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January 11, 2019

Parkville Special Road District Parkville, 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). This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

This report was prepared at the request of the political subdivision and is intended for use by the political subdivision and those designated or approved by the political subdivision. This report may be provided to parties other than the political subdivision only in its entirety and only with the permission of the political subdivision. GRS is not responsible for unauthorized use of this report.

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 28, 2018.

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. This valuation assumed the ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our expertise and not performed. 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 November 30, 2018. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

This report includes risk commentary in Appendix VI, but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

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

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the political subdivision as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the actuarial standards of practice issued by the Actuarial Standards Board, and with applicable statutes.

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

The signing actuary is independent of the plan sponsor.

Respectfully submitted,

Mita D. Drazilov, ASA, FCA, MAAA

Mita Drazilos



## 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.



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

		Percents of Active Member Payroll			roll
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	8.90%	2.80%	0.20%	11.90%
L-3	General	11.20	4.00	0.30	15.50
LT-4(65)	General	9.90	3.50	0.20	13.60
LT-5(65)	General	11.90	4.60	0.30	16.80
L-7	General	13.50	5.30	0.30	19.10
LT-8(65)	General	14.00	5.60	0.30	19.90
L-12	General	15.70	6.60	0.40	22.70
LT-14(65)	General	16.00	6.70	0.40	23.10
L-6	General	18.00	7.80	0.50	26.30

<sup>\*</sup> Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.



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

		Percents of Active Member Payroll			/roll
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	9.20%	3.00%	0.20%	12.40%
L-3	General	11.60	4.30	0.30	16.20
LT-4(65)	General	10.20	3.70	0.20	14.10
LT-5(65)	General	12.30	4.80	0.30	17.40
L-7	General	13.90	5.60	0.30	19.80
LT-8(65)	General	14.40	5.90	0.30	20.60
L-12	General	16.30	6.90	0.40	23.60
LT-14(65)	General	16.50	7.10	0.40	24.00
L-6	General	18.60	8.20	0.50	27.30

<sup>\*</sup> Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.



## <u>Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)</u> (No member contributions)

		Percents of Active Member Payroll			roll
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	9.10%	6.20%	0.20%	15.50%
L-3	General	11.30	7.50	0.30	19.10
LT-4(65)	General	10.00	6.90	0.20	17.10
LT-5(65)	General	12.10	8.10	0.30	20.50
L-7	General	13.60	8.90	0.30	22.80
LT-8(65)	General	14.10	9.20	0.30	23.60
L-12	General	15.90	10.20	0.40	26.50
LT-14(65)	General	16.10	10.40	0.40	26.90
L-6	General	18.10	11.50	0.50	30.10

<sup>\*</sup> Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.



## <u>Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)</u> (No member contributions)

		Percents of Active Member Payroll			roll
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	9.40%	6.40%	0.20%	16.00%
L-3	General	11.70	7.80	0.30	19.80
LT-4(65)	General	10.40	7.10	0.20	17.70
LT-5(65)	General	12.50	8.30	0.30	21.10
L-7	General	14.00	9.20	0.30	23.50
LT-8(65)	General	14.60	9.50	0.30	24.40
L-12	General	16.40	10.50	0.40	27.30
LT-14(65)	General	16.60	10.70	0.40	27.70
L-6	General	18.70	11.90	0.50	31.10

<sup>\*</sup> Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.



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

		Percents of Active Member Payroll			roll
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	9.50%	3.30%	0.20%	13.00%
L-3	General	12.00	4.70	0.30	17.00
LT-4(65)	General	11.20	4.60	0.20	16.00
LT-5(65)	General	13.20	5.60	0.30	19.10
L-7	General	14.40	6.10	0.30	20.80
LT-8(65)	General	15.20	6.70	0.30	22.20
L-12	General	16.90	7.40	0.40	24.70
LT-14(65)	General	17.30	7.80	0.40	25.50
L-6	General	19.30	8.80	0.50	28.60

- # 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.
- \* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.



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

		Percents of Active Member Payroll			
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	9.90%	3.50%	0.20%	13.60%
L-3	General	12.40	4.90	0.30	17.60
LT-4(65)	General	11.60	4.80	0.20	16.60
LT-5(65)	General	13.70	5.90	0.30	19.90
L-7	General	14.90	6.40	0.30	21.60
LT-8(65)	General	15.80	7.00	0.30	23.10
L-12	General	17.40	7.80	0.40	25.60
LT-14(65)	General	17.90	8.10	0.40	26.40
L-6	General	20.00	9.20	0.50	29.70

- # 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.
- \* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.



## <u>Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)</u> (No member contributions)

		Percents of Active Member Payroll			
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	9.70%	6.70%	0.20%	16.60%
L-3	General	12.10	8.20	0.30	20.60
LT-4(65)	General	11.30	8.00	0.20	19.50
LT-5(65)	General	13.30	9.10	0.30	22.70
L-7	General	14.50	9.60	0.30	24.40
LT-8(65)	General	15.40	10.20	0.30	25.90
L-12	General	17.00	11.10	0.40	28.50
LT-14(65)	General	17.40	11.40	0.40	29.20
L-6	General	19.40	12.50	0.50	32.40

- # 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.
- \* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.



## <u>Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)</u> (No member contributions)

		Percents of Active Member Payroll			roll
Benefit Program	Employee Groups	Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	10.00%	6.90%	0.20%	17.10%
L-3	General	12.50	8.40	0.30	21.20
LT-4(65)	General	11.70	8.20	0.20	20.10
LT-5(65)	General	13.80	9.40	0.30	23.50
L-7	General	15.00	9.90	0.30	25.20
LT-8(65)	General	15.90	10.60	0.30	26.80
L-12	General	17.50	11.40	0.40	29.30
LT-14(65)	General	18.00	11.80	0.40	30.20
L-6	General	20.00	12.90	0.50	33.40

- # 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.
- \* Assumes that credit is granted for 100% of service rendered prior to the membership date. If the governing body wishes to elect one of the lesser percents allowed by law -- 75%, 50%, or 25% -- the prior service cost will be reduced. An additional actuarial valuation will need to be performed to determine the employer contribution rate.



## **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			
L-1	\$ 43,640			
L-3	56,843			
LT-4(65)	49,875			
LT-5(65)	61,610			
L-7	70,045			
LT-8(65)	72,978			
L-12	83,247			
LT-14(65)	84,714			
L-6	96,449			

3 Yea	r FAS
Benefit	
Program	General
L-1	\$ 45,474
L-3	59,410
LT-4(65)	51,708
LT-5(65)	63,810
L-7	72,612
LT-8(65)	75,546
L-12	86,547
LT-14(65)	88,014
L-6	100,116

#### **Non-Contributory Plan**

5 Year FAS				
Benefit				
Program	General			
L-1	\$ 56,843			
L-3	70,045			
LT-4(65)	62,710			
LT-5(65)	75,179			
L-7	83,614			
LT-8(65)	86,547			
L-12	97,182			
LT-14(65)	98,649			
L-6	110,385			

3 Year FAS					
Benefit					
Program	General				
L-1	\$ 58,676				
L-3	72,612				
LT-4(65)	64,911				
LT-5(65)	77,379				
L-7	86,181				
LT-8(65)	89,481				
L-12	100,116				
LT-14(65)	101,583				
L-6	114,052				

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.



## **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				
L-1	\$ 47,674				
L-3	62,343				
LT-4(65)	58,676				
LT-5(65)	70,045				
L-7	76,279				
LT-8(65)	81,413				
L-12	90,581				
LT-14(65)	93,515				
L-6	104,884				

3 Year FAS					
Benefit					
Program	General				
L-1	\$ 49,875				
L-3	64,544				
LT-4(65)	60,877				
LT-5(65)	72,978				
L-7	79,213				
LT-8(65)	84,714				
L-12	93,882				
LT-14(65)	96,816				
L-6	108,918				

#### **Non-Contributory Plan**

5 Year FAS				
Benefit				
Program	General			
L-1	\$ 60,877			
L-3	75,546			
LT-4(65)	71,512			
LT-5(65)	83,247			
L-7	89,481			
LT-8(65)	94,982			
L-12	104,517			
LT-14(65)	107,084			
L-6	118,819			

3 Year FAS					
Benefit					
Program	General				
L-1	\$ 62,710				
L-3	77,746				
LT-4(65)	73,712				
LT-5(65)	86,181				
L-7	92,415				
LT-8(65)	98,283				
L-12	107,451				
LT-14(65)	110,751				
L-6	122,486				

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.



#### **Employees and Payroll Included in the Valuation**

	General
Number of Employees	7
Annual Payroll	\$ 366,726

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





UNFUNDED ACTUARIAL ACCRUED LIABILITY

#### **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:

#### **Parkville Special Road District**

		Contri	butory	Non-Con	tributory
Benefit Group	Employee Group	UAAL UAAL (5 Year FAS)		UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 574,651	\$ 594,533	\$ 585,182	\$ 604,869
L-3	General	722,116	746,940	731,471	756,105
LT-4(65)	General	639,072	661,194	649,083	670,986
LT-5(65)	General	770,432	796,949	779,408	805,693
L-7	General	869,556	899,367	877,795	907,293
LT-8(65)	General	901,765	932,701	909,738	940,360
L-12	General	1,017,015	1,051,782	1,024,074	1,058,517
LT-14(65)	General	1,033,089	1,068,463	1,040,051	1,075,069
L-6	General	1,164,462	1,204,202	1,170,389	1,209,748



#### **Unfunded Actuarial Accrued Liability (UAAL)**

		Contri	butory	Non-Con	tributory
Benefit	Employee	UAAL	UAAL	UAAL	UAAL
Group	Group	(5 Year FAS)	(3 Year FAS)	(5 Year FAS)	(3 Year FAS)
L-1	General	\$ 616,462	\$ 637,929	\$ 626,073	\$ 647,385
L-3	General	773,900	800,716	782,600	809,256
LT-4(65)	General	722,683	747,868	731,621	756,619
LT-5(65)	General	853,569	883,171	861,760	891,167
L-7	General	931,289	963,483	939,127	971,082
LT-8(65)	General	984,407	1,018,454	991,900	1,025,721
L-12	General	1,088,752	1,126,301	1,095,622	1,132,944
LT-14(65)	General	1,115,296	1,153,789	1,122,021	1,160,252
L-6	General	1,246,206	1,289,100	1,252,161	1,294,799





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



#### Schedule 1.

## Separations From Active Employment (Not Including Death-In-Service) Before Age & Service Retirement and Individual Pay Increase Assumptions

#### Percent of Active Members Separating Within Next Year

		General Members							
Sample	Years of	N	Men Women		Police		Fire		
Ages	Service	Disability	Withdrawal	Disability	Withdrawal	Disability	Withdrawal	Disability	Withdrawal
All	0		19.00%		22.00%		18.00%		10.00%
	1		17.00		20.00		17.00		8.00
	2		15.00		17.00		16.00		7.00
	3		13.00		14.00		13.00		6.00
	4		11.00		13.00		12.00		6.00
25	5 & Over	0.09%	7.30	0.02%	10.80	0.10%	9.80	0.06%	5.00
30		0.12	6.50	0.03	8.90	0.11	7.80	0.10	4.00
35		0.15	5.00	0.06	7.40	0.16	6.10	0.23	2.80
40		0.21	3.70	0.10	5.70	0.22	4.40	0.35	2.20
45		0.30	3.00	0.16	4.20	0.34	3.20	0.56	1.80
50		0.44	2.40	0.24	3.30	0.53	1.80	0.85	1.00
55		0.68	1.80	0.34	2.50	0.88	1.00	1.31	0.50
60		1.02	1.00	0.48	1.20		0.00		0.00
65			0.00		0.00		0.00		0.00

### Percent Increase in Individual's Pay

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



#### Schedule 2.

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

#### **Early Retirement**

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

#### **Normal Retirement**

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



#### **Schedule 2. (Continued)**

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

Retirement	General Members			
Ages	Men	Women	Police	Fire
Ages	IVICII	Women	1 Once	1110
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		





**SUMMARY OF LAGERS PROVISIONS** 

## Missouri LocAl Government Employees Retirement System Brief Summary of LAGERS Benefits and Conditions Evaluated and/or Considered

# Benefits and Conditions Evaluated and/or Considered as of February 28, 2018 (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-14(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.





**BENEFIT ILLUSTRATIONS** 

(L-1 Benefit Program is Years of Credited Service times: 1.00% of FAS <sup>1</sup> )

Final	Estimated Estimated		ated	
Average	LAGERS	Social	Monthly	/ Total
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 889	\$1,414	94%
2,000	700	1,032	1,732	87%
2,500	875	1,175	2,050	82%
3,000	1,050	1,318	2,368	79%
3,500	1,225	1,462	2,687	77%
4,000	1,400	1,604	3,004	75%
25 Years of Service:				
\$1,500	\$ 375	\$ 889	\$1,264	84%
2,000	500	1,032	1,532	77%
2,500	625	1,175	1,800	72%
3,000	750	1,318	2,068	69%
3,500	875	1,462	2,337	67%
4,000	1,000	1,604	2,604	65%
15 Years of Service:				
\$1,500	\$225	\$ 889	\$1,114	74%
2,000	300	1,032	1,332	67%
2,500	375	1,175	1,550	62%
3,000	450	1,318	1,768	59%
3,500	525	1,462	1,987	57%
4,000	600	1,604	2,204	55%

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

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



<sup>&</sup>quot;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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

(L-3 Benefit Program is Years of Credited Service times: 1.25% of FAS <sup>1</sup>)

Final		Estimated	Estimated	
Average	LAGERS	Social Monthly Total		/ Total
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS
35 Years of Service:				
\$1,500	\$ 656	\$ 889	\$1,545	103%
2,000	875	1,032	1,907	95%
2,500	1,094	1,175	2,269	91%
3,000	1,313	1,318	2,631	88%
3,500	1,531	1,462	2,993	86%
4,000	1,750	1,604	3,354	84%
25 Years of Service:				
\$1,500	\$ 469	\$ 889	\$1,358	91%
2,000	625	1,032	1,657	83%
2,500	781	1,175	1,956	78%
3,000	938	1,318	2,256	75%
3,500	1,094	1,462	2,556	73%
4,000	1,250	1,604	2,854	71%
15 Years of Service:				
\$1,500	\$281	\$ 889	\$1,170	78%
2,000	375	1,032	1,407	70%
2,500	469	1,175	1,644	66%
3,000	563	1,318	1,881	63%
3,500	656	1,462	2,118	61%
4,000	750	1,604	2,354	59%

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

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



<sup>&</sup>lt;sup>2</sup> "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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

(L-7 Benefit Program is Years of Credited Service times: 1.50% of FAS 1)

Final	Estimated		Estimated		
Average	LAGERS	Social	Monthly	/ Total	
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS	
35 Years of Service:					
\$1,500	\$ 788	\$ 889	\$1,677	112%	
2,000	1,050	1,032	2,082	104%	
2,500	1,313	1,175	2,488	100%	
3,000	1,575	1,318	2,893	96%	
3,500	1,838	1,462	3,300	94%	
4,000	2,100	1,604	3,704	93%	
25 Years of Service:					
\$1,500	\$ 563	\$ 889	\$1,452	97%	
2,000	750	1,032	1,782	89%	
2,500	938	1,175	2,113	85%	
3,000	1,125	1,318	2,443	81%	
3,500	1,313	1,462	2,775	79%	
4,000	1,500	1,604	3,104	78%	
15 Years of Service:					
\$1,500	\$338	\$ 889	\$1,227	82%	
2,000	450	1,032	1,482	74%	
2,500	563	1,175	1,738	70%	
3,000	675	1,318	1,993	66%	
3,500	788	1,462	2,250	64%	
4,000	900	1,604	2,504	63%	

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

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



<sup>&</sup>lt;sup>2</sup> "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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

(L-12 Benefit Program is Years of Credited Service times: 1.75% of FAS 1)

Final	Estimated Estimat			ated
Average	LAGERS	Social	Monthly	/ Total
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS
35 Years of Service:				
\$1,500	\$ 919	\$ 889	\$1,808	121%
2,000	1,225	1,032	2,257	113%
2,500	1,531	1,175	2,706	108%
3,000	1,838	1,318	3,156	105%
3,500	2,144	1,462	3,606	103%
4,000	2,450	1,604	4,054	101%
25 Years of Service:				
\$1,500	\$ 656	\$ 889	\$1,545	103%
2,000	875	1,032	1,907	95%
2,500	1,094	1,175	2,269	91%
3,000	1,313	1,318	2,631	88%
3,500	1,531	1,462	2,993	86%
4,000	1,750	1,604	3,354	84%
15 Years of Service:				
\$1,500	\$ 394	\$ 889	\$1,283	86%
2,000	525	1,032	1,557	78%
2,500	656	1,175	1,831	73%
3,000	788	1,318	2,106	70%
3,500	919	1,462	2,381	68%
4,000	1,050	1,604	2,654	66%

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

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



<sup>&</sup>lt;sup>2</sup> "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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

(L-6 Benefit Program is Years of Credited Service times: 2.00% of FAS <sup>1</sup> )

Final	Estimated Estimated		ated	
Average	LAGERS	Social	Monthly Total	
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 889	\$1,939	129%
2,000	1,400	1,032	2,432	122%
2,500	1,750	1,175	2,925	117%
3,000	2,100	1,318	3,418	114%
3,500	2,450	1,462	3,912	112%
4,000	2,800	1,604	4,404	110%
25 Years of Service:				
\$1,500	\$ 750	\$ 889	\$1,639	109%
2,000	1,000	1,032	2,032	102%
2,500	1,250	1,175	2,425	97%
3,000	1,500	1,318	2,818	94%
3,500	1,750	1,462	3,212	92%
4,000	2,000	1,604	3,604	90%
15 Years of Service:				
\$1,500	\$ 450	\$ 889	\$1,339	89%
2,000	600	1,032	1,632	82%
2,500	750	1,175	1,925	77%
3,000	900	1,318	2,218	74%
3,500	1,050	1,462	2,512	72%
4,000	1,200	1,604	2,804	70%

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

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



<sup>&</sup>lt;sup>2</sup> "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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

#### **Missouri LAGERS**

## Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary

(LT-4(65) Benefit Program is Years of Credited Service times: 2.00% of FAS <sup>1</sup> to age 65)

1.00% of FAS <sup>1</sup> at age 65)

Final	LAG	ERS	Estimated	Estim	ated	Perc	ent
Average	BENI	EFIT <sup>3</sup>	Social	Monthl	y Total	of F	AS
Salary (FAS) <sup>1</sup>	To 65	At 65	Security <sup>2</sup>	To 65	At 65	To 65	At 65
35 Years of Service	e:						
\$1,500	\$1,050	\$ 525	\$ 889	\$1,050	\$1,414	70%	94%
2,000	1,400	700	1,032	1,400	1,732	70%	87%
2,500	1,750	875	1,175	1,750	2,050	70%	82%
3,000	2,100	1,050	1,318	2,100	2,368	70%	79%
3,500	2,450	1,225	1,462	2,450	2,687	70%	77%
4,000	2,800	1,400	1,604	2,800	3,004	70%	75%
25 Years of Service	e:						
\$1,500	\$ 750	\$ 375	\$ 889	\$ 750	\$1,264	50%	84%
2,000	1,000	500	1,032	1,000	1,532	50%	77%
2,500	1,250	625	1,175	1,250	1,800	50%	72%
3,000	1,500	750	1,318	1,500	2,068	50%	69%
3,500	1,750	875	1,462	1,750	2,337	50%	67%
4,000	2,000	1,000	1,604	2,000	2,604	50%	65%
15 Years of Service	e:						
\$1,500	\$ 450	\$225	\$ 889	\$ 450	\$1,114	30%	74%
2,000	600	300	1,032	600	1,332	30%	67%
2,500	750	375	1,175	750	1,550	30%	62%
3,000	900	450	1,318	900	1,768	30%	59%
3,500	1,050	525	1,462	1,050	1,987	30%	57%
4,000	1,200	600	1,604	1,200	2,204	30%	55%
4							

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

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



<sup>&</sup>lt;sup>2</sup> "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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

#### **Missouri LAGERS**

## Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary

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

1.25% of FAS <sup>1</sup> at age 65)

Final	LAG	ERS	Estimated	Estim	nated	Pero	ent
Average	BENI	EFIT <sup>3</sup>	Social	Month	ly Total	of F	AS
Salary (FAS) <sup>1</sup>	To 65	At 65	Security <sup>2</sup>	To 65	At 65	To 65	At 65
35 Years of Service	e:						
\$1,500	\$1,050	\$ 656	\$ 889	\$1,050	\$1,545	70%	103%
2,000	1,400	875	1,032	1,400	1,907	70%	95%
2,500	1,750	1,094	1,175	1,750	2,269	70%	91%
3,000	2,100	1,313	1,318	2,100	2,631	70%	88%
3,500	2,450	1,531	1,462	2,450	2,993	70%	86%
4,000	2,800	1,750	1,604	2,800	3,354	70%	84%
25 Years of Service	2:						
\$1,500	\$ 750	\$ 469	\$ 889	\$ 750	\$1,358	50%	91%
2,000	1,000	625	1,032	1,000	1,657	50%	83%
2,500	1,250	781	1,175	1,250	1,956	50%	78%
3,000	1,500	938	1,318	1,500	2,256	50%	75%
3,500	1,750	1,094	1,462	1,750	2,556	50%	73%
4,000	2,000	1,250	1,604	2,000	2,854	50%	71%
15 Years of Service	<b>:</b> :						
\$1,500	\$ 450	\$281	\$ 889	\$ 450	\$1,170	30%	78%
2,000	600	375	1,032	600	1,407	30%	70%
2,500	750	469	1,175	750	1,644	30%	66%
3,000	900	563	1,318	900	1,881	30%	63%
3,500	1,050	656	1,462	1,050	2,118	30%	61%
4,000	1,200	750	1,604	1,200	2,354	30%	59%

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

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



<sup>&</sup>lt;sup>2</sup> "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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

## **Missouri LAGERS**

# Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary

(LT-8(65) Benefit Program is Years of Credited Service times: 2.00% of FAS <sup>1</sup> to age 65)

1.50% of FAS <sup>1</sup> at age 65)

Final	LAGERS		Estimated	Estimated Estimated		Percent		
Average	BENI	EFIT <sup>3</sup>	Social	Month	ly Total	of F	AS	
Salary (FAS) <sup>1</sup>	To 65	At 65	Security <sup>2</sup>	To 65	At 65	To 65	At 65	
35 Years of Service	<b>:</b> :							
\$1,500	\$1,050	\$ 788	\$ 889	\$1,050	\$1,677	70%	112%	
2,000	1,400	1,050	1,032	1,400	2,082	70%	104%	
2,500	1,750	1,313	1,175	1,750	2,488	70%	100%	
3,000	2,100	1,575	1,318	2,100	2,893	70%	96%	
3,500	2,450	1,838	1,462	2,450	3,300	70%	94%	
4,000	2,800	2,100	1,604	2,800	3,704	70%	93%	
25 Years of Service	2:							
\$1,500	\$ 750	\$ 563	\$ 889	\$ 750	\$1,452	50%	97%	
2,000	1,000	750	1,032	1,000	1,782	50%	89%	
2,500	1,250	938	1,175	1,250	2,113	50%	85%	
3,000	1,500	1,125	1,318	1,500	2,443	50%	81%	
3,500	1,750	1,313	1,462	1,750	2,775	50%	79%	
4,000	2,000	1,500	1,604	2,000	3,104	50%	78%	
15 Years of Service	2:							
\$1,500	\$ 450	\$338	\$ 889	\$ 450	\$1,227	30%	82%	
2,000	600	450	1,032	600	1,482	30%	74%	
2,500	750	563	1,175	750	1,738	30%	70%	
3,000	900	675	1,318	900	1,993	30%	66%	
3,500	1,050	788	1,462	1,050	2,250	30%	64%	
4,000	1,200	900	1,604	1,200	2,504	30%	63%	

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

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



<sup>&</sup>lt;sup>2</sup> "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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

#### **Missouri LAGERS**

## Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary

(LT-14(65) Benefit Program is Years of Credited Service times: 2.00% of FAS <sup>1</sup> to age 65)

1.75% of FAS <sup>1</sup> at age 65)

Final	LAGERS		Estimated	Estimated		Percent		
Average	BENI	EFIT <sup>3</sup>	Social	Monthl	y Total	of FAS		
Salary (FAS) <sup>1</sup>	To 65	At 65	Security <sup>2</sup>	To 65	At 65	To 65	At 65	
35 Years of Service	:							
\$1,500	\$1,050	\$ 919	\$ 889	\$1,050	\$1,808	70%	121%	
2,000	1,400	1,225	1,032	1,400	2,257	70%	113%	
2,500	1,750	1,531	1,175	1,750	2,706	70%	108%	
3,000	2,100	1,838	1,318	2,100	3,156	70%	105%	
3,500	2,450	2,144	1,462	2,450	3,606	70%	103%	
4,000	2,800	2,450	1,604	2,800	4,054	70%	101%	
25 Years of Service	:							
\$1,500	\$ 750	\$ 656	\$ 889	\$ 750	\$1,545	50%	103%	
2,000	1,000	875	1,032	1,000	1,907	50%	95%	
2,500	1,250	1,094	1,175	1,250	2,269	50%	91%	
3,000	1,500	1,313	1,318	1,500	2,631	50%	88%	
3,500	1,750	1,531	1,462	1,750	2,993	50%	86%	
4,000	2,000	1,750	1,604	2,000	3,354	50%	84%	
15 Years of Service	:							
\$1,500	\$ 450	\$ 394	\$ 889	\$ 450	\$1,283	30%	86%	
2,000	600	525	1,032	600	1,557	30%	78%	
2,500	750	656	1,175	750	1,831	30%	73%	
3,000	900	788	1,318	900	2,106	30%	70%	
3,500	1,050	919	1,462	1,050	2,381	30%	68%	
4,000	1,200	1,050	1,604	1,200	2,654	30%	66%	

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

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



<sup>&</sup>lt;sup>2</sup> "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 2018 - it does not include any amounts which might be payable to an eligible spouse or children.



AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES

## **Parkville Special Road District**

#### November 30, 2018

## By Attained Age and Years of Service

		Years of Service to Valuation Date Totals													
Attained									Valuation						
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Payroll						
Under 20															
20-24															
25-29	1							1	\$ 48,529						
30-34	1							1	\$ 45,000						
35-39															
40-44															
45-49															
50-54			1					1	\$ 82,590						
55-59		1			1		1	3	\$ 136,425						
60-64							1	1	\$ 54,182						
65-69															
70 & Over															
Totals	2	2 1 1 1 2 7 \$366,726													

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

Age: 49.0 years.

Benefit Service: 15.6 years.

Annual Pay: \$52,389.





**RISK COMMENTARY** 

## **Risk Commentary**

The determination of the accrued liability and the actuarially determined contribution (i.e., total employer contribution rate) requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

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

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

- Investment Risk actual investment returns may differ from the expected returns;
- 2. **Asset/Liability Mismatch Risk** changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
- 3. **Contribution Risk** actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
- 4. **Salary and Payroll Risk** actual salaries and total payroll may differ from expected, resulting in actual future accrued liability, contributions and contribution rates differing from expected;
- 5. **Longevity Risk** members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
- 6. **Other Demographic Risks** members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rates shown on pages 4 thru 11 may be considered as a minimum contribution rate for the selected benefit provisions that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.



## **Risk Commentary (Concluded)**

#### PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures are described below.

#### RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

#### RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

#### RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

#### **DURATION OF ACTUARIAL ACCRUED LIABILITY**

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

#### ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.





January 11, 2019 E-mail

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

Dear Bob:

Enclosed is the report of the November 30, 2018 Initial Actuarial Valuation of LAGERS benefits for the employees of

Parkville Special Road District

Sincerely,

Mita D. Drazilov, ASA, FCA, MAAA

Mita Drazilor

MDD:wp



January 11, 2019

Parkville Special Road District Parkville, 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 November 30, 2018 Initial Valuation for the Parkville Special Road District dated January 11, 2019.

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 28, 2018.

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 opinions herein.

Respectfully submitted,

Mita Draylov Mita D. Drazilov, ASA, FCA, MAAA

#### Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

#### Regular Retirement Eligibility

		L-1 Benefit Program			L-	3 Benefit Pro	gram	LT-4(65) Benefit Program		
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	ial Contribution		Actuarial	Contribution		Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 366,726	11.9%	\$43,640	\$ 574,651	15.5%	\$56,843	\$ 722,116	13.6%	\$49,875	\$ 639,072
2019	378,645	11.9	45,059	582,524	15.5	58,690	732,009	13.6	51,496	647,827
2020	390,951	11.9	46,523	589,869	15.5	60,597	741,239	13.6	53,169	655,996
2021	403,657	11.9	48,035	596,613	15.5	62,567	749,714	13.6	54,897	663,496
2022	416,776	11.9	49,596	602,675	15.5	64,600	757,332	13.6	56,682	670,238
2023	430,321	11.9	51,208	607,968	15.5	66,700	763,983	13.6	58,524	676,124
2024	444,306	11.9	52,872	612,397	15.5	68,867	769,548	13.6	60,426	681,049
2025	458,746	11.9	54,591	615,858	15.5	71,106	773,897	13.6	62,389	684,898
2026	473,655	11.9	56,365	618,240	15.5	73,417	776,890	13.6	64,417	687,547
2027	489,049	11.9	58,197	619,421	15.5	75,803	778,373	13.6	66,511	688,860

			LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
Estimated		Estimated Employer  Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	
2018	\$ 366,726	16.8%	\$61,610	\$ 770,432	19.1%	\$70,045	\$ 869,556	19.9%	\$72,978	\$ 901,765	
2019	378,645	16.8	63,612	780,987	19.1	72,321	881,469	19.9	75,350	914,119	
2020	390,951	16.8	65,680	790,835	19.1	74,672	892,584	19.9	77,799	925,645	
2021	403,657	16.8	67,814	799,877	19.1	77,098	902,789	19.9	80,328	936,228	
2022	416,776	16.8	70,018	808,004	19.1	79,604	911,962	19.9	82,938	945,741	
2023	430,321	16.8	72,294	815,100	19.1	82,191	919,971	19.9	85,634	954,047	
2024	444,306	16.8	74,643	821,037	19.1	84,862	926,672	19.9	88,417	960,997	
2025	458,746	16.8	77,069	825 <i>,</i> 677	19.1	87,620	931,909	19.9	91,290	966,428	
2026	473,655	16.8	79,574	828 <i>,</i> 870	19.1	90,468	935,513	19.9	94,257	970,165	
2027	489.049	16.8	82.160	830.453	19.1	93.408	937.299	19.9	97.321	972.018	

		L-12 Benefit Program			LT-14	l(65) Benefit I	Program	L-6 Benefit Program		
		Estimated	Employer Unfunded		Estimated Employer		Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	bution	Actuarial	Contribution		Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 366,726	22.7%	\$83,247	\$ 1,017,015	23.1%	\$84,714	\$ 1,033,089	26.3%	\$96,449	\$ 1,164,462
2019	378,645	22.7	85,952	1,030,948	23.1	87,467	1,047,242	26.3	99,584	1,180,415
2020	390,951	22.7	88,746	1,043,948	23.1	90,310	1,060,447	26.3	102,820	1,195,299
2021	403,657	22.7	91,630	1,055,883	23.1	93,245	1,072,571	26.3	106,162	1,208,965
2022	416,776	22.7	94,608	1,066,612	23.1	96,275	1,083,469	26.3	109,612	1,221,249
2023	430,321	22.7	97,683	1,075,979	23.1	99,404	1,092,984	26.3	113,174	1,231,974
2024	444,306	22.7	100,857	1,083,817	23.1	102,635	1,100,946	26.3	116,852	1,240,948
2025	458,746	22.7	104,135	1,089,942	23.1	105,970	1,107,168	26.3	120,650	1,247,961
2026	473,655	22.7	107,520	1,094,157	23.1	109,414	1,111,449	26.3	124,571	1,252,787
2027	489,049	22.7	111,014	1,096,246	23.1	112,970	1,113,571	26.3	128,620	1,255,179

- 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 28<sup>th</sup> 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.



#### Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

#### Regular Retirement Eligibility

L-1 Be			L-1 Benefit Program		L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	Contribution		Contribution		Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 366,726	12.4%	\$45,474	\$ 594,533	16.2%	\$59,410	\$ 746,940	14.1%	\$51,708	\$ 661,194
2019	378,645	12.4	46,952	602,678	16.2	61,340	757,173	14.1	53,389	670,252
2020	390,951	12.4	48,478	610,277	16.2	63,334	766,720	14.1	55,124	678,703
2021	403,657	12.4	50,053	617,254	16.2	65,392	775,486	14.1	56,916	686,463
2022	416,776	12.4	51,680	623,526	16.2	67,518	783,366	14.1	58,765	693,438
2023	430,321	12.4	53,360	629,002	16.2	69,712	790,246	14.1	60,675	699,528
2024	444,306	12.4	55,094	633,584	16.2	71,978	796,002	14.1	62,647	704,624
2025	458,746	12.4	56,885	637,165	16.2	74,317	800,501	14.1	64,683	708,606
2026	473,655	12.4	58,733	639,629	16.2	76,732	803,597	14.1	66,785	711,346
2027	489,049	12.4	60,642	640,850	16.2	79,226	805,131	14.1	68,956	712,704

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
Estimated		Estimated Employer Contribution		Unfunded Actuarial		Estimated Employer Contribution		Estimated Employer Contribution		Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 366,726	17.4%	\$63,810	\$ 796,949	19.8%	\$72,612	\$ 899,367	20.6%	\$75,546	\$ 932,701
2019	378,645	17.4	65,884	807,867	19.8	74,972	911,688	20.6	78,001	945,479
2020	390,951	17.4	68,025	818,054	19.8	77,408	923,184	20.6	80,536	957,401
2021	403,657	17.4	70,236	827,407	19.8	79,924	933,739	20.6	83,153	968,347
2022	416,776	17.4	72,519	835,814	19.8	82,522	943,227	20.6	85,856	978,186
2023	430,321	17.4	74,876	843,154	19.8	85,204	951,511	20.6	88,646	986,777
2024	444,306	17.4	77,309	849,296	19.8	87,973	958,442	20.6	91,527	993,965
2025	458,746	17.4	79,822	854,096	19.8	90,832	963,859	20.6	94,502	999,583
2026	473,655	17.4	82,416	857,399	19.8	93,784	967,586	20.6	97,573	1,003,448
2027	489.049	17.4	85.095	859.036	19.8	96.832	969.434	20.6	100.744	1.005.364

	Estimated		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
			l Employer ibution	Unfunded Actuarial		Estimated Employer Contribution			d Employer ibution	Unfunded Actuarial	
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Actuarial Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	
2018	\$ 366,726	23.6%	\$86,547	\$ 1,051,782	24.0%	\$88,014	\$ 1,068,463	27.3%	\$100,116	\$ 1,204,202	
2019	378,645	23.6	89,360	1,066,191	24.0	90,875	1,083,101	27.3	103,370	1,220,699	
2020	390,951	23.6	92,264	1,079,635	24.0	93,828	1,096,758	27.3	106,730	1,236,091	
2021	403,657	23.6	95,263	1,091,978	24.0	96,878	1,109,297	27.3	110,198	1,250,223	
2022	416,776	23.6	98,359	1,103,073	24.0	100,026	1,120,568	27.3	113,780	1,262,926	
2023	430,321	23.6	101,556	1,112,761	24.0	103,277	1,130,409	27.3	117,478	1,274,017	
2024	444,306	23.6	104,856	1,120,867	24.0	106,633	1,138,643	27.3	121,296	1,283,297	
2025	458,746	23.6	108,264	1,127,202	24.0	110,099	1,145,078	27.3	125,238	1,290,550	
2026	473,655	23.6	111,783	1,131,561	24.0	113,677	1,149,506	27.3	129,308	1,295,541	
2027	489,049	23.6	115,416	1,133,722	24.0	117,372	1,151,701	27.3	133,510	1,298,015	

- 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 28<sup>th</sup> 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.



#### Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

#### Regular Retirement Eligibility

		L-1 Benefit Program			L-	3 Benefit Pro	gram	LT-4(65) Benefit Program		
		Estimated	l Employer	Unfunded	Estimated	Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	Contribution		Contribution		Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 366,726	15.5%	\$56,843	\$ 585,182	19.1%	\$70,045	\$ 731,471	17.1%	\$62,710	\$ 649,083
2019	378,645	15.5	58,690	593,199	19.1	72,321	741,492	17.1	64,748	657,975
2020	390,951	15.5	60,597	600,679	19.1	74,672	750,842	17.1	66,853	666,272
2021	403,657	15.5	62,567	607,547	19.1	77,098	759,426	17.1	69,025	673,889
2022	416,776	15.5	64,600	613,720	19.1	79,604	767,142	17.1	71,269	680,736
2023	430,321	15.5	66,700	619,110	19.1	82,191	773,879	17.1	73,585	686,714
2024	444,306	15.5	68,867	623,620	19.1	84,862	779,516	17.1	75,976	691,716
2025	458,746	15.5	71,106	627,144	19.1	87,620	783,922	17.1	78,446	695,625
2026	473,655	15.5	73,417	629,569	19.1	90,468	786,953	17.1	80,995	698,315
2027	489,049	15.5	75,803	630,771	19.1	93,408	788,456	17.1	83,627	699,648

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer		Unfunded		l Employer	Unfunded	Estimated Employer Contribution		Unfunded Actuarial
	Estimated		ibution	Actuarial	Contribution		Actuarial	Contr	ibution	
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 366,726	20.5%	\$75,179	\$ 779,408	22.8%	\$83,614	\$ 877,795	23.6%	\$86,547	\$ 909,738
2019	378,645	20.5	77,622	790,086	22.8	86,331	889,821	23.6	89,360	922,201
2020	390,951	20.5	80,145	800,048	22.8	89,137	901,041	23.6	92,264	933,829
2021	403,657	20.5	82,750	809,195	22.8	92,034	911,343	23.6	95,263	944,505
2022	416,776	20.5	85,439	817,417	22.8	95,025	920,603	23.6	98,359	954,102
2023	430,321	20.5	88,216	824,596	22.8	98,113	928,688	23.6	101,556	962,481
2024	444,306	20.5	91,083	830,603	22.8	101,302	935,453	23.6	104,856	969,492
2025	458,746	20.5	94,043	835,297	22.8	104,594	940,740	23.6	108,264	974,971
2026	473,655	20.5	97,099	838,527	22.8	107,993	944,378	23.6	111,783	978,741
2027	489 049	20.5	100 255	840 128	22.8	111 503	946 181	23.6	115 416	980 610

		L-12 Benefit Program			LT-14	4(65) Benefit I	Program	L-6 Benefit Program		
		Estimated	l Employer	Unfunded	Estimated	d Employer	Unfunded	Estimated	d Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contribution		Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 366,726	26.5%	\$97,182	\$ 1,024,074	26.9%	\$98,649	\$ 1,040,051	30.1%	\$110,385	\$ 1,170,389
2019	378,645	26.5	100,341	1,038,104	26.9	101,856	1,054,300	30.1	113,972	1,186,423
2020	390,951	26.5	103,602	1,051,194	26.9	105,166	1,067,594	30.1	117,676	1,201,383
2021	403,657	26.5	106,969	1,063,212	26.9	108,584	1,079,800	30.1	121,501	1,215,118
2022	416,776	26.5	110,446	1,074,015	26.9	112,113	1,090,772	30.1	125,450	1,227,465
2023	430,321	26.5	114,035	1,083,447	26.9	115,756	1,100,352	30.1	129,527	1,238,245
2024	444,306	26.5	117,741	1,091,339	26.9	119,518	1,108,367	30.1	133,736	1,247,265
2025	458,746	26.5	121,568	1,097,507	26.9	123,403	1,114,631	30.1	138,083	1,254,314
2026	473,655	26.5	125,519	1,101,751	26.9	127,413	1,118,941	30.1	142,570	1,259,164
2027	489,049	26.5	129,598	1,103,855	26.9	131,554	1,121,078	30.1	147,204	1,261,568

- 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 28<sup>th</sup> 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.



#### Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

#### Regular Retirement Eligibility

		L-1 Benefit Program			L-	3 Benefit Pro	gram	LT-4(65) Benefit Program			
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	
	Estimated	Contri	bution	Actuarial	Contri	bution	Actuarial	Contri	ibution	Actuarial	
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued	
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	
2018	\$ 366,726	16.0%	\$58,676	\$ 604,869	19.8%	\$72,612	\$ 756,105	17.7%	\$64,911	\$ 670,986	
2019	378,645	16.0	60,583	613,156	19.8	74,972	766,464	17.7	67,020	680,178	
2020	390,951	16.0	62,552	620,888	19.8	77,408	776,129	17.7	69,198	688,755	
2021	403,657	16.0	64,585	627,987	19.8	79,924	785,002	17.7	71,447	696,629	
2022	416,776	16.0	66,684	634,368	19.8	82,522	792,978	17.7	73,769	703,707	
2023	430,321	16.0	68,851	639,939	19.8	85,204	799,942	17.7	76,167	709,887	
2024	444,306	16.0	71,089	644,601	19.8	87,973	805,769	17.7	78,642	715,058	
2025	458,746	16.0	73,399	648,244	19.8	90,832	810,323	17.7	81,198	719,099	
2026	473,655	16.0	75,785	650,751	19.8	93,784	813,457	17.7	83,837	721,880	
2027	489,049	16.0	78,248	651,994	19.8	96,832	815,010	17.7	86,562	723,258	

	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated	Estimated Employer Contribution		Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 366,726	21.1%	\$77,379	\$ 805,693	23.5%	\$86,181	\$ 907,293	24.4%	\$89,481	\$ 940,360
2019	378,645	21.1	79,894	816,731	23.5	88,982	919,723	24.4	92,389	953,243
2020	390,951	21.1	82,491	827,029	23.5	91,873	931,320	24.4	95,392	965,263
2021	403,657	21.1	85,172	836,484	23.5	94,859	941,968	24.4	98,492	976,299
2022	416,776	21.1	87,940	844,983	23.5	97,942	951,539	24.4	101,693	986,219
2023	430,321	21.1	90,798	852,404	23.5	101,125	959,896	24.4	104,998	994,880
2024	444,306	21.1	93,749	858,613	23.5	104,412	966,888	24.4	108,411	1,002,127
2025	458,746	21.1	96,795	863,466	23.5	107,805	972,353	24.4	111,934	1,007,791
2026	473,655	21.1	99,941	866,805	23.5	111,309	976,113	24.4	115,572	1,011,688
2027	489.049	21.1	103.189	868.460	23.5	114.927	977.977	24.4	119.328	1.013.620

		L-	12 Benefit Pro	ogram	LT-14	4(65) Benefit I	Program	L-	6 Benefit Pro	gram
	Estimated	Estimated	d Employer	Unfunded	Estimated	d Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 366,726	27.3%	\$100,116	\$ 1,058,517	27.7%	\$101,583	\$ 1,075,069	31.1%	\$114,052	\$ 1,209,748
2019	378,645	27.3	103,370	1,073,019	27.7	104,885	1,089,797	31.1	117,759	1,226,321
2020	390,951	27.3	106,730	1,086,549	27.7	108,293	1,103,539	31.1	121,586	1,241,784
2021	403,657	27.3	110,198	1,098,971	27.7	111,813	1,116,156	31.1	125,537	1,255,981
2022	416,776	27.3	113,780	1,110,138	27.7	115,447	1,127,497	31.1	129,617	1,268,743
2023	430,321	27.3	117,478	1,119,888	27.7	119,199	1,137,399	31.1	133,830	1,279,886
2024	444,306	27.3	121,296	1,128,046	27.7	123,073	1,145,684	31.1	138,179	1,289,209
2025	458,746	27.3	125,238	1,134,421	27.7	127,073	1,152,159	31.1	142,670	1,296,495
2026	473,655	27.3	129,308	1,138,808	27.7	131,202	1,156,614	31.1	147,307	1,301,509
2027	489,049	27.3	133,510	1,140,983	27.7	135,467	1,158,823	31.1	152,094	1,303,994

- 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 28<sup>th</sup> 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.



#### Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

#### Rule of 80 Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	ibution	Actuarial	Contri	\$58,676 60,583 62,552 64,585 66,684 68,851 71,089	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 366,726	13.0%	\$47,674	\$ 616,462	17.0%	\$62,343	\$ 773,900	16.0%	\$58,676	\$ 722,683
2019	378,645	13.0	49,224	624,907	17.0	64,370	784,502	16.0	60,583	732,584
2020	390,951	13.0	50,824	632,787	17.0	66,462	794,394	16.0	62,552	741,821
2021	403,657	13.0	52,475	640,022	17.0	68,622	803,476	16.0	64,585	750,302
2022	416,776	13.0	54,181	646,525	17.0	70,852	811,640	16.0	66,684	757,926
2023	430,321	13.0	55,942	652,203	17.0	73,155	818,768	16.0	68,851	764,582
2024	444,306	13.0	57,760	656,954	17.0	75,532	824,732	16.0	71,089	770,151
2025	458,746	13.0	59,637	660,667	17.0	77,987	829,393	16.0	73,399	774,504
2026	473,655	13.0	61,575	663,222	17.0	80,521	832,600	16.0	75,785	777,499
2027	489,049	13.0	63,576	664,488	17.0	83,138	834,190	16.0	78,248	778,984

		LT-5	(65) Benefit P	rogram	L-	7 Benefit Pro	gram	LT-8	(65) Benefit P	rogram
	Estimated		Estimated Employer Contribution			d Employer ibution	Unfunded Actuarial		l Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 366,726	19.1%	\$70,045	\$ 853,569	20.8%	\$76,279	\$ 931,289	22.2%	\$81,413	\$ 984,407
2019	378,645	19.1	72,321	865,263	20.8	78,758	944,048	22.2	84,059	997,893
2020	390,951	19.1	74,672	876,173	20.8	81,318	955,952	22.2	86,791	1,010,476
2021	403,657	19.1	77,098	886,190	20.8	83,961	966,881	22.2	89,612	1,022,029
2022	416,776	19.1	79,604	895,194	20.8	86,689	976,705	22.2	92,524	1,032,414
2023	430,321	19.1	82,191	903,056	20.8	89,507	985,283	22.2	95,531	1,041,481
2024	444,306	19.1	84,862	909,634	20.8	92,416	992,460	22.2	98,636	1,049,068
2025	458,746	19.1	87,620	914,775	20.8	95,419	998,069	22.2	101,842	1,054,997
2026	473,655	19.1	90,468	918,312	20.8	98,520	1,001,929	22.2	105,151	1,059,077
2027	489.049	19.1	93.408	920.065	20.8	101.722	1.003.842	22.2	108.569	1.061.099

		L-:	12 Benefit Pro	ogram	LT-14	4(65) Benefit I	Program	L-	6 Benefit Pro	gram
	Estimated		Estimated Employer Contribution			d Employer ibution	Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 366,726	24.7%	\$90,581	\$ 1,088,752	25.5%	\$93,515	\$ 1,115,296	28.6%	\$104,884	\$ 1,246,206
2019	378,645	24.7	93,525	1,103,668	25.5	96,554	1,130,575	28.6	108,292	1,263,279
2020	390,951	24.7	96,565	1,117,585	25.5	99,693	1,144,831	28.6	111,812	1,279,208
2021	403,657	24.7	99,703	1,130,362	25.5	102,933	1,157,920	28.6	115,446	1,293,833
2022	416,776	24.7	102,944	1,141,848	25.5	106,278	1,169,686	28.6	119,198	1,306,980
2023	430,321	24.7	106,289	1,151,876	25.5	109,732	1,179,959	28.6	123,072	1,318,458
2024	444,306	24.7	109,744	1,160,267	25.5	113,298	1,188,554	28.6	127,072	1,328,062
2025	458,746	24.7	113,310	1,166,824	25.5	116,980	1,195,271	28.6	131,201	1,335,568
2026	473,655	24.7	116,993	1,171,336	25.5	120,782	1,199,893	28.6	135,465	1,340,733
2027	489,049	24.7	120,795	1,173,573	25.5	124,707	1,202,184	28.6	139,868	1,343,293

- 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 28<sup>th</sup> 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.



#### Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

#### Rule of 80 Retirement Eligibility

		L-	1 Benefit Pro	gram	L-	3 Benefit Pro	gram	LT-4	(65) Benefit P	rogram
		Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contr	ibution	Actuarial	Contri	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 366,726	13.6%	\$49,875	\$ 637,929	17.6%	\$64,544	\$ 800,716	16.6%	\$60,877	\$ 747,868
2019	378,645	13.6	51,496	646,669	17.6	66,642	811,686	16.6	62,855	758,114
2020	390,951	13.6	53,169	654,823	17.6	68,807	821,921	16.6	64,898	767,673
2021	403,657	13.6	54,897	662,310	17.6	71,044	831,318	16.6	67,007	776,450
2022	416,776	13.6	56,682	669,040	17.6	73,353	839,765	16.6	69,185	784,339
2023	430,321	13.6	58,524	674,916	17.6	75,736	847,140	16.6	71,433	791,227
2024	444,306	13.6	60,426	679,832	17.6	78,198	853,311	16.6	73,755	796,991
2025	458,746	13.6	62,389	683,674	17.6	80,739	858,134	16.6	76,152	801,495
2026	473,655	13.6	64,417	686,318	17.6	83,363	861,452	16.6	78,627	804,594
2027	489,049	13.6	66,511	687,629	17.6	86,073	863,097	16.6	81,182	806,130

	LT-5(65) Benefit Program  Estimated Employer Unfunded			L-7 Benefit Program			LT-8(65) Benefit Program			
	Estimated		Estimated Employer Contribution			d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 366,726	19.9%	\$72,978	\$ 883,171	21.6%	\$79,213	\$ 963,483	23.1%	\$84,714	\$ 1,018,454
2019	378,645	19.9	75,350	895,270	21.6	81,787	976,683	23.1	87,467	1,032,407
2020	390,951	19.9	77,799	906,559	21.6	84,445	988,998	23.1	90,310	1,045,425
2021	403,657	19.9	80,328	916,924	21.6	87,190	1,000,305	23.1	93,245	1,057,377
2022	416,776	19.9	82,938	926,241	21.6	90,024	1,010,469	23.1	96,275	1,068,121
2023	430,321	19.9	85,634	934,376	21.6	92,949	1,019,343	23.1	99,404	1,077,502
2024	444,306	19.9	88,417	941,182	21.6	95,970	1,026,768	23.1	102,635	1,085,351
2025	458,746	19.9	91,290	946,501	21.6	99,089	1,032,571	23.1	105,970	1,091,485
2026	473,655	19.9	94,257	950,161	21.6	102,309	1,036,564	23.1	109,414	1,095,706
2027	489.049	19.9	97.321	951.975	21.6	105.635	1.038.543	23.1	112.970	1.097.798

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
	Estimated		l Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 366,726	25.6%	\$93,882	\$ 1,126,301	26.4%	\$96,816	\$ 1,153,789	29.7%	\$108,918	\$ 1,289,100
2019	378,645	25.6	96,933	1,141,731	26.4	99,962	1,169,596	29.7	112,458	1,306,760
2020	390,951	25.6	100,083	1,156,128	26.4	103,211	1,184,344	29.7	116,112	1,323,237
2021	403,657	25.6	103,336	1,169,346	26.4	106,565	1,197,885	29.7	119,886	1,338,365
2022	416,776	25.6	106,695	1,181,228	26.4	110,029	1,210,057	29.7	123,782	1,351,964
2023	430,321	25.6	110,162	1,191,602	26.4	113,605	1,220,684	29.7	127,805	1,363,837
2024	444,306	25.6	113,742	1,200,282	26.4	117,297	1,229,576	29.7	131,959	1,373,772
2025	458,746	25.6	117,439	1,207,066	26.4	121,109	1,236,525	29.7	136,248	1,381,536
2026	473,655	25.6	121,256	1,211,734	26.4	125,045	1,241,307	29.7	140,676	1,386,878
2027	489,049	25.6	125,197	1,214,048	26.4	129,109	1,243,677	29.7	145,248	1,389,526

- 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 28<sup>th</sup> 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.



#### Employer Contribution Rates (Non-Contributory Plan - 5 Year FAS)

(0% member contributions are additional)

#### Rule of 80 Retirement Eligibility

		L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated	l Employer	Unfunded	Estimated	Employer	Unfunded	Estimated	l Employer	Unfunded
	Estimated	Contri	ibution	Actuarial	Contri	bution	Actuarial	Contri	ibution	Actuarial
Valuation	Projected	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 366,726	16.6%	\$60,877	\$ 626,073	20.6%	\$75,546	\$ 782,600	19.5%	\$71,512	\$ 731,621
2019	378,645	16.6	62,855	634,650	20.6	78,001	793,322	19.5	73,836	741,644
2020	390,951	16.6	64,898	642,653	20.6	80,536	803,325	19.5	76,235	750,996
2021	403,657	16.6	67,007	650,000	20.6	83,153	812,509	19.5	78,713	759,582
2022	416,776	16.6	69,185	656,605	20.6	85,856	820,765	19.5	81,271	767,300
2023	430,321	16.6	71,433	662,372	20.6	88,646	827,973	19.5	83,913	774,039
2024	444,306	16.6	73,755	667,197	20.6	91,527	834,004	19.5	86,640	779,677
2025	458,746	16.6	76,152	670,968	20.6	94,502	838,718	19.5	89,455	784,083
2026	473,655	16.6	78,627	673,563	20.6	97,573	841,961	19.5	92,363	787,115
2027	489,049	16.6	81,182	674,849	20.6	100,744	843,569	19.5	95,365	788,618

	Estimated	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
	Estimated	Estimated Employer Contribution		Unfunded Actuarial		d Employer ibution	Unfunded Actuarial		d Employer ibution	Unfunded Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 366,726	22.7%	\$83,247	\$ 861,760	24.4%	\$89,481	\$ 939,127	25.9%	\$94,982	\$ 991,900
2019	378,645	22.7	85,952	873,566	24.4	92,389	951,993	25.9	98,069	1,005,489
2020	390,951	22.7	88,746	884,581	24.4	95,392	963,997	25.9	101,256	1,018,168
2021	403,657	22.7	91,630	894,694	24.4	98,492	975,018	25.9	104,547	1,029,809
2022	416,776	22.7	94,608	903,785	24.4	101,693	984,925	25.9	107,945	1,040,273
2023	430,321	22.7	97,683	911,722	24.4	104,998	993,575	25.9	111,453	1,049,409
2024	444,306	22.7	100,857	918,363	24.4	108,411	1,000,813	25.9	115,075	1,057,053
2025	458,746	22.7	104,135	923,553	24.4	111,934	1,006,469	25.9	118,815	1,063,027
2026	473,655	22.7	107,520	927,124	24.4	115,572	1,010,361	25.9	122,677	1,067,138
2027	489.049	22.7	111.014	928.894	24.4	119.328	1.012.290	25.9	126.664	1.069.176

		L-	12 Benefit Pro	ogram	LT-14	4(65) Benefit I	Program	L-	-6 Benefit Pro	gram
		Estimated	d Employer	Unfunded	Estimated	d Employer	Unfunded	Estimated	d Employer	Unfunded
	Estimated	Contr	ibution	Actuarial	Contr	ibution	Actuarial	Contr	ibution	Actuarial
Valuation	Projected	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 366,726	28.5%	\$104,517	\$ 1,095,622	29.2%	\$107,084	\$ 1,122,021	32.4%	\$118,819	\$ 1,252,161
2019	378,645	28.5	107,914	1,110,632	29.2	110,564	1,137,393	32.4	122,681	1,269,315
2020	390,951	28.5	111,421	1,124,636	29.2	114,158	1,151,735	32.4	126,668	1,285,320
2021	403,657	28.5	115,042	1,137,494	29.2	117,868	1,164,903	32.4	130,785	1,300,015
2022	416,776	28.5	118,781	1,149,052	29.2	121,699	1,176,739	32.4	135,035	1,313,224
2023	430,321	28.5	122,641	1,159,143	29.2	125,654	1,187,074	32.4	139,424	1,324,757
2024	444,306	28.5	126,627	1,167,587	29.2	129,737	1,195,721	32.4	143,955	1,334,407
2025	458,746	28.5	130,743	1,174,186	29.2	133,954	1,202,479	32.4	148,634	1,341,949
2026	473,655	28.5	134,992	1,178,727	29.2	138,307	1,207,129	32.4	153,464	1,347,138
2027	489,049	28.5	139,379	1,180,978	29.2	142,802	1,209,434	32.4	158,452	1,349,710

- 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 28<sup>th</sup> 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.



#### Employer Contribution Rates (Non-Contributory Plan - 3 Year FAS)

(0% member contributions are additional)

#### Rule of 80 Retirement Eligibility

	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
Valuation Year		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2019	378,645	17.1	64,748	656,254	21.2	80,273	820,343	20.1	76,108	766,985
2020	390,951	17.1	66,853	664,529	21.2	82,882	830,687	20.1	78,581	776,656
2021	403,657	17.1	69,025	672,127	21.2	85,575	840,184	20.1	81,135	785,535
2022	416,776	17.1	71,269	678,956	21.2	88,357	848,721	20.1	83,772	793,517
2023	430,321	17.1	73,585	684,919	21.2	91,228	856,175	20.1	86,495	800,486
2024	444,306	17.1	75,976	689,908	21.2	94,193	862,412	20.1	89,306	806,317
2025	458,746	17.1	78,446	693,807	21.2	97,254	867,286	20.1	92,208	810,874
2026	473,655	17.1	80,995	696,490	21.2	100,415	870,640	20.1	95,205	814,010
2027	489,049	17.1	83,627	697,820	21.2	103,678	872,302	20.1	98,299	815,564

	Estimated	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
Valuation Year	Projected Payroll	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2018	\$ 366,726	23.5%	\$86,181	\$ 891,167	25.2%	\$92,415	\$ 971,082	26.8%	\$98,283	\$ 1,025,721
2019	378,645	23.5	88,982	903,376	25.2	95,419	984,386	26.8	101,477	1,039,773
2020	390,951	23.5	91,873	914,767	25.2	98,520	996,798	26.8	104,775	1,052,884
2021	403,657	23.5	94,859	925,225	25.2	101,722	1,008,194	26.8	108,180	1,064,922
2022	416,776	23.5	97,942	934,626	25.2	105,028	1,018,438	26.8	111,696	1,075,743
2023	430,321	23.5	101,125	942,834	25.2	108,441	1,027,382	26.8	115,326	1,085,191
2024	444,306	23.5	104,412	949,702	25.2	111,965	1,034,866	26.8	119,074	1,093,096
2025	458,746	23.5	107,805	955,069	25.2	115,604	1,040,715	26.8	122,944	1,099,274
2026	473,655	23.5	111,309	958,762	25.2	119,361	1,044,739	26.8	126,940	1,103,525
2027	489.049	23.5	114.927	960.593	25.2	123.240	1.046.734	26.8	131.065	1.105.632

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
Estimated		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
Year	Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 366,726	29.3%	\$107,451	\$ 1,132,944	30.2%	\$110,751	\$ 1,160,252	33.4%	\$122,486	\$ 1,294,799
2019	378,645	29.3	110,943	1,148,465	30.2	114,351	1,176,147	33.4	126,467	1,312,538
2020	390,951	29.3	114,549	1,162,946	30.2	118,067	1,190,977	33.4	130,578	1,329,088
2021	403,657	29.3	118,272	1,176,242	30.2	121,904	1,204,593	33.4	134,821	1,344,283
2022	416,776	29.3	122,115	1,188,194	30.2	125,866	1,216,833	33.4	139,203	1,357,942
2023	430,321	29.3	126,084	1,198,629	30.2	129,957	1,227,520	33.4	143,727	1,369,868
2024	444,306	29.3	130,182	1,207,360	30.2	134,180	1,236,462	33.4	148,398	1,379,847
2025	458,746	29.3	134,413	1,214,184	30.2	138,541	1,243,450	33.4	153,221	1,387,645
2026	473,655	29.3	138,781	1,218,879	30.2	143,044	1,248,258	33.4	158,201	1,393,011
2027	489,049	29.3	143,291	1,221,206	30.2	147,693	1,250,642	33.4	163,342	1,395,671

- 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 28<sup>th</sup> 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.

