



The Initial Valuation For
City of Battlefield
as of January 31, 2020



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March 18, 2020

City of Battlefield
Battlefield, 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, 2019.

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 January 31, 2020. 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.

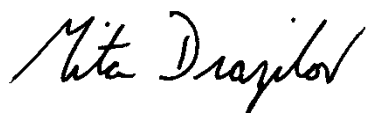
If you have any questions concerning this report or LAGERS in general, please contact the LAGERS office in Jefferson City.

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



Alternate Plan Provisions Affecting Employer Contribution Rates

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

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

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

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

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

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

City of Battlefield

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

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	2.10%	4.30%	0.20%	6.60%
	Police	3.80	4.60	0.40	8.80
L-3	General	2.70	6.00	0.30	9.00
	Police	4.80	6.40	0.50	11.70
LT-4(65)	General	2.40	4.90	0.20	7.50
	Police	4.50	6.20	0.40	11.10
LT-5(65)	General	2.90	6.50	0.30	9.70
	Police	5.30	7.60	0.50	13.40
L-7	General	3.30	7.70	0.30	11.30
	Police	5.80	8.10	0.60	14.50
LT-8(65)	General	3.50	8.00	0.30	11.80
	Police	6.10	8.90	0.60	15.60
L-12	General	3.90	9.30	0.40	13.60
	Police	6.80	9.90	0.70	17.40
LT-14(65)	General	4.00	9.50	0.40	13.90
	Police	7.00	10.30	0.70	18.00
L-6	General	4.50	11.00	0.50	16.00
	Police	7.80	11.60	0.80	20.20

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

City of Battlefield

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

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	2.20%	4.50%	0.20%	6.90%
	Police	3.90	4.80	0.40	9.10
L-3	General	2.80	6.30	0.30	9.40
	Police	5.00	6.70	0.50	12.20
LT-4(65)	General	2.50	5.20	0.20	7.90
	Police	4.70	6.50	0.40	11.60
LT-5(65)	General	3.00	6.80	0.30	10.10
	Police	5.50	7.90	0.50	13.90
L-7	General	3.40	8.00	0.30	11.70
	Police	6.00	8.50	0.60	15.10
LT-8(65)	General	3.60	8.30	0.30	12.20
	Police	6.40	9.30	0.60	16.30
L-12	General	4.10	9.70	0.40	14.20
	Police	7.00	10.30	0.70	18.00
LT-14(65)	General	4.10	9.90	0.40	14.40
	Police	7.20	10.70	0.70	18.60
L-6	General	4.70	11.50	0.50	16.70
	Police	8.00	12.10	0.80	20.90

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

City of Battlefield

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

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	2.40%	7.60%	0.20%	10.20%
	Police	4.00	8.10	0.40	12.50
L-3	General	3.00	9.30	0.30	12.60
	Police	5.00	9.90	0.50	15.40
LT-4(65)	General	2.60	8.30	0.20	11.10
	Police	4.70	9.70	0.40	14.80
LT-5(65)	General	3.20	9.80	0.30	13.30
	Police	5.50	11.10	0.50	17.10
L-7	General	3.60	11.00	0.30	14.90
	Police	6.00	11.70	0.60	18.30
LT-8(65)	General	3.70	11.30	0.30	15.30
	Police	6.30	12.50	0.60	19.40
L-12	General	4.20	12.70	0.40	17.30
	Police	7.00	13.50	0.70	21.20
LT-14(65)	General	4.30	12.90	0.40	17.60
	Police	7.10	13.90	0.70	21.70
L-6	General	4.80	14.40	0.50	19.70
	Police	8.00	15.30	0.80	24.10

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

City of Battlefield

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

Regular Retirement Eligibility

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	2.50%	7.90%	0.20%	10.60%
	Police	4.10	8.40	0.40	12.90
L-3	General	3.10	9.60	0.30	13.00
	Police	5.10	10.20	0.50	15.80
LT-4(65)	General	2.70	8.50	0.20	11.40
	Police	4.90	10.00	0.40	15.30
LT-5(65)	General	3.30	10.10	0.30	13.70
	Police	5.70	11.50	0.50	17.70
L-7	General	3.70	11.40	0.30	15.40
	Police	6.20	12.10	0.60	18.90
LT-8(65)	General	3.80	11.70	0.30	15.80
	Police	6.60	12.90	0.60	20.10
L-12	General	4.30	13.10	0.40	17.80
	Police	7.20	14.00	0.70	21.90
LT-14(65)	General	4.40	13.30	0.40	18.10
	Police	7.40	14.40	0.70	22.50
L-6	General	5.00	14.80	0.50	20.30
	Police	8.20	15.80	0.80	24.80

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

City of Battlefield

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

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	2.20%	4.40%	0.20%	6.80%
	Police	3.80	4.60	0.40	8.80
L-3	General	2.80	6.20	0.30	9.30
	Police	4.80	6.40	0.50	11.70
LT-4(65)	General	2.50	5.20	0.20	7.90
	Police	4.50	6.30	0.40	11.20
LT-5(65)	General	3.10	6.70	0.30	10.10
	Police	5.40	7.70	0.50	13.60
L-7	General	3.40	7.90	0.30	11.60
	Police	5.80	8.20	0.60	14.60
LT-8(65)	General	3.60	8.20	0.30	12.10
	Police	6.20	9.00	0.60	15.80
L-12	General	4.00	9.60	0.40	14.00
	Police	6.80	9.90	0.70	17.40
LT-14(65)	General	4.10	9.80	0.40	14.30
	Police	7.00	10.40	0.70	18.10
L-6	General	4.60	11.30	0.50	16.40
	Police	7.80	11.70	0.80	20.30

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 for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

City of Battlefield

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

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	2.30%	4.70%	0.20%	7.20%
	Police	3.90	4.90	0.40	9.20
L-3	General	2.90	6.40	0.30	9.60
	Police	5.00	6.70	0.50	12.20
LT-4(65)	General	2.60	5.50	0.20	8.30
	Police	4.70	6.60	0.40	11.70
LT-5(65)	General	3.20	7.00	0.30	10.50
	Police	5.50	8.00	0.50	14.00
L-7	General	3.50	8.20	0.30	12.00
	Police	6.00	8.50	0.60	15.10
LT-8(65)	General	3.70	8.60	0.30	12.60
	Police	6.40	9.40	0.60	16.40
L-12	General	4.20	10.00	0.40	14.60
	Police	7.00	10.40	0.70	18.10
LT-14(65)	General	4.30	10.20	0.40	14.90
	Police	7.20	10.80	0.70	18.70
L-6	General	4.80	11.70	0.50	17.00
	Police	8.00	12.20	0.80	21.00

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 for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

City of Battlefield

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

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	2.50%	7.80%	0.20%	10.50%
	Police	4.00	8.10	0.40	12.50
L-3	General	3.10	9.50	0.30	12.90
	Police	5.00	9.90	0.50	15.40
LT-4(65)	General	2.80	8.50	0.20	11.50
	Police	4.70	9.80	0.40	14.90
LT-5(65)	General	3.30	10.10	0.30	13.70
	Police	5.50	11.20	0.50	17.20
L-7	General	3.70	11.20	0.30	15.20
	Police	6.00	11.80	0.60	18.40
LT-8(65)	General	3.90	11.60	0.30	15.80
	Police	6.30	12.60	0.60	19.50
L-12	General	4.30	12.90	0.40	17.60
	Police	7.00	13.60	0.70	21.30
LT-14(65)	General	4.40	13.10	0.40	17.90
	Police	7.20	14.00	0.70	21.90
L-6	General	4.90	14.60	0.50	20.00
	Police	8.00	15.40	0.80	24.20

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

* Assumes that credit is granted for 100% of service rendered prior to the membership date for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

City of Battlefield

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

Rule of 80 Retirement Eligibility#

Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	General	2.50%	8.00%	0.20%	10.70%
	Police	4.10	8.40	0.40	12.90
L-3	General	3.20	9.80	0.30	13.30
	Police	5.10	10.30	0.50	15.90
LT-4(65)	General	2.90	8.80	0.20	11.90
	Police	4.90	10.10	0.40	15.40
LT-5(65)	General	3.40	10.40	0.30	14.10
	Police	5.70	11.60	0.50	17.80
L-7	General	3.80	11.60	0.30	15.70
	Police	6.20	12.10	0.60	18.90
LT-8(65)	General	4.00	12.00	0.30	16.30
	Police	6.60	13.00	0.60	20.20
L-12	General	4.50	13.30	0.40	18.20
	Police	7.20	14.00	0.70	21.90
LT-14(65)	General	4.50	13.50	0.40	18.40
	Police	7.40	14.40	0.70	22.50
L-6	General	5.10	15.10	0.50	20.70
	Police	8.20	15.90	0.80	24.90

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 for employees working in a covered position on the membership date and employed continuously in a covered position for one year with this employer. 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.

City of Battlefield

Employer Contribution Dollars Regular Retirement Eligibility

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

Contributory Plan

5 Year FAS		
Benefit Program	General	Police
L-1	\$ 16,231	\$ 34,871
L-3	22,133	46,362
LT-4(65)	18,444	43,985
LT-5(65)	23,855	53,099
L-7	27,790	57,458
LT-8(65)	29,019	61,816
L-12	33,446	68,949
LT-14(65)	34,184	71,327
L-6	39,348	80,044

3 Year FAS		
Benefit Program	General	Police
L-1	\$ 16,969	\$ 36,060
L-3	23,117	48,344
LT-4(65)	19,428	45,966
LT-5(65)	24,839	55,080
L-7	28,773	59,835
LT-8(65)	30,003	64,590
L-12	34,922	71,327
LT-14(65)	35,413	73,704
L-6	41,070	82,818

Non-Contributory Plan

5 Year FAS		
Benefit Program	General	Police
L-1	\$ 25,084	\$ 49,532
L-3	30,987	61,024
LT-4(65)	27,298	58,646
LT-5(65)	32,708	67,760
L-7	36,643	72,515
LT-8(65)	37,627	76,874
L-12	42,545	84,007
LT-14(65)	43,283	85,988
L-6	48,447	95,498

3 Year FAS		
Benefit Program	General	Police
L-1	\$ 26,068	\$ 51,117
L-3	31,970	62,609
LT-4(65)	28,036	60,628
LT-5(65)	33,692	70,138
L-7	37,873	74,893
LT-8(65)	38,856	79,648
L-12	43,775	86,781
LT-14(65)	44,513	89,158
L-6	49,923	98,272

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

City of Battlefield

Employer Contribution Dollars Rule of 80 Retirement Eligibility

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

Contributory Plan

5 Year FAS		
Benefit Program	General	Police
L-1	\$ 16,723	\$ 34,871
L-3	22,871	46,362
LT-4(65)	19,428	44,381
LT-5(65)	24,839	53,891
L-7	28,527	57,854
LT-8(65)	29,757	62,609
L-12	34,430	68,949
LT-14(65)	35,167	71,723
L-6	40,332	80,441

3 Year FAS		
Benefit Program	General	Police
L-1	\$ 17,707	\$ 36,456
L-3	23,609	48,344
LT-4(65)	20,412	46,362
LT-5(65)	25,822	55,476
L-7	29,511	59,835
LT-8(65)	30,987	64,986
L-12	35,905	71,723
LT-14(65)	36,643	74,100
L-6	41,807	83,214

Non-Contributory Plan

5 Year FAS		
Benefit Program	General	Police
L-1	\$ 25,822	\$ 49,532
L-3	31,724	61,024
LT-4(65)	28,282	59,043
LT-5(65)	33,692	68,157
L-7	37,381	72,912
LT-8(65)	38,856	77,271
L-12	43,283	84,403
LT-14(65)	44,021	86,781
L-6	49,185	95,895

3 Year FAS		
Benefit Program	General	Police
L-1	\$ 26,314	\$ 51,117
L-3	32,708	63,005
LT-4(65)	29,265	61,024
LT-5(65)	34,676	70,534
L-7	38,610	74,893
LT-8(65)	40,086	80,044
L-12	44,759	86,781
LT-14(65)	45,250	89,158
L-6	50,907	98,669

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

City of Battlefield

Employees and Payroll Included in the Valuation

	General	Police
Number of Employees	6	11
Annual Payroll	\$ 245,926	\$ 396,259

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

APPENDIX I

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:

City of Battlefield

Regular Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 92,685	\$ 96,194	\$ 103,842	\$ 107,365
	Police	264,822	274,424	277,457	287,122
L-3	General	118,391	122,726	129,789	134,228
	Police	334,064	346,044	346,872	358,882
LT-4(65)	General	103,603	107,476	114,703	118,617
	Police	316,639	328,105	328,998	340,502
LT-5(65)	General	126,586	131,219	137,927	142,636
	Police	372,940	386,325	385,537	398,913
L-7	General	144,015	149,245	155,758	161,062
	Police	403,230	417,568	416,214	430,631
LT-8(65)	General	149,488	154,884	161,184	166,690
	Police	429,127	444,428	442,010	457,322
L-12	General	169,625	175,716	181,699	187,894
	Police	472,295	489,040	485,627	502,450
LT-14(65)	General	172,343	178,553	184,425	190,700
	Police	485,258	502,466	498,496	515,799
L-6	General	195,195	202,143	207,661	214,742
	Police	541,420	560,581	554,960	574,211

City of Battlefield

Unfunded Actuarial Accrued Liability (UAAL)

Rule of 80 Retirement Eligibility

Benefit Group	Employee Group	Contributory		Non-Contributory	
		UAAL (5 Year FAS)	UAAL (3 Year FAS)	UAAL (5 Year FAS)	UAAL (3 Year FAS)
L-1	General	\$ 95,592	\$ 99,226	\$ 106,660	\$ 110,308
	Police	265,176	274,779	277,809	287,468
L-3	General	121,989	126,471	133,336	137,875
	Police	334,497	346,486	347,283	359,311
LT-4(65)	General	109,949	114,092	120,945	125,119
	Police	317,501	329,002	329,863	341,395
LT-5(65)	General	132,766	137,627	144,042	148,974
	Police	373,762	387,167	386,334	399,750
L-7	General	148,314	153,695	159,990	165,458
	Police	403,732	418,093	416,721	431,176
LT-8(65)	General	155,492	161,121	167,129	172,850
	Police	429,904	445,225	442,769	458,127
L-12	General	174,603	180,872	186,656	193,039
	Police	472,907	489,663	486,206	503,088
LT-14(65)	General	178,185	184,597	190,230	196,724
	Police	485,996	503,229	499,202	516,554
L-6	General	200,852	208,074	213,312	220,617
	Police	542,091	561,275	555,661	574,928

APPENDIX II

SUMMARY OF FINANCIAL ASSUMPTIONS

Summary of Assumptions Used in Actuarial Valuations

Assumptions Adopted by Board of Trustees After Consulting With Actuary

1. The investment return rate used in making the valuations was 7.25% per year, net of investment expenses, compounded annually. This rate of return is not the assumed real rate of return. The real rate of return is the rate of investment return in excess of the inflation rate. The price inflation rate used in making the valuations was 2.50% and the wage inflation rate used in making the valuations was 3.25%. The investment return rate translates to an assumed real rate of return over price inflation of 4.75% and over wage inflation of 4.00%. Adopted 2011 and 2016.
2. The healthy retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 Healthy Annuitant mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The disabled retiree mortality tables, for post-retirement mortality, used in evaluating allowances to be paid were the RP-2014 disabled mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. The pre-retirement mortality tables used were the RP-2014 employees mortality table for males and females, adjusted for mortality improvement back to the observation period base year of 2006. For both the post-retirement and pre-retirement tables, the base year for males was then established to be 2017. Mortality rates for a particular calendar year are determined by applying the MP-2015 mortality improvement scale to the above described tables. Adopted 2016.
3. The probabilities of withdrawal and disability from service, together with individual pay increase assumptions, are shown in Schedule 1. Adopted 2016.
4. The probabilities of retirement with an age and service allowance are shown in Schedule 2. Adopted 2016.
5. Post-retirement cost of living allowances are assumed to be 2.50% per year. Adopted 2016.
6. Total active member payroll is assumed to increase 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							
Sample Ages	Years of Service	General Members				Police		Fire	
		Men		Women		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

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

Schedule 2.

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

Early Retirement

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

Normal Retirement

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

Schedule 2. (Continued)

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

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

APPENDIX III

SUMMARY OF LAGERS PROVISIONS

Missouri Local Government Employees Retirement System

Brief Summary of LAGERS

Benefits and Conditions Evaluated and/or Considered as of February 28, 2019

(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, public safety or fire employee. Optionally, employers may also elect to provide for unreduced benefits for employees whose combination of years of age and years of service equals 80 or more.

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

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

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

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

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

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

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

Early Allowance. Section 70.670. A member may retire with an early allowance after both (i) completing 5 years of credited service, and (ii) attaining age 55 if a general employee or age 50 if a police or fire employee.

The early allowance amount, payable monthly for life, is computed in the same manner as an age & service allowance, based upon the service and earnings record to time of early retirement, but reduced to reflect the fact that the age when payments begin is younger than the minimum service retirement age. The amount of the reduction is 1/2 of 1% (.005) for each month the age at retirement is younger than the minimum service retirement age.

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

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

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

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

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

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

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

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

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

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

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

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

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

APPENDIX IV

BENEFIT ILLUSTRATIONS

Missouri LAGERS

Illustrations of Age and Service Allowance Amounts For Sample Combinations of Service & Salary (L-1 Benefit Program is Years of Credited Service times: 1.00% of FAS ¹)

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 525	\$ 930	\$1,455	97%
2,000	700	1,076	1,776	89%
2,500	875	1,223	2,098	84%
3,000	1,050	1,370	2,420	81%
3,500	1,225	1,516	2,741	78%
4,000	1,400	1,662	3,062	77%
25 Years of Service:				
\$1,500	\$ 375	\$ 930	\$1,305	87%
2,000	500	1,076	1,576	79%
2,500	625	1,223	1,848	74%
3,000	750	1,370	2,120	71%
3,500	875	1,516	2,391	68%
4,000	1,000	1,662	2,662	67%
15 Years of Service:				
\$1,500	\$225	\$ 930	\$1,155	77%
2,000	300	1,076	1,376	69%
2,500	375	1,223	1,598	64%
3,000	450	1,370	1,820	61%
3,500	525	1,516	2,041	58%
4,000	600	1,662	2,262	57%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 656	\$ 930	\$1,586	106%
2,000	875	1,076	1,951	98%
2,500	1,094	1,223	2,317	93%
3,000	1,313	1,370	2,683	89%
3,500	1,531	1,516	3,047	87%
4,000	1,750	1,662	3,412	85%
25 Years of Service:				
\$1,500	\$ 469	\$ 930	\$1,399	93%
2,000	625	1,076	1,701	85%
2,500	781	1,223	2,004	80%
3,000	938	1,370	2,308	77%
3,500	1,094	1,516	2,610	75%
4,000	1,250	1,662	2,912	73%
15 Years of Service:				
\$1,500	\$281	\$ 930	\$1,211	81%
2,000	375	1,076	1,451	73%
2,500	469	1,223	1,692	68%
3,000	563	1,370	1,933	64%
3,500	656	1,516	2,172	62%
4,000	750	1,662	2,412	60%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 788	\$ 930	\$1,718	115%
2,000	1,050	1,076	2,126	106%
2,500	1,313	1,223	2,536	101%
3,000	1,575	1,370	2,945	98%
3,500	1,838	1,516	3,354	96%
4,000	2,100	1,662	3,762	94%
25 Years of Service:				
\$1,500	\$ 563	\$ 930	\$1,493	100%
2,000	750	1,076	1,826	91%
2,500	938	1,223	2,161	86%
3,000	1,125	1,370	2,495	83%
3,500	1,313	1,516	2,829	81%
4,000	1,500	1,662	3,162	79%
15 Years of Service:				
\$1,500	\$338	\$ 930	\$1,268	85%
2,000	450	1,076	1,526	76%
2,500	563	1,223	1,786	71%
3,000	675	1,370	2,045	68%
3,500	788	1,516	2,304	66%
4,000	900	1,662	2,562	64%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$ 919	\$ 930	\$1,849	123%
2,000	1,225	1,076	2,301	115%
2,500	1,531	1,223	2,754	110%
3,000	1,838	1,370	3,208	107%
3,500	2,144	1,516	3,660	105%
4,000	2,450	1,662	4,112	103%
25 Years of Service:				
\$1,500	\$ 656	\$ 930	\$1,586	106%
2,000	875	1,076	1,951	98%
2,500	1,094	1,223	2,317	93%
3,000	1,313	1,370	2,683	89%
3,500	1,531	1,516	3,047	87%
4,000	1,750	1,662	3,412	85%
15 Years of Service:				
\$1,500	\$ 394	\$ 930	\$1,324	88%
2,000	525	1,076	1,601	80%
2,500	656	1,223	1,879	75%
3,000	788	1,370	2,158	72%
3,500	919	1,516	2,435	70%
4,000	1,050	1,662	2,712	68%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³	Estimated Social Security ²	Estimated Monthly Total	
			\$	% of FAS
35 Years of Service:				
\$1,500	\$1,050	\$ 930	\$1,980	132%
2,000	1,400	1,076	2,476	124%
2,500	1,750	1,223	2,973	119%
3,000	2,100	1,370	3,470	116%
3,500	2,450	1,516	3,966	113%
4,000	2,800	1,662	4,462	112%
25 Years of Service:				
\$1,500	\$ 750	\$ 930	\$1,680	112%
2,000	1,000	1,076	2,076	104%
2,500	1,250	1,223	2,473	99%
3,000	1,500	1,370	2,870	96%
3,500	1,750	1,516	3,266	93%
4,000	2,000	1,662	3,662	92%
15 Years of Service:				
\$1,500	\$ 450	\$ 930	\$1,380	92%
2,000	600	1,076	1,676	84%
2,500	750	1,223	1,973	79%
3,000	900	1,370	2,270	76%
3,500	1,050	1,516	2,566	73%
4,000	1,200	1,662	2,862	72%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 525	\$ 930	\$1,050	\$1,455	70%	97%
2,000	1,400	700	1,076	1,400	1,776	70%	89%
2,500	1,750	875	1,223	1,750	2,098	70%	84%
3,000	2,100	1,050	1,370	2,100	2,420	70%	81%
3,500	2,450	1,225	1,516	2,450	2,741	70%	78%
4,000	2,800	1,400	1,662	2,800	3,062	70%	77%
25 Years of Service:							
\$1,500	\$ 750	\$ 375	\$ 930	\$ 750	\$1,305	50%	87%
2,000	1,000	500	1,076	1,000	1,576	50%	79%
2,500	1,250	625	1,223	1,250	1,848	50%	74%
3,000	1,500	750	1,370	1,500	2,120	50%	71%
3,500	1,750	875	1,516	1,750	2,391	50%	68%
4,000	2,000	1,000	1,662	2,000	2,662	50%	67%
15 Years of Service:							
\$1,500	\$ 450	\$225	\$ 930	\$ 450	\$1,155	30%	77%
2,000	600	300	1,076	600	1,376	30%	69%
2,500	750	375	1,223	750	1,598	30%	64%
3,000	900	450	1,370	900	1,820	30%	61%
3,500	1,050	525	1,516	1,050	2,041	30%	58%
4,000	1,200	600	1,662	1,200	2,262	30%	57%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

Missouri LAGERS

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 656	\$ 930	\$1,050	\$1,586	70%	106%
2,000	1,400	875	1,076	1,400	1,951	70%	98%
2,500	1,750	1,094	1,223	1,750	2,317	70%	93%
3,000	2,100	1,313	1,370	2,100	2,683	70%	89%
3,500	2,450	1,531	1,516	2,450	3,047	70%	87%
4,000	2,800	1,750	1,662	2,800	3,412	70%	85%
25 Years of Service:							
\$1,500	\$ 750	\$ 469	\$ 930	\$ 750	\$1,399	50%	93%
2,000	1,000	625	1,076	1,000	1,701	50%	85%
2,500	1,250	781	1,223	1,250	2,004	50%	80%
3,000	1,500	938	1,370	1,500	2,308	50%	77%
3,500	1,750	1,094	1,516	1,750	2,610	50%	75%
4,000	2,000	1,250	1,662	2,000	2,912	50%	73%
15 Years of Service:							
\$1,500	\$ 450	\$281	\$ 930	\$ 450	\$1,211	30%	81%
2,000	600	375	1,076	600	1,451	30%	73%
2,500	750	469	1,223	750	1,692	30%	68%
3,000	900	563	1,370	900	1,933	30%	64%
3,500	1,050	656	1,516	1,050	2,172	30%	62%
4,000	1,200	750	1,662	1,200	2,412	30%	60%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 788	\$ 930	\$1,050	\$1,718	70%	115%
2,000	1,400	1,050	1,076	1,400	2,126	70%	106%
2,500	1,750	1,313	1,223	1,750	2,536	70%	101%
3,000	2,100	1,575	1,370	2,100	2,945	70%	98%
3,500	2,450	1,838	1,516	2,450	3,354	70%	96%
4,000	2,800	2,100	1,662	2,800	3,762	70%	94%
25 Years of Service:							
\$1,500	\$ 750	\$ 563	\$ 930	\$ 750	\$1,493	50%	100%
2,000	1,000	750	1,076	1,000	1,826	50%	91%
2,500	1,250	938	1,223	1,250	2,161	50%	86%
3,000	1,500	1,125	1,370	1,500	2,495	50%	83%
3,500	1,750	1,313	1,516	1,750	2,829	50%	81%
4,000	2,000	1,500	1,662	2,000	3,162	50%	79%
15 Years of Service:							
\$1,500	\$ 450	\$338	\$ 930	\$ 450	\$1,268	30%	85%
2,000	600	450	1,076	600	1,526	30%	76%
2,500	750	563	1,223	750	1,786	30%	71%
3,000	900	675	1,370	900	2,045	30%	68%
3,500	1,050	788	1,516	1,050	2,304	30%	66%
4,000	1,200	900	1,662	1,200	2,562	30%	64%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

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

Final Average Salary (FAS) ¹	LAGERS BENEFIT ³		Estimated Social Security ²	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 919	\$ 930	\$1,050	\$1,849	70%	123%
2,000	1,400	1,225	1,076	1,400	2,301	70%	115%
2,500	1,750	1,531	1,223	1,750	2,754	70%	110%
3,000	2,100	1,838	1,370	2,100	3,208	70%	107%
3,500	2,450	2,144	1,516	2,450	3,660	70%	105%
4,000	2,800	2,450	1,662	2,800	4,112	70%	103%
25 Years of Service:							
\$1,500	\$ 750	\$ 656	\$ 930	\$ 750	\$1,586	50%	106%
2,000	1,000	875	1,076	1,000	1,951	50%	98%
2,500	1,250	1,094	1,223	1,250	2,317	50%	93%
3,000	1,500	1,313	1,370	1,500	2,683	50%	89%
3,500	1,750	1,531	1,516	1,750	3,047	50%	87%
4,000	2,000	1,750	1,662	2,000	3,412	50%	85%
15 Years of Service:							
\$1,500	\$ 450	\$ 394	\$ 930	\$ 450	\$1,324	30%	88%
2,000	600	525	1,076	600	1,601	30%	80%
2,500	750	656	1,223	750	1,879	30%	75%
3,000	900	788	1,370	900	2,158	30%	72%
3,500	1,050	919	1,516	1,050	2,435	30%	70%
4,000	1,200	1,050	1,662	1,200	2,712	30%	68%

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

² "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2019 - it does not include any amounts which might be payable to an eligible spouse or children.

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

APPENDIX V

AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES

City of Battlefield - General

January 31, 2020

By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20									
20-24									
25-29									
30-34									
35-39	1							1	\$ 35,994
40-44									
45-49		1						1	\$ 47,132
50-54	1							1	\$ 31,197
55-59	1							1	\$ 64,679
60-64	1							1	\$ 22,788
65-69	1							1	\$ 44,136
70 & Over									
Totals	5	1						6	\$ 245,926

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

Age: 52.8 years.

Benefit Service: 3.8 years.

Annual Pay: \$ 40,988.

City of Battlefield - Police

January 31, 2020

By Attained Age and Years of Service

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
Under 20									
20-24									
25-29	2							2	\$ 67,486
30-34									
35-39	1							1	\$ 33,000
40-44	1	1						2	\$ 73,683
45-49		1						1	\$ 37,357
50-54	1			1				2	\$ 96,740
55-59		1						1	\$ 40,919
60-64									
65-69			1					1	\$ 33,810
70 & Over	1							1	\$ 13,264
Totals	6	3	1	1				11	\$ 396,259

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

Age: 48.1 years.

Benefit Service: 6.1 years.

Annual Pay: \$ 36,024.

APPENDIX VI

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:

1. **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.



March 18, 2020 E-mail

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

Dear Bob:

Enclosed is the report of the January 31, 2020 Initial Actuarial Valuation of LAGERS benefits for the employees of

City of Battlefield

Sincerely,

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

Mita D. Drazilov, ASA, FCA, MAAA

MDD:wp

March 18, 2020

City of Battlefield
Branson West, Missouri

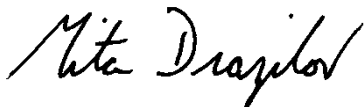
Ladies and Gentlemen:

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 January 31, 2020 Initial Valuation for the City of Battlefield dated March 18, 2020.

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, 2019.

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 D. Drazilov, ASA, FCA, MAAA

City of Battlefield - General

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 245,926	6.6%	\$16,231	\$ 92,685	9.0%	\$22,133	\$ 118,391	7.5%	\$18,444	\$ 103,603
2021	253,919	6.6	16,759	93,955	9.0	22,853	120,013	7.5	19,044	105,022
2022	262,171	6.6	17,303	95,140	9.0	23,595	121,526	7.5	19,663	106,346
2023	270,692	6.6	17,866	96,228	9.0	24,362	122,915	7.5	20,302	107,562
2024	279,489	6.6	18,446	97,206	9.0	25,154	124,164	7.5	20,962	108,655
2025	288,572	6.6	19,046	98,060	9.0	25,971	125,254	7.5	21,643	109,609
2026	297,951	6.6	19,665	98,774	9.0	26,816	126,166	7.5	22,346	110,407
2027	307,634	6.6	20,304	99,332	9.0	27,687	126,879	7.5	23,073	111,031
2028	317,632	6.6	20,964	99,716	9.0	28,587	127,370	7.5	23,822	111,460
2029	327,955	6.6	21,645	99,906	9.0	29,516	127,613	7.5	24,597	111,673

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 245,926	9.7%	\$23,855	\$ 126,586	11.3%	\$27,790	\$ 144,015	11.8%	\$29,019	\$ 149,488
2021	253,919	9.7	24,630	128,320	11.3	28,693	145,988	11.8	29,962	151,536
2022	262,171	9.7	25,431	129,938	11.3	29,625	147,829	11.8	30,936	153,447
2023	270,692	9.7	26,257	131,424	11.3	30,588	149,519	11.8	31,942	155,201
2024	279,489	9.7	27,110	132,759	11.3	31,582	151,038	11.8	32,980	156,778
2025	288,572	9.7	27,991	133,925	11.3	32,609	152,364	11.8	34,051	158,155
2026	297,951	9.7	28,901	134,901	11.3	33,668	153,474	11.8	35,158	159,307
2027	307,634	9.7	29,840	135,663	11.3	34,763	154,341	11.8	36,301	160,207
2028	317,632	9.7	30,810	136,188	11.3	35,892	154,938	11.8	37,481	160,827
2029	327,955	9.7	31,812	136,448	11.3	37,059	155,234	11.8	38,699	161,134

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 245,926	13.6%	\$33,446	\$ 169,625	13.9%	\$34,184	\$ 172,343	16.0%	\$39,348	\$ 195,195
2021	253,919	13.6	34,533	171,949	13.9	35,295	174,704	16.0	40,627	197,869
2022	262,171	13.6	35,655	174,117	13.9	36,442	176,907	16.0	41,947	200,364
2023	270,692	13.6	36,814	176,108	13.9	37,626	178,930	16.0	43,311	202,655
2024	279,489	13.6	38,011	177,897	13.9	38,849	180,748	16.0	44,718	204,714
2025	288,572	13.6	39,246	179,459	13.9	40,112	182,335	16.0	46,172	206,512
2026	297,951	13.6	40,521	180,766	13.9	41,415	183,663	16.0	47,672	208,016
2027	307,634	13.6	41,838	181,788	13.9	42,761	184,701	16.0	49,221	209,192
2028	317,632	13.6	43,198	182,491	13.9	44,151	185,415	16.0	50,821	210,001
2029	327,955	13.6	44,602	182,839	13.9	45,586	185,769	16.0	52,473	210,402

Notes regarding the above projections:

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

City of Battlefield - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2020	\$ 245,926	6.9%	\$16,969	\$ 96,194	9.4%	\$23,117	\$ 122,726	7.9%	\$19,428	\$ 107,476
2021	253,919	6.9	17,520	97,512	9.4	23,868	124,407	7.9	20,060	108,948
2022	262,171	6.9	18,090	98,742	9.4	24,644	125,976	7.9	20,712	110,322
2023	270,692	6.9	18,678	99,871	9.4	25,445	127,416	7.9	21,385	111,583
2024	279,489	6.9	19,285	100,886	9.4	26,272	128,711	7.9	22,080	112,717
2025	288,572	6.9	19,911	101,772	9.4	27,126	129,841	7.9	22,797	113,707
2026	297,951	6.9	20,559	102,513	9.4	28,007	130,787	7.9	23,538	114,535
2027	307,634	6.9	21,227	103,092	9.4	28,918	131,526	7.9	24,303	115,182
2028	317,632	6.9	21,917	103,491	9.4	29,857	132,035	7.9	25,093	115,627
2029	327,955	6.9	22,629	103,689	9.4	30,828	132,287	7.9	25,908	115,848

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2020	\$ 245,926	10.1%	\$24,839	\$ 131,219	11.7%	\$28,773	\$ 149,245	12.2%	\$30,003	\$ 154,884
2021	253,919	10.1	25,646	133,017	11.7	29,709	151,290	12.2	30,978	157,006
2022	262,171	10.1	26,479	134,694	11.7	30,674	153,198	12.2	31,985	158,986
2023	270,692	10.1	27,340	136,234	11.7	31,671	154,950	12.2	33,024	160,804
2024	279,489	10.1	28,228	137,618	11.7	32,700	156,524	12.2	34,098	162,438
2025	288,572	10.1	29,146	138,827	11.7	33,763	157,899	12.2	35,206	163,865
2026	297,951	10.1	30,093	139,838	11.7	34,860	159,049	12.2	36,350	165,059
2027	307,634	10.1	31,071	140,628	11.7	35,993	159,948	12.2	37,531	165,992
2028	317,632	10.1	32,081	141,172	11.7	37,163	160,567	12.2	38,751	166,634
2029	327,955	10.1	33,123	141,442	11.7	38,371	160,874	12.2	40,011	166,952

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2020	\$ 245,926	14.2%	\$34,922	\$ 175,716	14.4%	\$35,413	\$ 178,553	16.7%	\$41,070	\$ 202,143
2021	253,919	14.2	36,056	178,123	14.4	36,564	180,999	16.7	42,404	204,912
2022	262,171	14.2	37,228	180,369	14.4	37,753	183,281	16.7	43,783	207,496
2023	270,692	14.2	38,438	182,431	14.4	38,980	185,376	16.7	45,206	209,868
2024	279,489	14.2	39,687	184,285	14.4	40,246	187,260	16.7	46,675	212,000
2025	288,572	14.2	40,977	185,903	14.4	41,554	188,905	16.7	48,192	213,862
2026	297,951	14.2	42,309	187,257	14.4	42,905	190,281	16.7	49,758	215,420
2027	307,634	14.2	43,684	188,315	14.4	44,299	191,356	16.7	51,375	216,637
2028	317,632	14.2	45,104	189,043	14.4	45,739	192,096	16.7	53,045	217,475
2029	327,955	14.2	46,570	189,404	14.4	47,226	192,463	16.7	54,768	217,890

Notes regarding the above projections:

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

City of Battlefield - General

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

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	10.2%	\$25,084	\$ 103,842	12.6%	\$30,987	\$ 129,789	11.1%	\$27,298	\$ 114,703
2021	253,919	10.2	25,900	105,265	12.6	31,994	131,567	11.1	28,185	116,274
2022	262,171	10.2	26,741	106,592	12.6	33,034	133,226	11.1	29,101	117,740
2023	270,692	10.2	27,611	107,811	12.6	34,107	134,749	11.1	30,047	119,086
2024	279,489	10.2	28,508	108,906	12.6	35,216	136,118	11.1	31,023	120,296
2025	288,572	10.2	29,434	109,862	12.6	36,360	137,313	11.1	32,031	121,352
2026	297,951	10.2	30,391	110,662	12.6	37,542	138,313	11.1	33,073	122,236
2027	307,634	10.2	31,379	111,287	12.6	38,762	139,095	11.1	34,147	122,927
2028	317,632	10.2	32,398	111,717	12.6	40,022	139,633	11.1	35,257	123,402
2029	327,955	10.2	33,451	111,930	12.6	41,322	139,900	11.1	36,403	123,638

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	13.3%	\$32,708	\$ 137,927	14.9%	\$36,643	\$ 155,758	15.3%	\$37,627	\$ 161,184
2021	253,919	13.3	33,771	139,817	14.9	37,834	157,892	15.3	38,850	163,392
2022	262,171	13.3	34,869	141,580	14.9	39,063	159,883	15.3	40,112	165,452
2023	270,692	13.3	36,002	143,199	14.9	40,333	161,711	15.3	41,416	167,344
2024	279,489	13.3	37,172	144,654	14.9	41,644	163,354	15.3	42,762	169,044
2025	288,572	13.3	38,380	145,924	14.9	42,997	164,789	15.3	44,152	170,529
2026	297,951	13.3	39,627	146,987	14.9	44,395	165,989	15.3	45,587	171,771
2027	307,634	13.3	40,915	147,818	14.9	45,837	166,927	15.3	47,068	172,742
2028	317,632	13.3	42,245	148,390	14.9	47,327	167,573	15.3	48,598	173,410
2029	327,955	13.3	43,618	148,673	14.9	48,865	167,893	15.3	50,177	173,741

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	17.3%	\$42,545	\$ 181,699	17.6%	\$43,283	\$ 184,425	19.7%	\$48,447	\$ 207,661
2021	253,919	17.3	43,928	184,188	17.6	44,690	186,952	19.7	50,022	210,506
2022	262,171	17.3	45,356	186,510	17.6	46,142	189,309	19.7	51,648	213,160
2023	270,692	17.3	46,830	188,642	17.6	47,642	191,473	19.7	53,326	215,597
2024	279,489	17.3	48,352	190,559	17.6	49,190	193,419	19.7	55,059	217,788
2025	288,572	17.3	49,923	192,233	17.6	50,789	195,118	19.7	56,849	219,701
2026	297,951	17.3	51,546	193,633	17.6	52,439	196,539	19.7	58,696	221,301
2027	307,634	17.3	53,221	194,727	17.6	54,144	197,650	19.7	60,604	222,552
2028	317,632	17.3	54,950	195,480	17.6	55,903	198,414	19.7	62,574	223,413
2029	327,955	17.3	56,736	195,853	17.6	57,720	198,793	19.7	64,607	223,840

Notes regarding the above projections:

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

City of Battlefield - General

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

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued	Estimated Employer Contribution		Unfunded Actuarial Accrued	Estimated Employer Contribution		Unfunded Actuarial Accrued
		As a % of Payroll	Annual Dollars	Liability	As a % of Payroll	Annual Dollars	Liability	As a % of Payroll	Annual Dollars	Liability
2020	\$ 245,926	10.6%	\$26,068	\$ 107,365	13.0%	\$31,970	\$ 134,228	11.4%	\$28,036	\$ 118,617
2021	253,919	10.6	26,915	108,836	13.0	33,009	136,067	11.4	28,947	120,242
2022	262,171	10.6	27,790	110,208	13.0	34,082	137,783	11.4	29,887	121,758
2023	270,692	10.6	28,693	111,468	13.0	35,190	139,358	11.4	30,859	123,150
2024	279,489	10.6	29,626	112,601	13.0	36,334	140,774	11.4	31,862	124,401
2025	288,572	10.6	30,589	113,590	13.0	37,514	142,010	11.4	32,897	125,494
2026	297,951	10.6	31,583	114,417	13.0	38,734	143,044	11.4	33,966	126,408
2027	307,634	10.6	32,609	115,064	13.0	39,992	143,852	11.4	35,070	127,122
2028	317,632	10.6	33,669	115,509	13.0	41,292	144,408	11.4	36,210	127,614
2029	327,955	10.6	34,763	115,730	13.0	42,634	144,684	11.4	37,387	127,858

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued	Estimated Employer Contribution		Unfunded Actuarial Accrued	Estimated Employer Contribution		Unfunded Actuarial Accrued
		As a % of Payroll	Annual Dollars	Liability	As a % of Payroll	Annual Dollars	Liability	As a % of Payroll	Annual Dollars	Liability
2020	\$ 245,926	13.7%	\$33,692	\$ 142,636	15.4%	\$37,873	\$ 161,062	15.8%	\$38,856	\$ 166,690
2021	253,919	13.7	34,787	144,590	15.4	39,104	163,269	15.8	40,119	168,974
2022	262,171	13.7	35,917	146,413	15.4	40,374	165,328	15.8	41,423	171,105
2023	270,692	13.7	37,085	148,087	15.4	41,687	167,218	15.8	42,769	173,061
2024	279,489	13.7	38,290	149,592	15.4	43,041	168,917	15.8	44,159	174,819
2025	288,572	13.7	39,534	150,906	15.4	44,440	170,400	15.8	45,594	176,354
2026	297,951	13.7	40,819	152,005	15.4	45,884	171,641	15.8	47,076	177,639
2027	307,634	13.7	42,146	152,864	15.4	47,376	172,611	15.8	48,606	178,643
2028	317,632	13.7	43,516	153,455	15.4	48,915	173,278	15.8	50,186	179,334
2029	327,955	13.7	44,930	153,748	15.4	50,505	173,609	15.8	51,817	179,676

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued	Estimated Employer Contribution		Unfunded Actuarial Accrued	Estimated Employer Contribution		Unfunded Actuarial Accrued
		As a % of Payroll	Annual Dollars	Liability	As a % of Payroll	Annual Dollars	Liability	As a % of Payroll	Annual Dollars	Liability
2020	\$ 245,926	17.8%	\$43,775	\$ 187,894	18.1%	\$44,513	\$ 190,700	20.3%	\$49,923	\$ 214,742
2021	253,919	17.8	45,198	190,468	18.1	45,959	193,313	20.3	51,546	217,684
2022	262,171	17.8	46,666	192,870	18.1	47,453	195,751	20.3	53,221	220,429
2023	270,692	17.8	48,183	195,075	18.1	48,995	197,989	20.3	54,950	222,949
2024	279,489	17.8	49,749	197,057	18.1	50,588	200,001	20.3	56,736	225,214
2025	288,572	17.8	51,366	198,788	18.1	52,232	201,757	20.3	58,580	227,192
2026	297,951	17.8	53,035	200,236	18.1	53,929	203,227	20.3	60,484	228,847
2027	307,634	17.8	54,759	201,368	18.1	55,682	204,376	20.3	62,450	230,140
2028	317,632	17.8	56,538	202,147	18.1	57,491	205,166	20.3	64,479	231,030
2029	327,955	17.8	58,376	202,533	18.1	59,360	205,558	20.3	66,575	231,471

Notes regarding the above projections:

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

City of Battlefield - General

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2020	\$ 245,926	6.8%	\$16,723	\$ 95,592	9.3%	\$22,871	\$ 121,989	7.9%	\$19,428	\$ 109,949
2021	253,919	6.8	17,266	96,902	9.3	23,614	123,660	7.9	20,060	111,455
2022	262,171	6.8	17,828	98,124	9.3	24,382	125,219	7.9	20,712	112,860
2023	270,692	6.8	18,407	99,246	9.3	25,174	126,651	7.9	21,385	114,150
2024	279,489	6.8	19,005	100,254	9.3	25,992	127,938	7.9	22,080	115,310
2025	288,572	6.8	19,623	101,134	9.3	26,837	129,062	7.9	22,797	116,323
2026	297,951	6.8	20,261	101,871	9.3	27,709	130,002	7.9	23,538	117,170
2027	307,634	6.8	20,919	102,447	9.3	28,610	130,737	7.9	24,303	117,832
2028	317,632	6.8	21,599	102,843	9.3	29,540	131,243	7.9	25,093	118,288
2029	327,955	6.8	22,301	103,039	9.3	30,500	131,494	7.9	25,908	118,514

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2020	\$ 245,926	10.1%	\$24,839	\$ 132,766	11.6%	\$28,527	\$ 148,314	12.1%	\$29,757	\$ 155,492
2021	253,919	10.1	25,646	134,585	11.6	29,455	150,346	12.1	30,724	157,622
2022	262,171	10.1	26,479	136,282	11.6	30,412	152,242	12.1	31,723	159,610
2023	270,692	10.1	27,340	137,840	11.6	31,400	153,983	12.1	32,754	161,435
2024	279,489	10.1	28,228	139,241	11.6	32,421	155,548	12.1	33,818	163,075
2025	288,572	10.1	29,146	140,464	11.6	33,474	156,914	12.1	34,917	164,507
2026	297,951	10.1	30,093	141,487	11.6	34,562	158,057	12.1	36,052	165,705
2027	307,634	10.1	31,071	142,287	11.6	35,686	158,950	12.1	37,224	166,642
2028	317,632	10.1	32,081	142,837	11.6	36,845	159,565	12.1	38,433	167,286
2029	327,955	10.1	33,123	143,110	11.6	38,043	159,870	12.1	39,683	167,605

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2020	\$ 245,926	14.0%	\$34,430	\$ 174,603	14.3%	\$35,167	\$ 178,185	16.4%	\$40,332	\$ 200,852
2021	253,919	14.0	35,549	176,995	14.3	36,310	180,626	16.4	41,643	203,604
2022	262,171	14.0	36,704	179,227	14.3	37,490	182,904	16.4	42,996	206,171
2023	270,692	14.0	37,897	181,276	14.3	38,709	184,995	16.4	44,393	208,528
2024	279,489	14.0	39,128	183,118	14.3	39,967	186,875	16.4	45,836	210,647
2025	288,572	14.0	40,400	184,726	14.3	41,266	188,516	16.4	47,326	212,497
2026	297,951	14.0	41,713	186,072	14.3	42,607	189,889	16.4	48,864	214,045
2027	307,634	14.0	43,069	187,124	14.3	43,992	190,962	16.4	50,452	215,255
2028	317,632	14.0	44,468	187,848	14.3	45,421	191,700	16.4	52,092	216,087
2029	327,955	14.0	45,914	188,207	14.3	46,898	192,066	16.4	53,785	216,500

Notes regarding the above projections:

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

City of Battlefield - General

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	7.2%	\$17,707	\$ 99,226	9.6%	\$23,609	\$ 126,471	8.3%	\$20,412	\$ 114,092
2021	253,919	7.2	18,282	100,585	9.6	24,376	128,204	8.3	21,075	115,655
2022	262,171	7.2	18,876	101,853	9.6	25,168	129,821	8.3	21,760	117,113
2023	270,692	7.2	19,490	103,017	9.6	25,986	131,305	8.3	22,467	118,452
2024	279,489	7.2	20,123	104,064	9.6	26,831	132,639	8.3	23,198	119,656
2025	288,572	7.2	20,777	104,978	9.6	27,703	133,804	8.3	23,951	120,707
2026	297,951	7.2	21,452	105,743	9.6	28,603	134,779	8.3	24,730	121,586
2027	307,634	7.2	22,150	106,341	9.6	29,533	135,541	8.3	25,534	122,273
2028	317,632	7.2	22,870	106,752	9.6	30,493	136,065	8.3	26,363	122,746
2029	327,955	7.2	23,613	106,956	9.6	31,484	136,325	8.3	27,220	122,980

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	10.5%	\$25,822	\$ 137,627	12.0%	\$29,511	\$ 153,695	12.6%	\$30,987	\$ 161,121
2021	253,919	10.5	26,661	139,512	12.0	30,470	155,801	12.6	31,994	163,328
2022	262,171	10.5	27,528	141,271	12.0	31,461	157,766	12.6	33,034	165,387
2023	270,692	10.5	28,423	142,886	12.0	32,483	159,570	12.6	34,107	167,278
2024	279,489	10.5	29,346	144,338	12.0	33,539	161,191	12.6	35,216	168,978
2025	288,572	10.5	30,300	145,606	12.0	34,629	162,607	12.6	36,360	170,462
2026	297,951	10.5	31,285	146,667	12.0	35,754	163,791	12.6	37,542	171,704
2027	307,634	10.5	32,302	147,496	12.0	36,916	164,717	12.6	38,762	172,674
2028	317,632	10.5	33,351	148,066	12.0	38,116	165,354	12.6	40,022	173,342
2029	327,955	10.5	34,435	148,349	12.0	39,355	165,670	12.6	41,322	173,673

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	14.6%	\$35,905	\$ 180,872	14.9%	\$36,643	\$ 184,597	17.0%	\$41,807	\$ 208,074
2021	253,919	14.6	37,072	183,350	14.9	37,834	187,126	17.0	43,166	210,925
2022	262,171	14.6	38,277	185,662	14.9	39,063	189,486	17.0	44,569	213,585
2023	270,692	14.6	39,521	187,785	14.9	40,333	191,652	17.0	46,018	216,027
2024	279,489	14.6	40,805	189,693	14.9	41,644	193,599	17.0	47,513	218,222
2025	288,572	14.6	42,132	191,359	14.9	42,997	195,299	17.0	49,057	220,139
2026	297,951	14.6	43,501	192,753	14.9	44,395	196,722	17.0	50,652	221,743
2027	307,634	14.6	44,915	193,842	14.9	45,837	197,834	17.0	52,298	222,996
2028	317,632	14.6	46,374	194,592	14.9	47,327	198,599	17.0	53,997	223,858
2029	327,955	14.6	47,881	194,964	14.9	48,865	198,978	17.0	55,752	224,285

Notes regarding the above projections:

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

City of Battlefield - General

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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	10.5%	\$25,822	\$ 106,660	12.9%	\$31,724	\$ 133,336	11.5%	\$28,282	\$ 120,945
2021	253,919	10.5	26,661	108,121	12.9	32,756	135,163	11.5	29,201	122,602
2022	262,171	10.5	27,528	109,484	12.9	33,820	136,867	11.5	30,150	124,148
2023	270,692	10.5	28,423	110,736	12.9	34,919	138,432	11.5	31,130	125,567
2024	279,489	10.5	29,346	111,861	12.9	36,054	139,839	11.5	32,141	126,843
2025	288,572	10.5	30,300	112,843	12.9	37,226	141,067	11.5	33,186	127,957
2026	297,951	10.5	31,285	113,665	12.9	38,436	142,095	11.5	34,264	128,889
2027	307,634	10.5	32,302	114,307	12.9	39,685	142,898	11.5	35,378	129,617
2028	317,632	10.5	33,351	114,749	12.9	40,975	143,451	11.5	36,528	130,118
2029	327,955	10.5	34,435	114,968	12.9	42,306	143,725	11.5	37,715	130,366

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	13.7%	\$33,692	\$ 144,042	15.2%	\$37,381	\$ 159,990	15.8%	\$38,856	\$ 167,129
2021	253,919	13.7	34,787	146,015	15.2	38,596	162,182	15.8	40,119	169,419
2022	262,171	13.7	35,917	147,856	15.2	39,850	164,227	15.8	41,423	171,555
2023	270,692	13.7	37,085	149,546	15.2	41,145	166,105	15.8	42,769	173,516
2024	279,489	13.7	38,290	151,066	15.2	42,482	167,793	15.8	44,159	175,279
2025	288,572	13.7	39,534	152,393	15.2	43,863	169,267	15.8	45,594	176,818
2026	297,951	13.7	40,819	153,503	15.2	45,289	170,500	15.8	47,076	178,106
2027	307,634	13.7	42,146	154,371	15.2	46,760	171,464	15.8	48,606	179,113
2028	317,632	13.7	43,516	154,968	15.2	48,280	172,127	15.8	50,186	179,806
2029	327,955	13.7	44,930	155,264	15.2	49,849	172,456	15.8	51,817	180,149

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	17.6%	\$43,283	\$ 186,656	17.9%	\$44,021	\$ 190,230	20.0%	\$49,185	\$ 213,312
2021	253,919	17.6	44,690	189,213	17.9	45,452	192,836	20.0	50,784	216,234
2022	262,171	17.6	46,142	191,599	17.9	46,929	195,268	20.0	52,434	218,961
2023	270,692	17.6	47,642	193,790	17.9	48,454	197,500	20.0	54,138	221,464
2024	279,489	17.6	49,190	195,759	17.9	50,029	199,507	20.0	55,898	223,714
2025	288,572	17.6	50,789	197,478	17.9	51,654	201,259	20.0	57,714	225,679
2026	297,951	17.6	52,439	198,916	17.9	53,333	202,725	20.0	59,590	227,323
2027	307,634	17.6	54,144	200,040	17.9	55,066	203,871	20.0	61,527	228,608
2028	317,632	17.6	55,903	200,814	17.9	56,856	204,659	20.0	63,526	229,492
2029	327,955	17.6	57,720	201,197	17.9	58,704	205,050	20.0	65,591	229,930

Notes regarding the above projections:

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

City of Battlefield - General

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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	10.7%	\$26,314	\$ 110,308	13.3%	\$32,708	\$ 137,875	11.9%	\$29,265	\$ 125,119
2021	253,919	10.7	27,169	111,819	13.3	33,771	139,764	11.9	30,216	126,833
2022	262,171	10.7	28,052	113,229	13.3	34,869	141,526	11.9	31,198	128,432
2023	270,692	10.7	28,964	114,524	13.3	36,002	143,144	11.9	32,212	129,900
2024	279,489	10.7	29,905	115,688	13.3	37,172	144,598	11.9	33,259	131,220
2025	288,572	10.7	30,877	116,704	13.3	38,380	145,868	11.9	34,340	132,372
2026	297,951	10.7	31,881	117,554	13.3	39,627	146,931	11.9	35,456	133,336
2027	307,634	10.7	32,917	118,218	13.3	40,915	147,761	11.9	36,608	134,090
2028	317,632	10.7	33,987	118,675	13.3	42,245	148,332	11.9	37,798	134,609
2029	327,955	10.7	35,091	118,902	13.3	43,618	148,615	11.9	39,027	134,866

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	14.1%	\$34,676	\$ 148,974	15.7%	\$38,610	\$ 165,458	16.3%	\$40,086	\$ 172,850
2021	253,919	14.1	35,803	151,015	15.7	39,865	167,725	16.3	41,389	175,218
2022	262,171	14.1	36,966	152,919	15.7	41,161	169,840	16.3	42,734	177,427
2023	270,692	14.1	38,168	154,667	15.7	42,499	171,782	16.3	44,123	179,456
2024	279,489	14.1	39,408	156,239	15.7	43,880	173,527	16.3	45,557	181,279
2025	288,572	14.1	40,689	157,611	15.7	45,306	175,051	16.3	47,037	182,871
2026	297,951	14.1	42,011	158,759	15.7	46,778	176,326	16.3	48,566	184,203
2027	307,634	14.1	43,376	159,656	15.7	48,299	177,323	16.3	50,144	185,244
2028	317,632	14.1	44,786	160,273	15.7	49,868	178,009	16.3	51,774	185,960
2029	327,955	14.1	46,242	160,579	15.7	51,489	178,349	16.3	53,457	186,315

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 245,926	18.2%	\$44,759	\$ 193,039	18.4%	\$45,250	\$ 196,724	20.7%	\$50,907	\$ 220,617
2021	253,919	18.2	46,213	195,684	18.4	46,721	199,419	20.7	52,561	223,639
2022	262,171	18.2	47,715	198,151	18.4	48,239	201,934	20.7	54,269	226,459
2023	270,692	18.2	49,266	200,416	18.4	49,807	204,243	20.7	56,033	229,048
2024	279,489	18.2	50,867	202,452	18.4	51,426	206,318	20.7	57,854	231,375
2025	288,572	18.2	52,520	204,230	18.4	53,097	208,130	20.7	59,734	233,407
2026	297,951	18.2	54,227	205,718	18.4	54,823	209,646	20.7	61,676	235,107
2027	307,634	18.2	55,989	206,881	18.4	56,605	210,831	20.7	63,680	236,436
2028	317,632	18.2	57,809	207,681	18.4	58,444	211,646	20.7	65,750	237,350
2029	327,955	18.2	59,688	208,078	18.4	60,344	212,050	20.7	67,887	237,803

Notes regarding the above projections:

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

City of Battlefield - Police

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	8.8%	\$34,871	\$ 264,822	11.7%	\$46,362	\$ 334,064	11.1%	\$43,985	\$ 316,639
2021	409,138	8.8	36,004	268,450	11.7	47,869	338,641	11.1	45,414	320,977
2022	422,435	8.8	37,174	271,835	11.7	49,425	342,911	11.1	46,890	325,024
2023	436,164	8.8	38,382	274,943	11.7	51,031	346,831	11.1	48,414	328,740
2024	450,339	8.8	39,630	277,737	11.7	52,690	350,355	11.1	49,988	332,080
2025	464,975	8.8	40,918	280,176	11.7	54,402	353,432	11.1	51,612	334,996
2026	480,087	8.8	42,248	282,217	11.7	56,170	356,007	11.1	53,290	337,436
2027	495,690	8.8	43,621	283,812	11.7	57,996	358,019	11.1	55,022	339,343
2028	511,800	8.8	45,038	284,910	11.7	59,881	359,403	11.1	56,810	340,655
2029	528,434	8.8	46,502	285,454	11.7	61,827	360,089	11.1	58,656	341,305

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	13.3%	\$52,702	\$ 372,940	14.5%	\$57,458	\$ 403,230	15.6%	\$61,816	\$ 429,127
2021	409,138	13.3	54,415	378,049	14.5	59,325	408,754	15.6	63,826	435,006
2022	422,435	13.3	56,184	382,816	14.5	61,253	413,908	15.6	65,900	440,491
2023	436,164	13.3	58,010	387,193	14.5	63,244	418,640	15.6	68,042	445,527
2024	450,339	13.3	59,895	391,127	14.5	65,299	422,894	15.6	70,253	450,054
2025	464,975	13.3	61,842	394,562	14.5	67,421	426,608	15.6	72,536	454,007
2026	480,087	13.3	63,852	397,436	14.5	69,613	429,716	15.6	74,894	457,314
2027	495,690	13.3	65,927	399,682	14.5	71,875	432,145	15.6	77,328	459,899
2028	511,800	13.3	68,069	401,228	14.5	74,211	433,816	15.6	79,841	461,677
2029	528,434	13.3	70,282	401,994	14.5	76,623	434,644	15.6	82,436	462,559

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	17.4%	\$68,949	\$ 472,295	18.0%	\$71,327	\$ 485,258	20.2%	\$80,044	\$ 541,420
2021	409,138	17.4	71,190	478,765	18.0	73,645	491,906	20.2	82,646	548,837
2022	422,435	17.4	73,504	484,802	18.0	76,038	498,109	20.2	85,332	555,757
2023	436,164	17.4	75,893	490,345	18.0	78,510	503,804	20.2	88,105	562,111
2024	450,339	17.4	78,359	495,327	18.0	81,061	508,923	20.2	90,968	567,823
2025	464,975	17.4	80,906	499,677	18.0	83,696	513,393	20.2	93,925	572,810
2026	480,087	17.4	83,535	503,317	18.0	86,416	517,133	20.2	96,978	576,983
2027	495,690	17.4	86,250	506,162	18.0	89,224	520,056	20.2	100,129	580,244
2028	511,800	17.4	89,053	508,119	18.0	92,124	522,067	20.2	103,384	582,488
2029	528,434	17.4	91,948	509,089	18.0	95,118	523,064	20.2	106,744	583,600

Notes regarding the above projections:

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

City of Battlefield - Police

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 396,259	9.1%	\$36,060	\$ 274,424	12.2%	\$48,344	\$ 346,044	11.6%	\$45,966	\$ 328,105
2021	409,138	9.1	37,232	278,184	12.2	49,915	350,785	11.6	47,460	332,600
2022	422,435	9.1	38,442	281,692	12.2	51,537	355,208	11.6	49,002	336,794
2023	436,164	9.1	39,691	284,913	12.2	53,212	359,269	11.6	50,595	340,645
2024	450,339	9.1	40,981	287,808	12.2	54,941	362,920	11.6	52,239	344,106
2025	464,975	9.1	42,313	290,336	12.2	56,727	366,107	11.6	53,937	347,128
2026	480,087	9.1	43,688	292,451	12.2	58,571	368,774	11.6	55,690	349,657
2027	495,690	9.1	45,108	294,104	12.2	60,474	370,858	11.6	57,500	351,633
2028	511,800	9.1	46,574	295,241	12.2	62,440	372,292	11.6	59,369	352,993
2029	528,434	9.1	48,087	295,805	12.2	64,469	373,003	11.6	61,298	353,667

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 396,259	13.9%	\$55,080	\$ 386,325	15.1%	\$59,835	\$ 417,568	16.3%	\$64,590	\$ 444,428
2021	409,138	13.9	56,870	391,618	15.1	61,780	423,289	16.3	66,689	450,517
2022	422,435	13.9	58,718	396,556	15.1	63,788	428,626	16.3	68,857	456,198
2023	436,164	13.9	60,627	401,090	15.1	65,861	433,526	16.3	71,095	461,414
2024	450,339	13.9	62,597	405,165	15.1	68,001	437,931	16.3	73,405	466,102
2025	464,975	13.9	64,632	408,723	15.1	70,211	441,777	16.3	75,791	470,195
2026	480,087	13.9	66,732	411,700	15.1	72,493	444,995	16.3	78,254	473,620
2027	495,690	13.9	68,901	414,027	15.1	74,849	447,510	16.3	80,797	476,297
2028	511,800	13.9	71,140	415,628	15.1	77,282	449,241	16.3	83,423	478,139
2029	528,434	13.9	73,452	416,422	15.1	79,794	450,099	16.3	86,135	479,052

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 396,259	18.0%	\$71,327	\$ 489,040	18.6%	\$73,704	\$ 502,466	20.9%	\$82,818	\$ 560,581
2021	409,138	18.0	73,645	495,740	18.6	76,100	509,350	20.9	85,510	568,261
2022	422,435	18.0	76,038	501,991	18.6	78,573	515,773	20.9	88,289	575,426
2023	436,164	18.0	78,510	507,730	18.6	81,127	521,670	20.9	91,158	582,005
2024	450,339	18.0	81,061	512,889	18.6	83,763	526,971	20.9	94,121	587,919
2025	464,975	18.0	83,696	517,393	18.6	86,485	531,599	20.9	97,180	593,082
2026	480,087	18.0	86,416	521,162	18.6	89,296	535,471	20.9	100,338	597,402
2027	495,690	18.0	89,224	524,107	18.6	92,198	538,497	20.9	103,599	600,778
2028	511,800	18.0	92,124	526,134	18.6	95,195	540,579	20.9	106,966	603,101
2029	528,434	18.0	95,118	527,139	18.6	98,289	541,611	20.9	110,443	604,253

Notes regarding the above projections:

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

City of Battlefield - Police

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

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	12.5%	\$49,532	\$ 277,457	15.4%	\$61,024	\$ 346,872	14.8%	\$58,646	\$ 328,998
2021	409,138	12.5	51,142	281,258	15.4	63,007	351,624	14.8	60,552	333,505
2022	422,435	12.5	52,804	284,804	15.4	65,055	356,058	14.8	62,520	337,710
2023	436,164	12.5	54,521	288,060	15.4	67,169	360,129	14.8	64,552	341,571
2024	450,339	12.5	56,292	290,987	15.4	69,352	363,788	14.8	66,650	345,042
2025	464,975	12.5	58,122	293,543	15.4	71,606	366,983	14.8	68,816	348,072
2026	480,087	12.5	60,011	295,681	15.4	73,933	369,656	14.8	71,053	350,607
2027	495,690	12.5	61,961	297,352	15.4	76,336	371,745	14.8	73,362	352,589
2028	511,800	12.5	63,975	298,502	15.4	78,817	373,183	14.8	75,746	353,952
2029	528,434	12.5	66,054	299,072	15.4	81,379	373,896	14.8	78,208	354,628

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	17.1%	\$67,760	\$ 385,537	18.3%	\$72,515	\$ 416,214	19.4%	\$76,874	\$ 442,010
2021	409,138	17.1	69,963	390,819	18.3	74,872	421,916	19.4	79,373	448,065
2022	422,435	17.1	72,236	395,747	18.3	77,306	427,236	19.4	81,952	453,715
2023	436,164	17.1	74,584	400,272	18.3	79,818	432,121	19.4	84,616	458,902
2024	450,339	17.1	77,008	404,339	18.3	82,412	436,512	19.4	87,366	463,565
2025	464,975	17.1	79,511	407,890	18.3	85,090	440,346	19.4	90,205	467,636
2026	480,087	17.1	82,095	410,861	18.3	87,856	443,554	19.4	93,137	471,042
2027	495,690	17.1	84,763	413,183	18.3	90,711	446,061	19.4	96,164	473,704
2028	511,800	17.1	87,518	414,781	18.3	93,659	447,786	19.4	99,289	475,536
2029	528,434	17.1	90,362	415,573	18.3	96,703	448,641	19.4	102,516	476,444

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	21.2%	\$84,007	\$ 485,627	21.7%	\$85,988	\$ 498,496	24.1%	\$95,498	\$ 554,960
2021	409,138	21.2	86,737	492,280	21.7	88,783	505,325	24.1	98,602	562,563
2022	422,435	21.2	89,556	498,487	21.7	91,668	511,697	24.1	101,807	569,657
2023	436,164	21.2	92,467	504,186	21.7	94,648	517,547	24.1	105,116	576,170
2024	450,339	21.2	95,472	509,309	21.7	97,724	522,806	24.1	108,532	582,024
2025	464,975	21.2	98,575	513,782	21.7	100,900	527,397	24.1	112,059	587,136
2026	480,087	21.2	101,778	517,525	21.7	104,179	531,239	24.1	115,701	591,413
2027	495,690	21.2	105,086	520,450	21.7	107,565	534,241	24.1	119,461	594,755
2028	511,800	21.2	108,502	522,463	21.7	111,061	536,307	24.1	123,344	597,055
2029	528,434	21.2	112,028	523,461	21.7	114,670	537,331	24.1	127,353	598,195

Notes regarding the above projections:

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

City of Battlefield - Police

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

(0% member contributions are additional)

Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	12.9%	\$51,117	\$ 287,122	15.8%	\$62,609	\$ 358,882	15.3%	\$60,628	\$ 340,502
2021	409,138	12.9	52,779	291,056	15.8	64,644	363,799	15.3	62,598	345,167
2022	422,435	12.9	54,494	294,726	15.8	66,745	368,386	15.3	64,633	349,519
2023	436,164	12.9	56,265	298,096	15.8	68,914	372,598	15.3	66,733	353,515
2024	450,339	12.9	58,094	301,125	15.8	71,154	376,384	15.3	68,902	357,107
2025	464,975	12.9	59,982	303,770	15.8	73,466	379,690	15.3	71,141	360,243
2026	480,087	12.9	61,931	305,983	15.8	75,854	382,456	15.3	73,453	362,867
2027	495,690	12.9	63,944	307,712	15.8	78,319	384,618	15.3	75,841	364,918
2028	511,800	12.9	66,022	308,902	15.8	80,864	386,105	15.3	78,305	366,329
2029	528,434	12.9	68,168	309,492	15.8	83,493	386,842	15.3	80,850	367,028

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	17.7%	\$70,138	\$ 398,913	18.9%	\$74,893	\$ 430,631	20.1%	\$79,648	\$ 457,322
2021	409,138	17.7	72,417	404,378	18.9	77,327	436,531	20.1	82,237	463,587
2022	422,435	17.7	74,771	409,477	18.9	79,840	442,035	20.1	84,909	469,433
2023	436,164	17.7	77,201	414,159	18.9	82,435	447,089	20.1	87,669	474,800
2024	450,339	17.7	79,710	418,367	18.9	85,114	451,632	20.1	90,518	479,624
2025	464,975	17.7	82,301	422,041	18.9	87,880	455,598	20.1	93,460	483,836
2026	480,087	17.7	84,975	425,115	18.9	90,736	458,917	20.1	96,497	487,360
2027	495,690	17.7	87,737	427,518	18.9	93,685	461,511	20.1	99,634	490,114
2028	511,800	17.7	90,589	429,171	18.9	96,730	463,296	20.1	102,872	492,009
2029	528,434	17.7	93,533	429,990	18.9	99,874	464,181	20.1	106,215	492,948

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	21.9%	\$86,781	\$ 502,450	22.5%	\$89,158	\$ 515,799	24.8%	\$98,272	\$ 574,211
2021	409,138	21.9	89,601	509,333	22.5	92,056	522,865	24.8	101,466	582,078
2022	422,435	21.9	92,513	515,755	22.5	95,048	529,458	24.8	104,764	589,418
2023	436,164	21.9	95,520	521,652	22.5	98,137	535,511	24.8	108,169	596,157
2024	450,339	21.9	98,624	526,952	22.5	101,326	540,952	24.8	111,684	602,214
2025	464,975	21.9	101,830	531,580	22.5	104,619	545,703	24.8	115,314	607,503
2026	480,087	21.9	105,139	535,452	22.5	108,020	549,678	24.8	119,062	611,928
2027	495,690	21.9	108,556	538,478	22.5	111,530	552,785	24.8	122,931	615,386
2028	511,800	21.9	112,084	540,560	22.5	115,155	554,923	24.8	126,926	617,766
2029	528,434	21.9	115,727	541,592	22.5	118,898	555,983	24.8	131,052	618,946

Notes regarding the above projections:

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

City of Battlefield - Police

Employer Contribution Rates (Contributory Plan - 5 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
Valuation Year	Estimated Projected Payroll	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	8.8%	\$34,871	\$ 265,176	11.7%	\$46,362	\$ 334,497	11.2%	\$44,381	\$ 317,501
2021	409,138	8.8	36,004	268,809	11.7	47,869	339,080	11.2	45,823	321,851
2022	422,435	8.8	37,174	272,199	11.7	49,425	343,356	11.2	47,313	325,909
2023	436,164	8.8	38,382	275,311	11.7	51,031	347,282	11.2	48,850	329,635
2024	450,339	8.8	39,630	278,108	11.7	52,690	350,811	11.2	50,438	332,984
2025	464,975	8.8	40,918	280,550	11.7	54,402	353,892	11.2	52,077	335,908
2026	480,087	8.8	42,248	282,594	11.7	56,170	356,470	11.2	53,770	338,355
2027	495,690	8.8	43,621	284,191	11.7	57,996	358,485	11.2	55,517	340,267
2028	511,800	8.8	45,038	285,290	11.7	59,881	359,871	11.2	57,322	341,583
2029	528,434	8.8	46,502	285,835	11.7	61,827	360,558	11.2	59,185	342,235

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
Valuation Year	Estimated Projected Payroll	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	13.6%	\$53,891	\$ 373,762	14.6%	\$57,854	\$ 403,732	15.8%	\$62,609	\$ 429,904
2021	409,138	13.6	55,643	378,882	14.6	59,734	409,263	15.8	64,644	435,794
2022	422,435	13.6	57,451	383,659	14.6	61,676	414,424	15.8	66,745	441,289
2023	436,164	13.6	59,318	388,045	14.6	63,680	419,162	15.8	68,914	446,334
2024	450,339	13.6	61,246	391,988	14.6	65,749	423,421	15.8	71,154	450,869
2025	464,975	13.6	63,237	395,431	14.6	67,886	427,140	15.8	73,466	454,829
2026	480,087	13.6	65,292	398,311	14.6	70,093	430,251	15.8	75,854	458,142
2027	495,690	13.6	67,414	400,562	14.6	72,371	432,683	15.8	78,319	460,731
2028	511,800	13.6	69,605	402,111	14.6	74,723	434,356	15.8	80,864	462,513
2029	528,434	13.6	71,867	402,879	14.6	77,151	435,185	15.8	83,493	463,396

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
Valuation Year	Estimated Projected Payroll	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	17.4%	\$68,949	\$ 472,907	18.1%	\$71,723	\$ 485,996	20.3%	\$80,441	\$ 542,091
2021	409,138	17.4	71,190	479,386	18.1	74,054	492,654	20.3	83,055	549,518
2022	422,435	17.4	73,504	485,431	18.1	76,461	498,866	20.3	85,754	556,447
2023	436,164	17.4	75,893	490,981	18.1	78,946	504,570	20.3	88,541	562,809
2024	450,339	17.4	78,359	495,970	18.1	81,511	509,697	20.3	91,419	568,528
2025	464,975	17.4	80,906	500,326	18.1	84,160	514,173	20.3	94,390	573,521
2026	480,087	17.4	83,535	503,971	18.1	86,896	517,918	20.3	97,458	577,699
2027	495,690	17.4	86,250	506,819	18.1	89,720	520,845	20.3	100,625	580,964
2028	511,800	17.4	89,053	508,779	18.1	92,636	522,859	20.3	103,895	583,211
2029	528,434	17.4	91,948	509,751	18.1	95,647	523,857	20.3	107,272	584,325

Notes regarding the above projections:

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

City of Battlefield - Police

Employer Contribution Rates (Contributory Plan - 3 Year FAS)

(4% member contributions are additional)

Rule of 80 Retirement Eligibility

		L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
Valuation Year	Estimated Projected Payroll	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 396,259	9.2%	\$36,456	\$ 274,779	12.2%	\$48,344	\$ 346,486	11.7%	\$46,362	\$ 329,002
2021	409,138	9.2	37,641	278,543	12.2	49,915	351,233	11.7	47,869	333,509
2022	422,435	9.2	38,864	282,055	12.2	51,537	355,662	11.7	49,425	337,714
2023	436,164	9.2	40,127	285,280	12.2	53,212	359,728	11.7	51,031	341,575
2024	450,339	9.2	41,431	288,179	12.2	54,941	363,383	11.7	52,690	345,046
2025	464,975	9.2	42,778	290,710	12.2	56,727	366,574	11.7	54,402	348,076
2026	480,087	9.2	44,168	292,828	12.2	58,571	369,244	11.7	56,170	350,612
2027	495,690	9.2	45,603	294,483	12.2	60,474	371,331	11.7	57,996	352,594
2028	511,800	9.2	47,086	295,622	12.2	62,440	372,767	11.7	59,881	353,957
2029	528,434	9.2	48,616	296,186	12.2	64,469	373,479	11.7	61,827	354,633

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
Valuation Year	Estimated Projected Payroll	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 396,259	14.0%	\$55,476	\$ 387,167	15.1%	\$59,835	\$ 418,093	16.4%	\$64,986	\$ 445,225
2021	409,138	14.0	57,279	392,471	15.1	61,780	423,821	16.4	67,099	451,325
2022	422,435	14.0	59,141	397,420	15.1	63,788	429,165	16.4	69,279	457,016
2023	436,164	14.0	61,063	401,964	15.1	65,861	434,072	16.4	71,531	462,241
2024	450,339	14.0	63,047	406,048	15.1	68,001	438,483	16.4	73,856	466,938
2025	464,975	14.0	65,097	409,614	15.1	70,211	442,334	16.4	76,256	471,039
2026	480,087	14.0	67,212	412,598	15.1	72,493	445,556	16.4	78,734	474,470
2027	495,690	14.0	69,397	414,930	15.1	74,849	448,074	16.4	81,293	477,152
2028	511,800	14.0	71,652	416,535	15.1	77,282	449,807	16.4	83,935	478,997
2029	528,434	14.0	73,981	417,330	15.1	79,794	450,666	16.4	86,663	479,912

		L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
Valuation Year	Estimated Projected Payroll	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability	As a % of Payroll	Annual Dollars	Accrued Liability
2020	\$ 396,259	18.1%	\$71,723	\$ 489,663	18.7%	\$74,100	\$ 503,229	21.0%	\$83,214	\$ 561,275
2021	409,138	18.1	74,054	496,371	18.7	76,509	510,123	21.0	85,919	568,964
2022	422,435	18.1	76,461	502,630	18.7	78,995	516,555	21.0	88,711	576,138
2023	436,164	18.1	78,946	508,377	18.7	81,563	522,461	21.0	91,594	582,725
2024	450,339	18.1	81,511	513,543	18.7	84,213	527,770	21.0	94,571	588,646
2025	464,975	18.1	84,160	518,053	18.7	86,950	532,405	21.0	97,645	593,816
2026	480,087	18.1	86,896	521,827	18.7	89,776	536,283	21.0	100,818	598,142
2027	495,690	18.1	89,720	524,776	18.7	92,694	539,314	21.0	104,095	601,523
2028	511,800	18.1	92,636	526,805	18.7	95,707	541,400	21.0	107,478	603,849
2029	528,434	18.1	95,647	527,811	18.7	98,817	542,434	21.0	110,971	605,002

Notes regarding the above projections:

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

City of Battlefield - Police

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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
		of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2020	\$ 396,259	12.5%	\$49,532	\$ 277,809	15.4%	\$61,024	\$ 347,283	14.9%	\$59,043	\$ 329,863
2021	409,138	12.5	51,142	281,615	15.4	63,007	352,041	14.9	60,962	334,382
2022	422,435	12.5	52,804	285,166	15.4	65,055	356,480	14.9	62,943	338,598
2023	436,164	12.5	54,521	288,426	15.4	67,169	360,556	14.9	64,988	342,469
2024	450,339	12.5	56,292	291,357	15.4	69,352	364,220	14.9	67,101	345,949
2025	464,975	12.5	58,122	293,916	15.4	71,606	367,419	14.9	69,281	348,987
2026	480,087	12.5	60,011	296,057	15.4	73,933	370,095	14.9	71,533	351,529
2027	495,690	12.5	61,961	297,730	15.4	76,336	372,187	14.9	73,858	353,516
2028	511,800	12.5	63,975	298,881	15.4	78,817	373,626	14.9	76,258	354,883
2029	528,434	12.5	66,054	299,452	15.4	81,379	374,339	14.9	78,737	355,561

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2020	\$ 396,259	17.2%	\$68,157	\$ 386,334	18.4%	\$72,912	\$ 415,555	19.5%	\$77,271	\$ 442,769
2021	409,138	17.2	70,372	391,627	18.4	75,281	421,248	19.5	79,782	448,835
2022	422,435	17.2	72,659	396,565	18.4	77,728	426,560	19.5	82,375	454,495
2023	436,164	17.2	75,020	401,099	18.4	80,254	431,437	19.5	85,052	459,691
2024	450,339	17.2	77,458	405,175	18.4	82,862	435,821	19.5	87,816	464,362
2025	464,975	17.2	79,976	408,733	18.4	85,555	439,649	19.5	90,670	468,440
2026	480,087	17.2	82,575	411,710	18.4	88,336	442,852	19.5	93,617	471,852
2027	495,690	17.2	85,259	414,037	18.4	91,207	445,355	19.5	96,660	474,519
2028	511,800	17.2	88,030	415,638	18.4	94,171	447,077	19.5	99,801	476,354
2029	528,434	17.2	90,891	416,432	18.4	97,232	447,931	19.5	103,045	477,264

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
		As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
		Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2020	\$ 396,259	21.3%	\$84,403	\$ 486,206	21.9%	\$86,781	\$ 499,202	24.2%	\$95,895	\$ 555,661
2021	409,138	21.3	87,146	492,867	21.9	89,601	506,041	24.2	99,011	563,273
2022	422,435	21.3	89,979	499,082	21.9	92,513	512,422	24.2	102,229	570,376
2023	436,164	21.3	92,903	504,788	21.9	95,520	518,280	24.2	105,552	576,897
2024	450,339	21.3	95,922	509,917	21.9	98,624	523,546	24.2	108,982	582,759
2025	464,975	21.3	99,040	514,395	21.9	101,830	528,144	24.2	112,524	587,877
2026	480,087	21.3	102,259	518,142	21.9	105,139	531,991	24.2	116,181	592,159
2027	495,690	21.3	105,582	521,070	21.9	108,556	534,998	24.2	119,957	595,506
2028	511,800	21.3	109,013	523,085	21.9	112,084	537,067	24.2	123,856	597,809
2029	528,434	21.3	112,556	524,084	21.9	115,727	538,093	24.2	127,881	598,951

Notes regarding the above projections:

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

City of Battlefield - Police

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

(0% member contributions are additional)

Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	12.9%	\$51,117	\$ 287,468	15.9%	\$63,005	\$ 359,311	15.4%	\$61,024	\$ 341,395
2021	409,138	12.9	52,779	291,406	15.9	65,053	364,234	15.4	63,007	346,072
2022	422,435	12.9	54,494	295,080	15.9	67,167	368,827	15.4	65,055	350,436
2023	436,164	12.9	56,265	298,454	15.9	69,350	373,044	15.4	67,169	354,443
2024	450,339	12.9	58,094	301,487	15.9	71,604	376,834	15.4	69,352	358,044
2025	464,975	12.9	59,982	304,135	15.9	73,931	380,143	15.4	71,606	361,188
2026	480,087	12.9	61,931	306,350	15.9	76,334	382,912	15.4	73,933	363,819
2027	495,690	12.9	63,944	308,081	15.9	78,815	385,076	15.4	76,336	365,875
2028	511,800	12.9	66,022	309,272	15.9	81,376	386,565	15.4	78,817	367,290
2029	528,434	12.9	68,168	309,863	15.9	84,021	387,303	15.4	81,379	367,991

Valuation Year	Estimated Projected Payroll	LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	17.8%	\$70,534	\$ 399,750	18.9%	\$74,893	\$ 431,176	20.2%	\$80,044	\$ 458,127
2021	409,138	17.8	72,827	405,227	18.9	77,327	437,083	20.2	82,646	464,403
2022	422,435	17.8	75,193	410,337	18.9	79,840	442,594	20.2	85,332	470,259
2023	436,164	17.8	77,637	415,028	18.9	82,435	447,654	20.2	88,105	475,635
2024	450,339	17.8	80,160	419,245	18.9	85,114	452,203	20.2	90,968	480,468
2025	464,975	17.8	82,766	422,927	18.9	87,880	456,174	20.2	93,925	484,688
2026	480,087	17.8	85,455	426,008	18.9	90,736	459,497	20.2	96,978	488,219
2027	495,690	17.8	88,233	428,416	18.9	93,685	462,094	20.2	100,129	490,978
2028	511,800	17.8	91,100	430,073	18.9	96,730	463,881	20.2	103,384	492,877
2029	528,434	17.8	94,061	430,894	18.9	99,874	464,767	20.2	106,744	493,818

Valuation Year	Estimated Projected Payroll	L-12 Benefit Program			LT-14(65) Benefit Program			L-6 Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability	Estimated Employer Contribution		Unfunded Actuarial Accrued Liability
		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars		As a % of Payroll	Annual Dollars	
2020	\$ 396,259	21.9%	\$86,781	\$ 503,088	22.5%	\$89,158	\$ 516,554	24.9%	\$98,669	\$ 574,928
2021	409,138	21.9	89,601	509,980	22.5	92,056	523,631	24.9	101,875	582,804
2022	422,435	21.9	92,513	516,411	22.5	95,048	530,234	24.9	105,186	590,153
2023	436,164	21.9	95,520	522,315	22.5	98,137	536,296	24.9	108,605	596,900
2024	450,339	21.9	98,624	527,622	22.5	101,326	541,745	24.9	112,134	602,965
2025	464,975	21.9	101,830	532,256	22.5	104,619	546,503	24.9	115,779	608,260
2026	480,087	21.9	105,139	536,133	22.5	108,020	550,484	24.9	119,542	612,691
2027	495,690	21.9	108,556	539,163	22.5	111,530	553,595	24.9	123,427	616,154
2028	511,800	21.9	112,084	541,248	22.5	115,155	555,736	24.9	127,438	618,537
2029	528,434	21.9	115,727	542,281	22.5	118,898	556,797	24.9	131,580	619,718

Notes regarding the above projections:

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