



The Initial Valuation For

# **Holt Community Fire Protection District**

as of July 31, 2018



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August 30, 2018

Holt Community Fire Protection District  
Holt, Missouri

Ladies and Gentlemen:

Submitted in this report are the results of the actuarial valuation prepared to determine the employer contribution rates required to support, for your employees, the benefits provided by the Missouri Local Government Employees Retirement System (LAGERS). This report contains the information needed to comply with Missouri state disclosure requirements regarding the adoption of LAGERS benefits by a political subdivision (Sections 105.660 - 106.685 RSMo).

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

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

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

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

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of this report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2018.

The computed contributions required for LAGERS participation will permit the System to continue to operate in accordance with the actuarial principles of level cost financing and the state law which governs LAGERS. 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 July 31, 2018. The valuation was based on data furnished from your records concerning individual employees (see Appendix V).

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

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

Respectfully submitted,

A handwritten signature in black ink that reads "Mita Drazilov". The signature is fluid and cursive, with the first name "Mita" and last name "Drazilov" clearly distinguishable.

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.

# Holt Community Fire Protection District

## 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	Fire	5.60%	5.70%	0.60%	11.90%
L-3	Fire	7.00	7.80	0.70	15.50
LT-4(65)	Fire	7.20	8.10	0.60	15.90
LT-5(65)	Fire	8.20	9.60	0.70	18.50
L-7	Fire	8.50	9.90	0.80	19.20
LT-8(65)	Fire	9.30	11.10	0.80	21.20
L-12	Fire	9.90	12.10	0.90	22.90
LT-14(65)	Fire	10.30	12.70	0.90	23.90
L-6	Fire	11.30	14.20	1.00	26.50

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

# Holt Community Fire Protection District

## 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	Fire	5.80%	6.00%	0.60%	12.40%
L-3	Fire	7.30	8.20	0.70	16.20
LT-4(65)	Fire	7.50	8.40	0.60	16.50
LT-5(65)	Fire	8.50	10.00	0.70	19.20
L-7	Fire	8.80	10.40	0.80	20.00
LT-8(65)	Fire	9.60	11.60	0.80	22.00
L-12	Fire	10.20	12.60	0.90	23.70
LT-14(65)	Fire	10.70	13.20	0.90	24.80
L-6	Fire	11.70	14.90	1.00	27.60

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

# Holt Community Fire Protection District

## 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	Fire	5.70%	9.50%	0.60%	15.80%
L-3	Fire	7.10	11.60	0.70	19.40
LT-4(65)	Fire	7.30	11.90	0.60	19.80
LT-5(65)	Fire	8.30	13.40	0.70	22.40
L-7	Fire	8.50	13.80	0.80	23.10
LT-8(65)	Fire	9.30	15.00	0.80	25.10
L-12	Fire	10.00	15.90	0.90	26.80
LT-14(65)	Fire	10.40	16.50	0.90	27.80
L-6	Fire	11.40	18.00	1.00	30.40

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



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Benefit Program	Employee Groups	Percents of Active Member Payroll			
		Prior Service Cost *	Current Cost	Disability Cost	Total Employer Contribution Rate
L-1	Fire	5.90%	9.80%	0.60%	16.30%
L-3	Fire	7.40	12.00	0.70	20.10
LT-4(65)	Fire	7.50	12.20	0.60	20.30
LT-5(65)	Fire	8.60	13.80	0.70	23.10
L-7	Fire	8.80	14.20	0.80	23.80
LT-8(65)	Fire	9.60	15.40	0.80	25.80
L-12	Fire	10.30	16.40	0.90	27.60
LT-14(65)	Fire	10.70	17.00	0.90	28.60
L-6	Fire	11.80	18.70	1.00	31.50

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# Holt Community Fire Protection District

## 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	Fire	5.60%	5.70%	0.60%	11.90%
L-3	Fire	7.00	7.80	0.70	15.50
LT-4(65)	Fire	7.20	8.10	0.60	15.90
LT-5(65)	Fire	8.20	9.60	0.70	18.50
L-7	Fire	8.50	9.90	0.80	19.20
LT-8(65)	Fire	9.30	11.10	0.80	21.20
L-12	Fire	9.90	12.10	0.90	22.90
LT-14(65)	Fire	10.30	12.70	0.90	23.90
L-6	Fire	11.30	14.20	1.00	26.50

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

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

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Benefit Program	Employee Groups	Percents of Active Member Payroll			
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LT-8(65)	Fire	9.60	11.60	0.80	22.00
L-12	Fire	10.20	12.60	0.90	23.70
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# Holt Community Fire Protection District

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

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LT-8(65)	Fire	9.30	15.00	0.80	25.10
L-12	Fire	10.00	15.90	0.90	26.80
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L-7	Fire	8.80	14.20	0.80	23.80
LT-8(65)	Fire	9.60	15.40	0.80	25.80
L-12	Fire	10.30	16.40	0.90	27.60
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# Holt Community Fire Protection District

## 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	Fire
L-1	\$ 37,455
L-3	48,785
LT-4(65)	50,044
LT-5(65)	58,228
L-7	60,431
LT-8(65)	66,726
L-12	72,076
LT-14(65)	75,224
L-6	83,407

3 Year FAS	
Benefit Program	Fire
L-1	\$ 39,028
L-3	50,989
LT-4(65)	51,933
LT-5(65)	60,431
L-7	62,949
LT-8(65)	69,244
L-12	74,594
LT-14(65)	78,057
L-6	86,869

### Non-Contributory Plan

5 Year FAS	
Benefit Program	Fire
L-1	\$ 49,730
L-3	61,060
LT-4(65)	62,319
LT-5(65)	70,503
L-7	72,706
LT-8(65)	79,001
L-12	84,351
LT-14(65)	87,499
L-6	95,682

3 Year FAS	
Benefit Program	Fire
L-1	\$ 51,303
L-3	63,264
LT-4(65)	63,893
LT-5(65)	72,706
L-7	74,909
LT-8(65)	81,204
L-12	86,869
LT-14(65)	90,017
L-6	99,144

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.

# Holt Community Fire Protection District

## 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	Fire
L-1	\$ 37,455
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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.

## Holt Community Fire Protection District

### Employees and Payroll Included in the Valuation

	Fire
Number of Employees	7
Annual Payroll	\$ 314,744

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



## APPENDIX I

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### 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:

### Holt Community Fire Protection District

#### 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	Fire	\$ 311,495	\$ 322,401	\$ 315,282	\$ 326,130
L-3	Fire	390,675	404,312	394,119	407,645
LT-4(65)	Fire	400,341	414,420	403,729	417,733
LT-5(65)	Fire	457,310	473,317	460,453	476,349
L-7	Fire	469,825	486,179	472,935	489,229
LT-8(65)	Fire	514,245	532,199	517,134	534,995
L-12	Fire	548,979	568,052	551,762	570,789
LT-14(65)	Fire	571,199	591,094	573,883	593,674
L-6	Fire	628,100	649,906	630,567	652,296

# Holt Community Fire Protection District

## 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	Fire	\$ 311,495	\$ 322,401	\$ 315,282	\$ 326,130
L-3	Fire	390,675	404,312	394,119	407,645
LT-4(65)	Fire	400,341	414,420	403,729	417,733
LT-5(65)	Fire	457,310	473,317	460,453	476,349
L-7	Fire	469,825	486,179	472,935	489,229
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L-12	Fire	548,979	568,052	551,762	570,789
LT-14(65)	Fire	571,199	591,094	573,883	593,674
L-6	Fire	628,100	649,906	630,567	652,296

## **APPENDIX II**

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### **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	
	Fire	
25	6.55%	7.15%
30	5.75	6.05
35	5.25	5.15
40	4.75	4.45
45	4.25	4.15
50	3.85	3.85
55	3.65	3.65
60	3.55	3.25
65	3.25	3.25

## Schedule 2.

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

#### Early Retirement

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

#### Normal Retirement

Retirement	General Members		Retirement		
Ages	Men	Women	Ages	Police	Fire
60	10%	10%	55	10%	13%
61	10	10	56	10	13
62	25	15	57	10	13
63	20	15	58	10	13
64	20	15	59	10	13
65	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**

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### **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, 2018

#### (Section references are to RSMo)

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

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

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

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

L-1 Benefit Program:	1.00% for life
L-3 Benefit Program:	1.25% for life
L-7 Benefit Program:	1.50% for life
L-12 Benefit Program:	1.75% for life
L-6 Benefit Program:	2.00% for life
LT-4(65) Benefit Program:	1.00% for life, plus 1.00% to age 65
LT-5(65) Benefit Program:	1.25% for life, plus 0.75% to age 65
LT-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  $\frac{1}{2}$  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

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### BENEFIT ILLUSTRATIONS

# Missouri LAGERS

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

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

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

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

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

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

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

Final		Estimated	Estimated	
Average	LAGERS	Social	Monthly Total	
Salary (FAS) <sup>1</sup>	BENEFIT <sup>3</sup>	Security <sup>2</sup>	\$	% of FAS

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

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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



# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

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

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

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

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

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

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

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

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

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

(LT-5(65) Benefit Program is Years of Credited Service  
times: 2.00% of FAS <sup>1</sup> to age 65)  
1.25% of FAS <sup>1</sup> at age 65)

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 656	\$ 889	\$1,050	\$1,545	70%	103%
2,000	1,400	875	1,032	1,400	1,907	70%	95%
2,500	1,750	1,094	1,175	1,750	2,269	70%	91%
3,000	2,100	1,313	1,318	2,100	2,631	70%	88%
3,500	2,450	1,531	1,462	2,450	2,993	70%	86%
4,000	2,800	1,750	1,604	2,800	3,354	70%	84%

25 Years of Service:

\$1,500	\$ 750	\$ 469	\$ 889	\$ 750	\$1,358	50%	91%
2,000	1,000	625	1,032	1,000	1,657	50%	83%
2,500	1,250	781	1,175	1,250	1,956	50%	78%
3,000	1,500	938	1,318	1,500	2,256	50%	75%
3,500	1,750	1,094	1,462	1,750	2,556	50%	73%
4,000	2,000	1,250	1,604	2,000	2,854	50%	71%

15 Years of Service:

\$1,500	\$ 450	\$281	\$ 889	\$ 450	\$1,170	30%	78%
2,000	600	375	1,032	600	1,407	30%	70%
2,500	750	469	1,175	750	1,644	30%	66%
3,000	900	563	1,318	900	1,881	30%	63%
3,500	1,050	656	1,462	1,050	2,118	30%	61%
4,000	1,200	750	1,604	1,200	2,354	30%	59%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

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

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

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

# Missouri LAGERS

## Illustrations of Age and Service Allowance Amounts

### For Sample Combinations of Service & Salary

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

Final Average Salary (FAS) <sup>1</sup>	LAGERS BENEFIT <sup>3</sup>		Estimated Social Security <sup>2</sup>	Estimated Monthly Total		Percent of FAS	
	To 65	At 65		To 65	At 65	To 65	At 65
35 Years of Service:							
\$1,500	\$1,050	\$ 919	\$ 889	\$1,050	\$1,808	70%	121%
2,000	1,400	1,225	1,032	1,400	2,257	70%	113%
2,500	1,750	1,531	1,175	1,750	2,706	70%	108%
3,000	2,100	1,838	1,318	2,100	3,156	70%	105%
3,500	2,450	2,144	1,462	2,450	3,606	70%	103%
4,000	2,800	2,450	1,604	2,800	4,054	70%	101%

25 Years of Service:

\$1,500	\$ 750	\$ 656	\$ 889	\$ 750	\$1,545	50%	103%
2,000	1,000	875	1,032	1,000	1,907	50%	95%
2,500	1,250	1,094	1,175	1,250	2,269	50%	91%
3,000	1,500	1,313	1,318	1,500	2,631	50%	88%
3,500	1,750	1,531	1,462	1,750	2,993	50%	86%
4,000	2,000	1,750	1,604	2,000	3,354	50%	84%

15 Years of Service:

\$1,500	\$ 450	\$ 394	\$ 889	\$ 450	\$1,283	30%	86%
2,000	600	525	1,032	600	1,557	30%	78%
2,500	750	656	1,175	750	1,831	30%	73%
3,000	900	788	1,318	900	2,106	30%	70%
3,500	1,050	919	1,462	1,050	2,381	30%	68%
4,000	1,200	1,050	1,604	1,200	2,654	30%	66%

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

<sup>2</sup> "Estimated Social Security" means, for an employee covered by Social Security, an employee's estimated OASDI retirement benefit and is based upon an estimated "average indexed monthly earnings" for an employee retiring at age 65 in 2018 - it does not include any amounts which might be payable to an eligible spouse or children.

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

## **APPENDIX V**

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### **AGE AND SERVICE CHARACTERISTICS OF EMPLOYEES**

# Holt Community Fire Protection District

July 31, 2018

## 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	1							1	\$ 41,808
35-39									
40-44			1					1	\$ 36,840
45-49			3					3	\$ 139,650
50-54		1						1	\$ 58,432
55-59			1					1	\$ 38,014
60-64									
65-69									
70 & Over									
<b>Totals</b>	<b>1</b>	<b>1</b>	<b>5</b>					<b>7</b>	<b>\$ 314,744</b>

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

Age: 47.6 years.

Benefit Service: 9.5 years.

Annual Pay: \$44,963.





August 30, 2018 E-mail

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

Dear Bob:

Enclosed is the report of the July 31, 2018 Initial Actuarial Valuation of LAGERS benefits for the employees of

Holt Community Fire Protection District

Sincerely,

A handwritten signature in black ink that reads "Mita Drazilov".

Mita D. Drazilov, ASA, FCA, MAAA

MDD:wp

August 30, 2018

Holt Community Fire Protection District  
Holt, Missouri

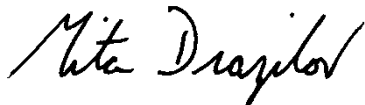
Ladies and Gentlemen:

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 July 31, 2018 Initial Valuation for the Holt Community Fire Protection District dated August 30, 2018.

The actuarial assumptions and methods used to determine the stated costs are described in Appendix II of the Initial Valuation Report. In our opinion, they do produce results which, in the aggregate, are reasonable. Additional miscellaneous and technical assumptions as well as disclosures required by the actuarial standards of practice may be found in the LAGERS Compiled Annual Actuarial Valuation report as of February 28, 2018.

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

Respectfully submitted,



Mita D. Drazilov, ASA, FCA, MAAA

# Holt Community Fire Protection District - Fire

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

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		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
2018	\$ 314,744	11.9%	\$37,455	\$ 311,495	15.5%	\$48,785	\$ 390,675	15.9%	\$50,044	\$ 400,341
2019	324,973	11.9	38,672	315,762	15.5	50,371	396,027	15.9	51,671	405,826
2020	335,535	11.9	39,929	319,744	15.5	52,008	401,021	15.9	53,350	410,943
2021	346,440	11.9	41,226	323,400	15.5	53,698	405,606	15.9	55,084	415,641
2022	357,699	11.9	42,566	326,686	15.5	55,443	409,727	15.9	56,874	419,864
2023	369,324	11.9	43,950	329,555	15.5	57,245	413,325	15.9	58,723	423,551
2024	381,327	11.9	45,378	331,956	15.5	59,106	416,336	15.9	60,631	426,636
2025	393,720	11.9	46,853	333,832	15.5	61,027	418,689	15.9	62,601	429,047
2026	406,516	11.9	48,375	335,123	15.5	63,010	420,308	15.9	64,636	430,706
2027	419,728	11.9	49,948	335,763	15.5	65,058	421,111	15.9	66,737	431,528

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
2018	\$ 314,744	18.5%	\$58,228	\$ 457,310	19.2%	\$60,431	\$ 469,825	21.2%	\$66,726	\$ 514,245
2019	324,973	18.5	60,120	463,575	19.2	62,395	476,262	21.2	68,894	521,290
2020	335,535	18.5	62,074	469,420	19.2	64,423	482,267	21.2	71,133	527,863
2021	346,440	18.5	64,091	474,787	19.2	66,516	487,781	21.2	73,445	533,898
2022	357,699	18.5	66,174	479,611	19.2	68,678	492,737	21.2	75,832	539,323
2023	369,324	18.5	68,325	483,823	19.2	70,910	497,064	21.2	78,297	544,060
2024	381,327	18.5	70,545	487,347	19.2	73,215	500,685	21.2	80,841	548,023
2025	393,720	18.5	72,838	490,101	19.2	75,594	503,515	21.2	83,469	551,120
2026	406,516	18.5	75,205	491,996	19.2	78,051	505,462	21.2	86,181	553,251
2027	419,728	18.5	77,650	492,935	19.2	80,588	506,427	21.2	88,982	554,307

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
2018	\$ 314,744	22.9%	\$72,076	\$ 548,979	23.9%	\$75,224	\$ 571,199	26.5%	\$83,407	\$ 628,100
2019	324,973	22.9	74,419	556,500	23.9	77,669	579,024	26.5	86,118	636,705
2020	335,535	22.9	76,838	563,517	23.9	80,193	586,325	26.5	88,917	644,733
2021	346,440	22.9	79,335	569,960	23.9	82,799	593,028	26.5	91,807	652,104
2022	357,699	22.9	81,913	575,751	23.9	85,490	599,054	26.5	94,790	658,730
2023	369,324	22.9	84,575	580,807	23.9	88,268	604,315	26.5	97,871	664,515
2024	381,327	22.9	87,324	585,038	23.9	91,137	608,717	26.5	101,052	669,356
2025	393,720	22.9	90,162	588,344	23.9	94,099	612,157	26.5	104,336	673,139
2026	406,516	22.9	93,092	590,619	23.9	97,157	614,524	26.5	107,727	675,742
2027	419,728	22.9	96,118	591,747	23.9	100,315	615,697	26.5	111,228	677,032

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 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# Holt Community Fire Protection District - Fire

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

### Regular Retirement Eligibility

		L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
Valuation	Estimated	As a %	Annual	Accrued	As a %	Annual	Accrued	As a %	Annual	Accrued
Year	Projected Payroll	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability	of Payroll	Dollars	Liability
2018	\$ 314,744	12.4%	\$39,028	\$ 322,401	16.2%	\$50,989	\$ 404,312	16.5%	\$51,933	\$ 414,420
2019	324,973	12.4	40,297	326,818	16.2	52,646	409,851	16.5	53,621	420,097
2020	335,535	12.4	41,606	330,939	16.2	54,357	415,019	16.5	55,363	425,394
2021	346,440	12.4	42,959	334,723	16.2	56,123	419,764	16.5	57,163	430,258
2022	357,699	12.4	44,355	338,124	16.2	57,947	424,029	16.5	59,020	434,630
2023	369,324	12.4	45,796	341,094	16.2	59,830	427,753	16.5	60,938	438,447
2024	381,327	12.4	47,285	343,579	16.2	61,775	430,869	16.5	62,919	441,641
2025	393,720	12.4	48,821	345,521	16.2	63,783	433,304	16.5	64,964	444,137
2026	406,516	12.4	50,408	346,857	16.2	65,856	434,980	16.5	67,075	445,854
2027	419,728	12.4	52,046	347,519	16.2	67,996	435,811	16.5	69,255	446,705

		LT-5(65) Benefit Program			L-7 Benefit Program			LT-8(65) Benefit Program		
		Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial	Estimated Employer Contribution		Unfunded Actuarial
Valuation	Estimated	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Projected Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 314,744	19.2%	\$60,431	\$ 473,317	20.0%	\$62,949	\$ 486,179	22.0%	\$69,244	\$ 532,199
2019	324,973	19.2	62,395	479,801	20.0	64,995	492,840	22.0	71,494	539,490
2020	335,535	19.2	64,423	485,851	20.0	67,107	499,054	22.0	73,818	546,293
2021	346,440	19.2	66,516	491,406	20.0	69,288	504,760	22.0	76,217	552,539
2022	357,699	19.2	68,678	496,399	20.0	71,540	509,889	22.0	78,694	558,153
2023	369,324	19.2	70,910	500,759	20.0	73,865	514,367	22.0	81,251	563,055
2024	381,327	19.2	73,215	504,407	20.0	76,265	518,114	22.0	83,892	567,156
2025	393,720	19.2	75,594	507,258	20.0	78,744	521,042	22.0	86,618	570,361
2026	406,516	19.2	78,051	509,220	20.0	81,303	523,057	22.0	89,434	572,567
2027	419,728	19.2	80,588	510,192	20.0	83,946	524,056	22.0	92,340	573,660

		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
Valuation	Estimated	As a % of	Annual	Accrued	As a % of	Annual	Accrued	As a % of	Annual	Accrued
Year	Projected Payroll	Payroll	Dollars	Liability	Payroll	Dollars	Liability	Payroll	Dollars	Liability
2018	\$ 314,744	23.7%	\$74,594	\$ 568,052	24.8%	\$78,057	\$ 591,094	27.6%	\$86,869	\$ 649,906
2019	324,973	23.7	77,019	575,834	24.8	80,593	599,192	27.6	89,693	658,810
2020	335,535	23.7	79,522	583,095	24.8	83,213	606,747	27.6	92,608	667,117
2021	346,440	23.7	82,106	589,761	24.8	85,917	613,684	27.6	95,617	674,744
2022	357,699	23.7	84,775	595,754	24.8	88,709	619,920	27.6	98,725	681,600
2023	369,324	23.7	87,530	600,986	24.8	91,592	625,364	27.6	101,933	687,586
2024	381,327	23.7	90,374	605,364	24.8	94,569	629,919	27.6	105,246	692,595
2025	393,720	23.7	93,312	608,785	24.8	97,643	633,479	27.6	108,667	696,509
2026	406,516	23.7	96,344	611,139	24.8	100,816	635,929	27.6	112,198	699,202
2027	419,728	23.7	99,476	612,306	24.8	104,093	637,143	27.6	115,845	700,537

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 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# Holt Community Fire Protection District - Fire

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

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		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
2018	\$ 314,744	15.8%	\$49,730	\$ 315,282	19.4%	\$61,060	\$ 394,119	19.8%	\$62,319	\$ 403,729
2019	324,973	15.8	51,346	319,601	19.4	63,045	399,518	19.8	64,345	409,260
2020	335,535	15.8	53,015	323,631	19.4	65,094	404,556	19.8	66,436	414,421
2021	346,440	15.8	54,738	327,331	19.4	67,209	409,181	19.8	68,595	419,159
2022	357,699	15.8	56,516	330,657	19.4	69,394	413,339	19.8	70,824	423,418
2023	369,324	15.8	58,353	333,561	19.4	71,649	416,969	19.8	73,126	427,137
2024	381,327	15.8	60,250	335,991	19.4	73,977	420,006	19.8	75,503	430,248
2025	393,720	15.8	62,208	337,890	19.4	76,382	422,380	19.8	77,957	432,680
2026	406,516	15.8	64,230	339,197	19.4	78,864	424,013	19.8	80,490	434,353
2027	419,728	15.8	66,317	339,845	19.4	81,427	424,823	19.8	83,106	435,182

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
2018	\$ 314,744	22.4%	\$70,503	\$ 460,453	23.1%	\$72,706	\$ 472,935	25.1%	\$79,001	\$ 517,134
2019	324,973	22.4	72,794	466,761	23.1	75,069	479,414	25.1	81,568	524,219
2020	335,535	22.4	75,160	472,647	23.1	77,509	485,459	25.1	84,219	530,829
2021	346,440	22.4	77,603	478,051	23.1	80,028	491,009	25.1	86,956	536,898
2022	357,699	22.4	80,125	482,908	23.1	82,628	495,998	25.1	89,782	542,353
2023	369,324	22.4	82,729	487,149	23.1	85,314	500,354	25.1	92,700	547,116
2024	381,327	22.4	85,417	490,698	23.1	88,087	503,999	25.1	95,713	551,101
2025	393,720	22.4	88,193	493,471	23.1	90,949	506,847	25.1	98,824	554,216
2026	406,516	22.4	91,060	495,379	23.1	93,905	508,807	25.1	102,036	556,359
2027	419,728	22.4	94,019	496,325	23.1	96,957	509,779	25.1	105,352	557,421

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
2018	\$ 314,744	26.8%	\$84,351	\$ 551,762	27.8%	\$87,499	\$ 573,883	30.4%	\$95,682	\$ 630,567
2019	324,973	26.8	87,093	559,321	27.8	90,342	581,745	30.4	98,792	639,206
2020	335,535	26.8	89,923	566,374	27.8	93,279	589,080	30.4	102,003	647,266
2021	346,440	26.8	92,846	572,849	27.8	96,310	595,815	30.4	105,318	654,666
2022	357,699	26.8	95,863	578,670	27.8	99,440	601,869	30.4	108,740	661,318
2023	369,324	26.8	98,979	583,752	27.8	102,672	607,155	30.4	112,274	667,126
2024	381,327	26.8	102,196	588,004	27.8	106,009	611,578	30.4	115,923	671,986
2025	393,720	26.8	105,517	591,327	27.8	109,454	615,034	30.4	119,691	675,784
2026	406,516	26.8	108,946	593,614	27.8	113,011	617,412	30.4	123,581	678,397
2027	419,728	26.8	112,487	594,747	27.8	116,684	618,591	30.4	127,597	679,692

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 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# Holt Community Fire Protection District - Fire

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

(0% member contributions are additional)

### Regular Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		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
2018	\$ 314,744	16.3%	\$51,303	\$ 326,130	20.1%	\$63,264	\$ 407,645	20.3%	\$63,893	\$ 417,733
2019	324,973	16.3	52,971	330,598	20.1	65,320	413,230	20.3	65,970	423,456
2020	335,535	16.3	54,692	334,767	20.1	67,443	418,441	20.3	68,114	428,796
2021	346,440	16.3	56,470	338,594	20.1	69,634	423,225	20.3	70,327	433,698
2022	357,699	16.3	58,305	342,034	20.1	71,897	427,525	20.3	72,613	438,105
2023	369,324	16.3	60,200	345,038	20.1	74,234	431,280	20.3	74,973	441,953
2024	381,327	16.3	62,156	347,551	20.1	76,647	434,422	20.3	77,409	445,172
2025	393,720	16.3	64,176	349,515	20.1	79,138	436,877	20.3	79,925	447,688
2026	406,516	16.3	66,262	350,867	20.1	81,710	438,566	20.3	82,523	449,419
2027	419,728	16.3	68,416	351,537	20.1	84,365	439,403	20.3	85,205	450,277

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
2018	\$ 314,744	23.1%	\$72,706	\$ 476,349	23.8%	\$74,909	\$ 489,229	25.8%	\$81,204	\$ 534,995
2019	324,973	23.1	75,069	482,875	23.8	77,344	495,931	25.8	83,843	542,324
2020	335,535	23.1	77,509	488,964	23.8	79,857	502,184	25.8	86,568	549,162
2021	346,440	23.1	80,028	494,554	23.8	82,453	507,925	25.8	89,382	555,441
2022	357,699	23.1	82,628	499,579	23.8	85,132	513,086	25.8	92,286	561,085
2023	369,324	23.1	85,314	503,966	23.8	87,899	517,592	25.8	95,286	566,013
2024	381,327	23.1	88,087	507,637	23.8	90,756	521,362	25.8	98,382	570,136
2025	393,720	23.1	90,949	510,506	23.8	93,705	524,309	25.8	101,580	573,358
2026	406,516	23.1	93,905	512,480	23.8	96,751	526,337	25.8	104,881	575,575
2027	419,728	23.1	96,957	513,459	23.8	99,895	527,342	25.8	108,290	576,674

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
2018	\$ 314,744	27.6%	\$86,869	\$ 570,789	28.6%	\$90,017	\$ 593,674	31.5%	\$99,144	\$ 652,296
2019	324,973	27.6	89,693	578,609	28.6	92,942	601,807	31.5	102,366	661,232
2020	335,535	27.6	92,608	585,905	28.6	95,963	609,395	31.5	105,694	669,570
2021	346,440	27.6	95,617	592,604	28.6	99,082	616,362	31.5	109,129	677,225
2022	357,699	27.6	98,725	598,625	28.6	102,302	622,625	31.5	112,675	684,106
2023	369,324	27.6	101,933	603,882	28.6	105,627	628,093	31.5	116,337	690,114
2024	381,327	27.6	105,246	608,281	28.6	109,060	632,668	31.5	120,118	695,141
2025	393,720	27.6	108,667	611,719	28.6	112,604	636,244	31.5	124,022	699,070
2026	406,516	27.6	112,198	614,085	28.6	116,264	638,704	31.5	128,053	701,773
2027	419,728	27.6	115,845	615,258	28.6	120,042	639,924	31.5	132,214	703,113

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 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# Holt Community Fire Protection District - Fire

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

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		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
2018	\$ 314,744	11.9%	\$37,455	\$ 311,495	15.5%	\$48,785	\$ 390,675	15.9%	\$50,044	\$ 400,341
2019	324,973	11.9	38,672	315,762	15.5	50,371	396,027	15.9	51,671	405,826
2020	335,535	11.9	39,929	319,744	15.5	52,008	401,021	15.9	53,350	410,943
2021	346,440	11.9	41,226	323,400	15.5	53,698	405,606	15.9	55,084	415,641
2022	357,699	11.9	42,566	326,686	15.5	55,443	409,727	15.9	56,874	419,864
2023	369,324	11.9	43,950	329,555	15.5	57,245	413,325	15.9	58,723	423,551
2024	381,327	11.9	45,378	331,956	15.5	59,106	416,336	15.9	60,631	426,636
2025	393,720	11.9	46,853	333,832	15.5	61,027	418,689	15.9	62,601	429,047
2026	406,516	11.9	48,375	335,123	15.5	63,010	420,308	15.9	64,636	430,706
2027	419,728	11.9	49,948	335,763	15.5	65,058	421,111	15.9	66,737	431,528

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
2018	\$ 314,744	18.5%	\$58,228	\$ 457,310	19.2%	\$60,431	\$ 469,825	21.2%	\$66,726	\$ 514,245
2019	324,973	18.5	60,120	463,575	19.2	62,395	476,262	21.2	68,894	521,290
2020	335,535	18.5	62,074	469,420	19.2	64,423	482,267	21.2	71,133	527,863
2021	346,440	18.5	64,091	474,787	19.2	66,516	487,781	21.2	73,445	533,898
2022	357,699	18.5	66,174	479,611	19.2	68,678	492,737	21.2	75,832	539,323
2023	369,324	18.5	68,325	483,823	19.2	70,910	497,064	21.2	78,297	544,060
2024	381,327	18.5	70,545	487,347	19.2	73,215	500,685	21.2	80,841	548,023
2025	393,720	18.5	72,838	490,101	19.2	75,594	503,515	21.2	83,469	551,120
2026	406,516	18.5	75,205	491,996	19.2	78,051	505,462	21.2	86,181	553,251
2027	419,728	18.5	77,650	492,935	19.2	80,588	506,427	21.2	88,982	554,307

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
2018	\$ 314,744	22.9%	\$72,076	\$ 548,979	23.9%	\$75,224	\$ 571,199	26.5%	\$83,407	\$ 628,100
2019	324,973	22.9	74,419	556,500	23.9	77,669	579,024	26.5	86,118	636,705
2020	335,535	22.9	76,838	563,517	23.9	80,193	586,325	26.5	88,917	644,733
2021	346,440	22.9	79,335	569,960	23.9	82,799	593,028	26.5	91,807	652,104
2022	357,699	22.9	81,913	575,751	23.9	85,490	599,054	26.5	94,790	658,730
2023	369,324	22.9	84,575	580,807	23.9	88,268	604,315	26.5	97,871	664,515
2024	381,327	22.9	87,324	585,038	23.9	91,137	608,717	26.5	101,052	669,356
2025	393,720	22.9	90,162	588,344	23.9	94,099	612,157	26.5	104,336	673,139
2026	406,516	22.9	93,092	590,619	23.9	97,157	614,524	26.5	107,727	675,742
2027	419,728	22.9	96,118	591,747	23.9	100,315	615,697	26.5	111,228	677,032

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 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# Holt Community Fire Protection District - Fire

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

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		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
2018	\$ 314,744	12.4%	\$39,028	\$ 322,401	16.2%	\$50,989	\$ 404,312	16.5%	\$51,933	\$ 414,420
2019	324,973	12.4	40,297	326,818	16.2	52,646	409,851	16.5	53,621	420,097
2020	335,535	12.4	41,606	330,939	16.2	54,357	415,019	16.5	55,363	425,394
2021	346,440	12.4	42,959	334,723	16.2	56,123	419,764	16.5	57,163	430,258
2022	357,699	12.4	44,355	338,124	16.2	57,947	424,029	16.5	59,020	434,630
2023	369,324	12.4	45,796	341,094	16.2	59,830	427,753	16.5	60,938	438,447
2024	381,327	12.4	47,285	343,579	16.2	61,775	430,869	16.5	62,919	441,641
2025	393,720	12.4	48,821	345,521	16.2	63,783	433,304	16.5	64,964	444,137
2026	406,516	12.4	50,408	346,857	16.2	65,856	434,980	16.5	67,075	445,854
2027	419,728	12.4	52,046	347,519	16.2	67,996	435,811	16.5	69,255	446,705

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
2018	\$ 314,744	19.2%	\$60,431	\$ 473,317	20.0%	\$62,949	\$ 486,179	22.0%	\$69,244	\$ 532,199
2019	324,973	19.2	62,395	479,801	20.0	64,995	492,840	22.0	71,494	539,490
2020	335,535	19.2	64,423	485,851	20.0	67,107	499,054	22.0	73,818	546,293
2021	346,440	19.2	66,516	491,406	20.0	69,288	504,760	22.0	76,217	552,539
2022	357,699	19.2	68,678	496,399	20.0	71,540	509,889	22.0	78,694	558,153
2023	369,324	19.2	70,910	500,759	20.0	73,865	514,367	22.0	81,251	563,055
2024	381,327	19.2	73,215	504,407	20.0	76,265	518,114	22.0	83,892	567,156
2025	393,720	19.2	75,594	507,258	20.0	78,744	521,042	22.0	86,618	570,361
2026	406,516	19.2	78,051	509,220	20.0	81,303	523,057	22.0	89,434	572,567
2027	419,728	19.2	80,588	510,192	20.0	83,946	524,056	22.0	92,340	573,660

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
2018	\$ 314,744	23.7%	\$74,594	\$ 568,052	24.8%	\$78,057	\$ 591,094	27.6%	\$86,869	\$ 649,906
2019	324,973	23.7	77,019	575,834	24.8	80,593	599,192	27.6	89,693	658,810
2020	335,535	23.7	79,522	583,095	24.8	83,213	606,747	27.6	92,608	667,117
2021	346,440	23.7	82,106	589,761	24.8	85,917	613,684	27.6	95,617	674,744
2022	357,699	23.7	84,775	595,754	24.8	88,709	619,920	27.6	98,725	681,600
2023	369,324	23.7	87,530	600,986	24.8	91,592	625,364	27.6	101,933	687,586
2024	381,327	23.7	90,374	605,364	24.8	94,569	629,919	27.6	105,246	692,595
2025	393,720	23.7	93,312	608,785	24.8	97,643	633,479	27.6	108,667	696,509
2026	406,516	23.7	96,344	611,139	24.8	100,816	635,929	27.6	112,198	699,202
2027	419,728	23.7	99,476	612,306	24.8	104,093	637,143	27.6	115,845	700,537

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 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.



# Holt Community Fire Protection District - Fire

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

(0% member contributions are additional)

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		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
2018	\$ 314,744	15.8%	\$49,730	\$ 315,282	19.4%	\$61,060	\$ 394,119	19.8%	\$62,319	\$ 403,729
2019	324,973	15.8	51,346	319,601	19.4	63,045	399,518	19.8	64,345	409,260
2020	335,535	15.8	53,015	323,631	19.4	65,094	404,556	19.8	66,436	414,421
2021	346,440	15.8	54,738	327,331	19.4	67,209	409,181	19.8	68,595	419,159
2022	357,699	15.8	56,516	330,657	19.4	69,394	413,339	19.8	70,824	423,418
2023	369,324	15.8	58,353	333,561	19.4	71,649	416,969	19.8	73,126	427,137
2024	381,327	15.8	60,250	335,991	19.4	73,977	420,006	19.8	75,503	430,248
2025	393,720	15.8	62,208	337,890	19.4	76,382	422,380	19.8	77,957	432,680
2026	406,516	15.8	64,230	339,197	19.4	78,864	424,013	19.8	80,490	434,353
2027	419,728	15.8	66,317	339,845	19.4	81,427	424,823	19.8	83,106	435,182

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
2018	\$ 314,744	22.4%	\$70,503	\$ 460,453	23.1%	\$72,706	\$ 470,755	25.1%	\$79,001	\$ 517,134
2019	324,973	22.4	72,794	466,761	23.1	75,069	477,204	25.1	81,568	524,219
2020	335,535	22.4	75,160	472,647	23.1	77,509	483,221	25.1	84,219	530,829
2021	346,440	22.4	77,603	478,051	23.1	80,028	488,746	25.1	86,956	536,898
2022	357,699	22.4	80,125	482,908	23.1	82,628	493,712	25.1	89,782	542,353
2023	369,324	22.4	82,729	487,149	23.1	85,314	498,048	25.1	92,700	547,116
2024	381,327	22.4	85,417	490,698	23.1	88,087	501,676	25.1	95,713	551,101
2025	393,720	22.4	88,193	493,471	23.1	90,949	504,511	25.1	98,824	554,216
2026	406,516	22.4	91,060	495,379	23.1	93,905	506,462	25.1	102,036	556,359
2027	419,728	22.4	94,019	496,325	23.1	96,957	507,429	25.1	105,352	557,421

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
2018	\$ 314,744	26.8%	\$84,351	\$ 551,762	27.8%	\$87,499	\$ 573,883	30.4%	\$95,682	\$ 630,567
2019	324,973	26.8	87,093	559,321	27.8	90,342	581,745	30.4	98,792	639,206
2020	335,535	26.8	89,923	566,374	27.8	93,279	589,080	30.4	102,003	647,266
2021	346,440	26.8	92,846	572,849	27.8	96,310	595,815	30.4	105,318	654,666
2022	357,699	26.8	95,863	578,670	27.8	99,440	601,869	30.4	108,740	661,318
2023	369,324	26.8	98,979	583,752	27.8	102,672	607,155	30.4	112,274	667,126
2024	381,327	26.8	102,196	588,004	27.8	106,009	611,578	30.4	115,923	671,986
2025	393,720	26.8	105,517	591,327	27.8	109,454	615,034	30.4	119,691	675,784
2026	406,516	26.8	108,946	593,614	27.8	113,011	617,412	30.4	123,581	678,397
2027	419,728	26.8	112,487	594,747	27.8	116,684	618,591	30.4	127,597	679,692

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 28<sup>th</sup> have not been incorporated in the above results.
- 5) The actual employer contribution rates for future valuation dates will be based upon actual data as of the future valuation date.

# Holt Community Fire Protection District - Fire

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

(0% member contributions are additional)

### Rule of 80 Retirement Eligibility

Valuation Year	Estimated Projected Payroll	L-1 Benefit Program			L-3 Benefit Program			LT-4(65) Benefit Program		
		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
2018	\$ 314,744	16.3%	\$51,303	\$ 326,130	20.1%	\$63,264	\$ 407,645	20.3%	\$63,893	\$ 417,733
2019	324,973	16.3	52,971	330,598	20.1	65,320	413,230	20.3	65,970	423,456
2020	335,535	16.3	54,692	334,767	20.1	67,443	418,441	20.3	68,114	428,796
2021	346,440	16.3	56,470	338,594	20.1	69,634	423,225	20.3	70,327	433,698
2022	357,699	16.3	58,305	342,034	20.1	71,897	427,525	20.3	72,613	438,105
2023	369,324	16.3	60,200	345,038	20.1	74,234	431,280	20.3	74,973	441,953
2024	381,327	16.3	62,156	347,551	20.1	76,647	434,422	20.3	77,409	445,172
2025	393,720	16.3	64,176	349,515	20.1	79,138	436,877	20.3	79,925	447,688
2026	406,516	16.3	66,262	350,867	20.1	81,710	438,566	20.3	82,523	449,419
2027	419,728	16.3	68,416	351,537	20.1	84,365	439,403	20.3	85,205	450,277

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
2018	\$ 314,744	23.1%	\$72,706	\$ 476,349	23.8%	\$74,909	\$ 489,229	25.8%	\$81,204	\$ 534,995
2019	324,973	23.1	75,069	482,875	23.8	77,344	495,931	25.8	83,843	542,324
2020	335,535	23.1	77,509	488,964	23.8	79,857	502,184	25.8	86,568	549,162
2021	346,440	23.1	80,028	494,554	23.8	82,453	507,925	25.8	89,382	555,441
2022	357,699	23.1	82,628	499,579	23.8	85,132	513,086	25.8	92,286	561,085
2023	369,324	23.1	85,314	503,966	23.8	87,899	517,592	25.8	95,286	566,013
2024	381,327	23.1	88,087	507,637	23.8	90,756	521,362	25.8	98,382	570,136
2025	393,720	23.1	90,949	510,506	23.8	93,705	524,309	25.8	101,580	573,358
2026	406,516	23.1	93,905	512,480	23.8	96,751	526,337	25.8	104,881	575,575
2027	419,728	23.1	96,957	513,459	23.8	99,895	527,342	25.8	108,290	576,674

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
2018	\$ 314,744	27.6%	\$86,869	\$ 570,789	28.6%	\$90,017	\$ 593,674	31.5%	\$99,144	\$ 652,296
2019	324,973	27.6	89,693	578,609	28.6	92,942	601,807	31.5	102,366	661,232
2020	335,535	27.6	92,608	585,905	28.6	95,963	609,395	31.5	105,694	669,570
2021	346,440	27.6	95,617	592,604	28.6	99,082	616,362	31.5	109,129	677,225
2022	357,699	27.6	98,725	598,625	28.6	102,302	622,625	31.5	112,675	684,106
2023	369,324	27.6	101,933	603,882	28.6	105,627	628,093	31.5	116,337	690,114
2024	381,327	27.6	105,246	608,281	28.6	109,060	632,668	31.5	120,118	695,141
2025	393,720	27.6	108,667	611,719	28.6	112,604	636,244	31.5	124,022	699,070
2026	406,516	27.6	112,198	614,085	28.6	116,264	638,704	31.5	128,053	701,773
2027	419,728	27.6	115,845	615,258	28.6	120,042	639,924	31.5	132,214	703,113

Notes regarding the above projections:

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- 3) Due to the estimated nature of the above projections, certain but not all aspects of the Missouri LAGERS funding policy have been incorporated in the above projections.
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