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November 10, 2025

Creve Coeur Fire Protection District  
11221 Olive Blvd.  
Creve Coeur, Missouri 63141

RE: Creve Coeur Fire Protection District Age Activated Supplemental Pension Plan – Section 105.665  
Cost Statement

Dear Members of the Board:

The purpose of this letter is to provide the Board of the Creve Coeur Fire Protection District Age Activated Supplemental Pension Plan (“Plan”) with a cost statement required under the Missouri Revised Statutes Section 105.665 in connection with the following proposed change in Plan provision:

- Removal of Social Security Offset for Future Benefit Commencements

For purposes of the cost statement, we have assumed that this plan change was implemented retroactive to January 1, 2025. Our projections are based on the census data, assets and actuarial assumptions/methods that were used in the January 1, 2025 actuarial valuation. We did not take into account changes in plan population (other than expected new entrants to maintain a stable active population as noted in Exhibit III) and/or market conditions after January 1, 2025.

In Exhibit I attached to this letter, we have provided 10-year projections of costs and liabilities based on current and proposed plan provisions.

We are providing the following information numbered to correspond with Section 105.665:

1. The level normal cost of plan benefits currently in effect is \$298,192 as of January 1, 2025, or 3.7% of expected covered payroll.
2. The contribution amount for the plan’s unfunded actuarial accrued liability is \$0 as of January 1, 2025, or 0.0% of expected covered payroll. The amortization period is 15 years.
3. The current total required contribution (including interest to the end of the plan year) determined as of January 1, 2025 is \$316,978, or 4.0% of expected covered payroll.
4. The total required contribution from item 3 is being contributed in a timely manner.
5. As of January 1, 2025, the plan's actuarial value of assets is \$19,282,322, the market value of assets is \$20,028,498, the actuarial accrued liability is \$18,214,719, and the funded ratio based on the actuarial value of assets is 105.9%.
6. The proposed total required contribution (including interest to the end of the plan year) determined as of January 1, 2025 is \$498,568, or 6.2% of expected covered payroll.
7. A 10-year projection of liabilities, annual costs and funded ratios is presented in Exhibit I.
8. The proposed provisions would result in additional contributions in the year of implementation. For purposes of this cost statement, we have illustrated the additional contributions assuming the proposed plan change was in effect as of January 1, 2025.

9. Under the Board's funding policy, the proposed plan change would not in any way impair the ability of the plan sponsor to meet its obligation to pay benefits to plan members and their beneficiaries.
10. The actuarial assumptions used in the January 1, 2025 actuarial valuation are presented in Exhibit II. Other assumptions used for these projections that are not listed in Exhibit II are included in Exhibit III.
11. The actuary's certification regarding the assumptions used in the January 1, 2025 valuation is provided below.
12. The actuarial funding method used in the January 1, 2025 valuation is described in Exhibit II.

## Assumptions and Methods

In preparing the January 1, 2025, actuarial valuation, which is the basis for this cost statement, we have employed generally accepted actuarial methods and assumptions, in conjunction with employee data and financial information provided to us by the Plan. The employee data has not been audited, but it has been reviewed and found to be consistent, both internally and with prior years' data. The validity of our analysis results is dependent upon the accuracy of the data and financial information provided.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the Plan and reasonable long-term expectations, and represent our best estimate of the anticipated long-term experience under the Plan. The actuary performs an analysis of Plan experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. A summary of all assumptions and methods used are as described in Exhibit II. Unless otherwise specified in this study, all data, methods, assumptions, and plan provisions are the same as described in the January 1, 2025 valuation report dated June 5, 2025. The methodology used in the selection of the assumptions is described in detail in the January 1, 2025 valuation report, including the disclosures required under Actuarial Standard of Practice No. 27.

If the Board moves forward with this plan change, we recommend changing the 15-year "open" amortization method to a 15-year closed layered amortization method to ensure that any unfunded liability is fully paid within a reasonable period. If the Board continues to use an open amortization period, we will have to include separate calculations in the future based on a closed layered amortization method to satisfy Actuarial Standards of Practice.

Where presented, references to "funded ratio" and "unfunded accrued liability" typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Where presented, references to "accumulated benefit funded ratio" is measured on a market value of assets basis. Moreover, the funded ratios presented are appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

Future actuarial measurements may differ slightly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements; and changes in plan provisions or applicable law. Because of limited scope, no analysis of the potential range of such future differences was performed except as noted in this letter.

Gallagher prepared this cost statement for use by the Board in considering the proposed plan change described above. Use of this cost statement by other parties or for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions,

methodologies, or the inapplicability of the cost statement for that purpose. Because of the risk of misinterpretation of actuarial results, Gallagher recommends requesting its advance review of any statement, document, or filing to be based on information contained in this cost statement. Gallagher will accept no liability for any such statement, document or filing made without its prior review.

## Use of Models

Actuarial Standard of Practice No. 56 (“ASOP 56”) provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. Gallagher uses the following:

- Third-party software in the performance of annual actuarial valuations and projections to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the funding methods specified in this report.
- An internally developed model that applies applicable funding methods and policies to the liabilities derived from the output of the third-party software and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report.

Gallagher has an extensive review process whereby the results of the liability calculations are checked using detailed sample output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other outputs and the internal model are similarly reviewed in detail and at a high level for accuracy, reasonability and consistency with prior results. Gallagher also reviews the third-party model when significant changes are made to the software or model. The review is performed by experts within the company who are familiar with applicable funding methods as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked and reviewed by multiple experts within the company who are familiar with the details of the required changes.

## Assessment of Risks

Information required under Actuarial Standard of Practice No. 51 regarding the Plan’s major risks are provided in the January 1, 2025 actuarial valuation report. Those same risks are applicable to the analysis contained in this letter.

## Actuarial Certification

The undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this memorandum. This letter has been prepared in accordance with all Applicable Actuarial Standards of Practice and we are available to answer any questions on the material contained in the letter, or to provide explanations or further details as may be appropriate.

Sincerely,



David J. Kershner, FSA, EA, MAAA, FCA  
Principal, Wealth



Duncan Reynolds, FSA, EA, MAAA  
Senior Consultant, Wealth



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## Creve Coeur Fire Protection District Age Activated Supplemental Pension Plan January 1, 2025 Projections

	<u>2025</u>	<u>2026</u>	<u>2027</u>	<u>2028</u>	<u>2029</u>	<u>2030</u>	<u>2031</u>	<u>2032</u>	<u>2033</u>	<u>2034</u>	<u>2035</u>
<b>CURRENT</b>											
A Actuarial Accrued Liability	18,214,719	18,466,145	18,673,461	18,938,772	19,239,623	19,545,649	19,817,656	20,087,271	20,374,751	20,630,356	20,908,229
B Actuarial Value of Assets	<u>19,282,322</u>	<u>20,240,275</u>	<u>20,688,954</u>	<u>21,073,425</u>	<u>21,498,681</u>	<u>21,934,527</u>	<u>22,341,287</u>	<u>22,758,165</u>	<u>23,204,035</u>	<u>23,627,235</u>	<u>24,084,322</u>
C Unfunded Actuarial Accrued Liability [A-B]	(1,067,603)	(1,774,130)	(2,015,493)	(2,134,653)	(2,259,058)	(2,388,878)	(2,523,631)	(2,670,894)	(2,829,284)	(2,996,879)	(3,176,093)
D Funded Ratio [B/A]	105.9%	109.6%	110.8%	111.3%	111.7%	112.2%	112.7%	113.3%	113.9%	114.5%	115.2%
E Market Value of Assets	20,028,498	20,371,843	20,688,954	21,073,425	21,498,681	21,934,527	22,341,287	22,758,165	23,204,035	23,627,235	24,084,322
F Normal Cost	298,192	300,229	317,038	315,899	339,718	349,126	378,976	390,511	368,956	380,878	413,008
G Amortization of Unfunded Liability	0	0	0	0	0	0	0	0	0	0	0
H Employer Cost [F+G]x1.063	316,978	319,143	337,011	335,801	361,120	371,121	402,851	415,113	392,200	404,873	439,028
G Projected Payroll	7,981,225	7,885,810	8,012,773	8,215,951	8,409,144	8,549,185	8,648,734	8,850,476	9,099,275	9,360,758	9,652,904
H Employer Contribution Rate [H/G]	4.0%	4.0%	4.2%	4.1%	4.3%	4.3%	4.7%	4.7%	4.3%	4.3%	4.5%
<b>PROPOSED</b>											
A Actuarial Accrued Liability	20,276,927	20,738,676	21,171,768	21,661,572	22,200,251	22,766,270	23,293,237	23,829,817	24,404,604	24,961,681	25,548,492
B Actuarial Value of Assets	<u>19,282,322</u>	<u>20,421,865</u>	<u>20,996,035</u>	<u>21,483,954</u>	<u>22,018,241</u>	<u>22,577,326</u>	<u>23,094,003</u>	<u>23,625,140</u>	<u>24,196,842</u>	<u>24,750,033</u>	<u>25,334,271</u>
C Unfunded Actuarial Accrued Liability [A-B]	994,605	316,811	175,733	177,618	182,010	188,944	199,234	204,677	207,762	211,648	214,221
D Funded Ratio [B/A]	95.1%	98.5%	99.2%	99.2%	99.2%	99.2%	99.1%	99.1%	99.1%	99.2%	99.2%
E Market Value of Assets	20,028,498	20,553,433	20,996,035	21,483,954	22,018,241	22,577,326	23,094,003	23,625,140	24,196,842	24,750,033	25,334,271
F Normal Cost	370,785	376,229	395,903	393,513	423,600	436,853	474,720	490,049	463,922	478,586	518,821
G Amortization of Unfunded Liability	98,235	31,291	17,357	17,543	17,977	18,662	19,678	20,216	20,520	20,904	21,158
H Employer Cost [F+G]x1.063	498,568	433,194	439,295	436,953	469,396	484,212	525,545	542,412	514,962	530,958	573,998
G Projected Payroll	7,981,225	7,885,810	8,012,773	8,215,951	8,409,144	8,549,185	8,648,734	8,850,476	9,099,275	9,360,758	9,652,904
H Employer Contribution Rate [H/G]	6.2%	5.5%	5.5%	5.3%	5.6%	5.7%	6.1%	6.1%	5.7%	5.7%	5.9%



## Actuarial Assumptions and Methods

### Interest Rate

6.3% compounded annually (net of investment expenses).

### Money Purchase Plan Conversion Rate

The interest rate used in converting Money Purchase Plan account balances to monthly annuities is 4.5%. The mortality table is as specified in Revenue Ruling 2001-62.

### Money Purchase Plan Conversion Rate

20% of Salary

### Salary Increases

4.0% compounded annually, with recognition of longevity increases.

### Hours Worked

It is assumed each active member earns at least 1,500 hours each year in the future.

### Mortality

Healthy Lives: Pub-2010 Mortality Table, Public Safety, fully generational with the MP-2021 Mortality Improvement scale.

Disabled Lives: Pub-2010 Disability Mortality Table, Public Safety, fully generational with the MP-2021 Mortality improvement scale.

### Withdrawal Rates

T-6 rates from the Pension Actuaries Handbook by Crocker, Sarason and Straight.



## Actuarial Assumptions and Methods (continued)

### Assumed Retirement Age

<u>Age</u>	<u>Retirement Rate</u>
55	40%
56	10%
57	10%
58	10%
59	10%
60	10%
61 (or older)	100%

### Expenses

None explicitly assumed.

### Asset Valuation Method

The actuarial value of assets is based on a three-year smoothing method and is determined by spreading the effect of each year's investment return in excess of or below the expected return over three years. The Fair Value of assets at the valuation date is reduced by the sum of the following:

1. 66.67% of the return to be spread during the first year preceding the valuation date,
2. 33.33% of the return to be spread during the second year preceding the valuation date.

### Actuarial Cost Method

Projected Unit Credit Actuarial Cost Method. Under this method, the projected benefit of each participant is allocated to his years of service by level proration. The actuarial present value of benefits allocated to the current plan year is the normal cost, and the actuarial present value of benefits allocated to prior years of service is the accrued liability. Actuarial gains and losses are recognized in the unfunded accrued liability as they emerge.



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## Amortization Method for Unfunded Accrued Liability (UAL)

The UAL for each valuation is amortized over a 15-year period, level dollar payments. The amortization period is reset to 15 years for each subsequent valuation<sup>1</sup>. Surplus funding is not amortized to offset the normal cost contribution.

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<sup>1</sup> If the Board moves forward with this plan change, we recommend changing the 15-year “open” amortization method to a 15-year closed layered amortization method to ensure that any unfunded liability is fully paid within a reasonable period. If the Board continues to use an open amortization period, we will have to include separate calculations in the future based on a closed layered amortization method to satisfy Actuarial Standards of Practice.



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Exhibit III

## Projection Assumptions

### New Entrants

New entrants were assumed to replace exiting active members such that the number of active members (59) stays level throughout the projection period. The expected salary of new entrants in 2025 was \$86,345.48. 78% of new entrants were assumed to be male and 22% were assumed to be female. Hire age of new entrants is assumed to be spread evenly between 25, 30, and 35.

### Timing of Employer Contributions

Employer contributions were assumed to be made mid-year following the plan year to which the contribution applies.

### Asset Returns in 2025 and Beyond

Market returns were assumed to be 6.3% per year net of investment expenses.