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February 9, 2021

Mr. John Brewer
Executive Director
Firemen's Retirement System of St. Louis
1601 South Broadway
St. Louis, MO 63104

**Re: Firemen's Retirement System of St. Louis (FRS) –
Actuarial Cost Impact of Proposed Additions to Chapter 87**

Dear John:

We have reviewed the potential actuarial cost impact of the Proposed Additions to Chapter 87, Sections 87.120 to 87.371 of the Mo. Statutes, which affect the Firemen's Retirement System of St. Louis (FRS) and other pension plans providing benefits to firefighters of the City of St. Louis, namely the Firefighters' Retirement Plan of the City of St. Louis (FRP). In addition, we have also reviewed the Proposed Changes to Chapter 4.18 and Chapter 4.19 of the City of St. Louis Ordinances, relating to the Proposed Additions to Chapter 87. This letter only considers the actuarial cost impact to FRS.

Our understanding of the Proposed Additions to Chapter 87, and the Proposed Changes to Chapter 4.18 and 4.19 are as follows:

- FRS trustees will also serve as FRP trustees;
- FRS/FRP trustees will be responsible for establishing the administrative policies of FRS and FRP;
- Separate administrative policies and records must be maintained for FRS and FRP;
- FRS and FRP assets may be held in the same investment account; however, principal, investment earnings, contributions, benefits, and expenses must be tracked and accounted for separately;
- Benefits and expenses incurred by FRP must be paid from the FRP trust account, and in no event shall FRP benefits and expenses be paid from the FRS trust account; and
- FRP may use the same actuary, audit firm, and investment consultant as FRS.

We understand that the FRS Board and Staff would be responsible for the operation and administrative functions for both FRS and FRP. This arrangement is expected to result in significant administrative savings to both FRS and FRP because certain fixed costs will be shared and allocated between FRS and FRP. Fixed administrative annual costs include:

- Staff compensation and fringe benefits
- Recurring fees for professional services, such as: accounting, actuarial, investment consulting, and legal
- Capitalized costs for the benefit administration system and other software

- Insurance
- Medical reviews
- City allocated costs
- Computer, hardware, and website costs
- Building operations expenses
- Office equipment rental and maintenance costs
- Other supplies and other expenses

We understand that an expenses allocation policy will be developed defining the sharing of certain administrative costs between FRP and FRS. Certain variable costs may be incurred by each respective system in which case the plan incurring the cost will be responsible for paying the expenses.

With respect to FRS, the consolidation of the Board and Administrative Staff means that certain costs will be shared between FRS and FRP. Consequently, the expense assumption used for the FRS actuarial valuation would be decreased by the proportion of expenses expected to be picked up by FRP.

The actuarial valuation as of October 1, 2020, assumes a return of 6.75 percent which is net of both investment expenses and administrative expenses. Furthermore, the valuation assumes administrative expenses of approximately 25 basis points of the market value of assets. During the last four years, administrative expenses were: $1,086,000 for 2020, $1,027,000 for 2019, $1,050,000 for 2018, and $1,068,000 for 2017.

If administrative expenses are shared between FRS and FRP, then it is expected that expenses for FRS would be reduced in the future. For example, if FRS administrative expenses are reduced from $1,000,000 to $800,000, then the expense load would be reduced from 25 basis points to approximately 20 basis points.

Please note that decreasing the administrative expense assumption from 25 basis points to 20 basis points does not necessarily mean that an adjustment to the investment return assumption is needed. However, we would recommend that administrative expense experience be monitored and that the expense and investment return assumptions be updated during the next experience study. Consequently, the Proposed Additions to Chapter 87, would have no significant impact to the actuarially determined actuarial liability, normal cost and statutory City contributions.

Additional information regarding actuarial assumptions and methods, and important additional disclosures are provided in the full actuarial valuation report of the Firemen's Retirement System as of October 1, 2020.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation. We performed tests to ensure that the model reasonably represents that which is intended to be modeled. We are relying on the GRS actuaries and Internal Software, Training, and Processes Team who developed and maintain the model.

Future actuarial measurements may differ significantly from the current measurements presented in this letter due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

If you need additional information to make an informed decision about the contents of this letter, or if anything appears to be missing or incomplete, please contact us before relying on this letter. Gabriel, Roeder, Smith & Company is not responsible for the consequences to the extent you change, misinterpret, misuse or otherwise misquote the provided information.

This letter should not be relied on for any purpose other than the purpose stated.

The signing actuaries are independent of the plan sponsor.

Alex Rivera and Jeff Tebeau 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 herein.

This communication shall not be construed to provide tax advice, legal advice or investment advice.

Please let us know if you have any questions, would like to discuss the results of this analysis further or would like to see any further analysis.

Respectfully submitted,

Gabriel, Roeder, Smith & Company

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Enclosures

Disclosure for the cost impact relating to the Proposed Additions to Chapter 87 of Missouri Revised Statutes based on the requirements of Missouri Revised Statutes Chapter 105, Section 105.665.2:

(1) The level normal cost of plan benefits in effect, for the plan year ending September 30, 2021, is equal to $2.106 million and is 6.121 percent of active employee payroll under the Frozen Initial Liability cost method.

(2) The contribution for unfunded initial accrued liability currently payable by the plan, before the impact of Proposed Additions to Chapter 87, for the plan year ending September 30, 2021, is $1.297 million and is 3.770 percent of active employee payroll under the Frozen Initial Liability cost method.

(3) The total contribution rate, equal to the normal cost rate plus the frozen initial unfunded accrued liability contribution rate before the impact of Proposed Additions to Chapter 87, for the plan year ending September 30, 2021, is equal to $3.403 million which is 9.891 percent of active payroll under the Frozen Initial Liability cost method.

(4) GRS is not able to comment on whether or not the legislative body is currently paying the total contribution rate as defined in (3) above.

(5) As of the most recent actuarial valuation as of October 1, 2020, under the Frozen Initial Liability cost method, the present value of future benefits was $482.613 million, the actuarial value of assets was $450.742 million and the funded ratio on an actuarial value of asset basis was 93.4 percent. The market value of assets was $434.981 million and the funded ratio on a market value of asset basis was 90.1 percent.

(6) Adopting Proposed Additions to Chapter 87 is expected to produce no significant change to the FRS' normal costs, actuarial liability or the unfunded actuarial liability. Consequently, the total contribution rate equal to the normal cost rate plus the frozen initial unfunded accrued liability contribution rate, after the impact of Proposed Additions to Chapter 87, for the plan year ending September 30, 2021, would remain the same at $3.403 million or 9.891 percent of active payroll under the Frozen Initial Liability cost method.

(7) Adopting Proposed Additions to Chapter 87 is not expected to significantly change FRS' actuarial accrued liability, consequently there would be no significant change to the unfunded liability or City contributions associated with the unfunded actuarial liability. The projected contributions over the next ten years are expected to be the same before and after the adoption of Proposed Additions to Chapter 87.

(8) The total contribution rate for plan year ending September 30, 2021, is expected to remain the same before and after the proposed change.

(9) GRS cannot comment on whether or not the proposed change would in any way impair the ability of the plan to meet the obligation thereof in effect at the time the proposal was made.

(10) This cost statement uses the same assumptions that were used for the most recent actuarial valuation as of October 1, 2020.

(11) In the opinion of GRS, the assumptions used for the actuarial valuation are reasonable individually and in aggregate.

(12) The method used in the most recent actuarial valuation as of October 1, 2020, is the Frozen Initial Liability Cost Method. This method determines a normal cost on an aggregate basis expressed as a level percentage of pay. The normal cost rate equals the ratio of (a) the present value of future benefits less the actuarial value of assets less the frozen initial unfunded accrued liability, to (b) the present value of future salaries. Under this method, the actuarial gains/(losses), as they occur, reduce/(increase) future normal costs.

Unfunded actuarial accrued liabilities attributable to changes in assumptions, plan provisions or methods are amortized on a level dollar basis over 30 years from the creation of the unfunded base. The total contribution is equal to the normal cost plus the amortization of the frozen initial unfunded accrued liabilities.