

# Dallas Police and Fire Pension System Supplemental Plan

**Actuarial Valuation and Review as of January 1, 2025 –  
REVISED**

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**Segal**



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February 2, 2026

Board of Trustees  
Dallas Police and Fire Pension System Supplemental Plan  
4100 Harry Hines Blvd., Suite 100  
Dallas, TX 75219

Dear Board of Trustees Members:

We are pleased to submit this Actuarial Valuation and Review as of January 1, 2025. It summarizes the actuarial data used in the valuation, analyzes the preceding year's experience, and establishes the funding requirements for fiscal 2025.

This report has been revised from the version issued on October 20, 2025. In addition, the January 1, 2024 results have been restated to reflect the Funding Agreement with the City of Dallas adopted by the Board of Trustees on December 11, 2025.

This report has been prepared in accordance with generally accepted actuarial principles and practices for the exclusive use and benefit of the Board of Trustees, based upon information provided by the staff of the Dallas Police and Fire Pension System.

Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; 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.

The actuarial calculations were directed under the supervision of Jeffrey S. Williams. I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate. The assumptions used in this

Board of Trustees  
February 2, 20265

actuarial valuation were selected by the Board based upon my analysis and recommendations. In my opinion, the assumptions are reasonable and take into account the experience of the Plan and reasonable expectations. In addition, in my opinion, the combined effect of these assumptions is expected to have no significant bias.

Segal makes no representation or warranty as to the future status of the Plan and does not guarantee any particular result. This document does not constitute legal, tax, accounting or investment advice or create or imply a fiduciary relationship. The Board is encouraged to discuss any issues raised in this report with the Plan's legal, tax and other advisors before taking, or refraining from taking, any action.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

Segal



Jeffrey S. Williams, FCA, ASA, MAAA, EA  
Vice President and Consulting Actuary



Caitlin E. Grice, FCA, ASA, MAAA, EA  
Vice President and Consulting Actuary

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# Section 1: Actuarial Valuation Summary

## Purpose and basis

This report has been prepared by Segal to present a valuation of the Dallas Police and Fire Pension System Supplemental Plan as of January 1, 2025. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to provide information for required disclosures under Governmental Accounting Standards Board (GASB) Statement No. 67.

The contribution requirements presented in this report are based on:

- The benefit provisions of the Supplemental Plan, as administered by the Board;
- The characteristics of covered active members, inactive vested members, and retired members and beneficiaries as of December 31, 2024, provided by the System's IT Department;
- The assets of the Plan as of December 31, 2024, provided by the System's Finance Department;
- Economic assumptions regarding future salary increases and investment earnings;
- Other actuarial assumptions regarding employee terminations, retirement, death, etc.;
- Article 6243a-1, as amended by House Bill 3158 (HB 3158), signed into law by the Governor of Texas on May 31, 2017; and
- The funding policy adopted by the Board of Trustees of the Pension System on December 12, 2019 as amended through July 9, 2020.

The majority of assumptions and methods used to value the Plan were set by the Board based on recommendations made by Segal following a five-year experience study for the period ended December 31, 2024.

Certain disclosure information required by GASB Statement No. 68 as of September 30, 2025 for the City is provided in a separate report.

# Section 1: Actuarial Valuation Summary

## Valuation highlights

- The January 1, 2024 valuation results have been restated to reflect the Funding Agreement with the City of Dallas adopted by the Board of Trustees on December 11, 2025. Changes include removing the immediate partial cost of living adjustments (COLA), updating the ad hoc COLA start year from 2073 to 2046, when the System is projected to be 70% funded, and recalculating the actuarial determined contribution (ADC).

## Developments since last valuation

- **Asset returns:** The rate of return on the market value of assets was 9.23% for the year ending December 31, 2024. Note that this value may differ slightly from the value calculated by the investment consultant due to differences in methodology. Since the market value of assets is equivalent to the actuarial value of assets, the effective return on the actuarial value of assets was also 9.23% for the same period. This resulted in an actuarial gain when measured against the assumed rate of return of 6.50%. This actuarial investment gain decreased the ADC by \$67,790. We advise the Board to continue to monitor actual and anticipated investment returns relative to the assumed long-term rate of return on investments of 6.50%.
- **Contributions:** Actual City contributions made during the year ending December 31, 2024 of \$4,256,587 were 111.8% of the revised actuarially determined contribution. In the prior year, actual contributions were 100.0% of the prior year ADC.
- **Experience:** The actuarial gain of \$233,863, or 0.50% of actuarial accrued liability, is due to an investment gain of \$556,282, or 1.18% of actuarial accrued liability, and a loss from sources other than investments of \$322,419, or 0.69% of the actuarial accrued liability prior to reflection of assumption changes.
- **Assumption changes:** The following actuarial assumptions were approved by the Board and changed with this valuation, following the completion of an experience study for the period January 1, 2020 through December 31, 2024:
  - All mortality tables updated to Pub-2016 and projected generationally using Scale MP-2021:
    - Healthy annuitant mortality table, multiplied times 1.25 for males and multiplied by 0.8 for females
    - Contingent beneficiary mortality table, multiplied times 1.1 for males and multiplied by 1.25 for females
    - Disabled annuitant mortality table, set forward five years for males
    - Pre-retirement mortality, set forward five years for males and set back two years for females
  - Retirement rates for all participant groups:
    - DROP actives: Lowered age-based rates covering the same age ranges for Fire and Police
    - Non-DROP actives: Updated age-based rates covering the same age ranges for Fire and Police

## Section 1: Actuarial Valuation Summary

- Inactive vested members: 25% of those who terminate will take a cash out within the first two years following termination; afterwards, 100% retirement at Normal Retirement Age
- Age-based disability rates lowered
- Service-based turnover rates updated
- Spousal age difference updated from females three years younger than males to two years younger
- Payroll growth increased from 2.50% to 3.50%
- Salary scales based on service, with 10-14% increase based on rank in first year, based on 2025 pay scales.

As a result of these assumption changes, the employer normal cost increased by \$132,037 and the actuarial accrued liability decreased by \$1,379,510. The total impact was a decrease in the ADC of \$148,501.

- **Plan provisions:** The following plan changes are based on Article 6243a-1, as amended by House Bill 4034 (HB 4034) and effective September 1, 2023 are included for the first time in this valuation:
  - For active members who pass away while in the line of duty, the surviving spouse benefit was increased to 100% of the member's accrued benefit. Further for Group B members who began active service before March 1, 2011, the benefit multiplier was increased for service earned on and after September 1, 2017 from the 20 & Out Table 2 to 2.5% at all ages. As a part of this plan change, an assumption was added that 30% of pre-retirement active deaths are in the line of duty.
  - For Group B members who began active service before March 1, 2011, the disability benefit multiplier was increased for service earned on and after September 1, 2017 from the 20 & Out Table 2 to 2.5% at all ages.

As a result of these plan changes, the employer normal cost increased by \$1,799 and the actuarial accrued liability increased by \$7,350. The total impact was an increase in the ADC of \$2,716.

# Section 1: Actuarial Valuation Summary

## Actuarial valuation results

- **Funded ratio:** The funded ratio (the ratio of the actuarial value of assets to actuarial accrued liability) is 50.03%, compared to the prior year funded ratio of 43.24%. These measurements are not necessarily appropriate for assessing the sufficiency of the plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.
- **Actuarially determined contribution (ADC):** The ADC for the upcoming year is \$3,354,094, a decrease of \$453,146 from last year.
- **Unfunded actuarial accrued liability (UAAL):** The UAAL (the excess of the actuarial accrued liability over the actuarial value of assets) is \$22,831,052, which is a decrease of \$3,169,033 since the prior valuation.
- **Asset smoothing:** There is no smoothing method in place.
- **GASB Accounting:** The information contained in Section 5 provides the accounting information for Governmental Accounting Standards Board (GASB) Statement No. 67, for inclusion in the Plan's and employer's financial statements as of December 31, 2024. The Net Pension Liability (NPL) and Pension Expense under GASB statement No. 68 for the inclusion in the plan and employer's financial statement as of September 30, 2025 will be provided separately. The Net Pension Liability (NPL) is equal to the difference between the Total Pension Liability (TPL) and the Plan's fiduciary net position (equal to the market value of assets). The NPL as of December 31, 2024 is \$22.8 million.

# Section 1: Actuarial Valuation Summary

## Funding considerations

- **Funding method:** Segal strongly recommends an actuarial funding method that targets 100% funding of the actuarial accrued liability. Generally, this implies payments that are ultimately at least enough to cover normal cost, interest on the UAAL and the principal balance. In the funding policy adopted by the Board, the UAAL as of January 1, 2020 was amortized over a closed, 20-year period, with future gains or losses each year thereafter amortized over separate, closed, 10-year periods. Amortization will remain on a level percentage of pay basis.
- **Effective amortization period:** The UAAL is projected to be fully amortized in 11 years based on the System's funding policy.

## Section 1: Actuarial Valuation Summary

### Risk

- **Snapshot date:** It is important to note that this actuarial valuation is based on plan assets as of December 31, 2024. The Plan's funded status does not reflect short-term economic fluctuations but rather is based on the market values on the last day of the plan year. Segal is available to prepare projections of potential outcomes of market conditions and other demographic experience upon request.
- **Understanding risk:** Since the actuarial valuation results are dependent on a given set of assumptions, there is a risk that emerging results may differ significantly as actual experience proves to be different from the assumptions. A more detailed assessment of the risks would provide the Board with a better understanding of the inherent risks in the Plan. This assessment may include scenario testing, sensitivity testing, stress testing and stochastic modeling.
  - We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition, but have included a brief discussion of some risks that may affect the Plan in Section 2.

## Section 1: Actuarial Valuation Summary

### Summary of key valuation results

Valuation Result	Current	Prior
<b>Contributions for plan year beginning:</b>	<b>January 1, 2025</b>	<b>January 1, 2024</b>
• Actuarially determined contributions	\$3,354,094	\$3,807,240
• Actuarially determined contributions as a percent of computation payroll	176.32%	186.52%
• Actual City contributions	—	4,256,587
<b>Actuarial accrued liability for plan year beginning:</b>	<b>January 1, 2025</b>	<b>January 1, 2024</b>
• Retired members and beneficiaries	\$33,105,706	\$32,810,725
• Inactive vested members	0	44,117
• Active members	12,579,911	12,953,072
• <b>Total</b>	<b>\$45,685,617</b>	<b>\$45,807,914</b>
• Normal cost including administrative expenses for plan year beginning January 1	1,192,626	1,356,804
<b>Assets for plan year beginning January 1:</b>		
• Actuarial (market) value of assets (AVA)	22,854,565	19,807,829
<b>Funded status for plan year beginning January 1:</b>		
• Unfunded actuarial accrued liability	\$22,831,052	\$26,000,085
• Funded percentage on MVA basis	50.03%	43.24%
• Effective amortization period on an AVA basis	11	12

## Section 1: Actuarial Valuation Summary

Valuation Result	Current	Prior
<b>Key assumptions:</b>		
• Net investment return	6.50%	6.50%
• Inflation rate	3.50%	2.50%
<b>GASB information:</b>		
• Discount rate	6.50%	6.50%
• Total Pension Liability	\$45,703,525	\$45,266,116
• Plan Fiduciary Net Position	22,854,565	19,807,829
• Net Pension Liability	22,848,960	25,458,287
• Plan Fiduciary Net Position as a percentage of Total Pension Liability	50.01%	43.76%
<b>Demographic data for plan year beginning January 1:</b>		
• Number of retired members and beneficiaries	159	152
• Number of DROP only beneficiaries	3	3
• Number of inactive vested members	0	1
• Number of active members	57	56
• Total supplemental computation pay <sup>1</sup>	\$1,902,315	\$2,041,195
• Average supplemental computation pay	33,374	36,450

<sup>1</sup> Total computation pay is the active members' actual payroll for the preceding year, increased by the salary scale applicable for each member to account for their anticipated increases in the upcoming year.

# Section 1: Actuarial Valuation Summary

## Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of a pension plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare a valuation, Segal relies on a number of input items. These include:

Input Item	Description
<b>Plan provisions</b>	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
<b>Participant information</b>	An actuarial valuation for a plan is based on data provided to the actuary by the System. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
<b>Financial information</b>	Part of the cost of a plan will be paid from existing assets — the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the System. A snapshot as of a single date may not be an appropriate value for determining a single year's contribution requirement, especially in volatile markets. Plan sponsors often use an "actuarial value of assets" that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
<b>Actuarial assumptions</b>	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of participants in each year, as well as forecasts of the plan's benefits for each of those events. In addition, the benefits forecasted for each of those events in each future year reflect actuarial assumptions as to salary increases and cost-of-living adjustments. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan's assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions are selected within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

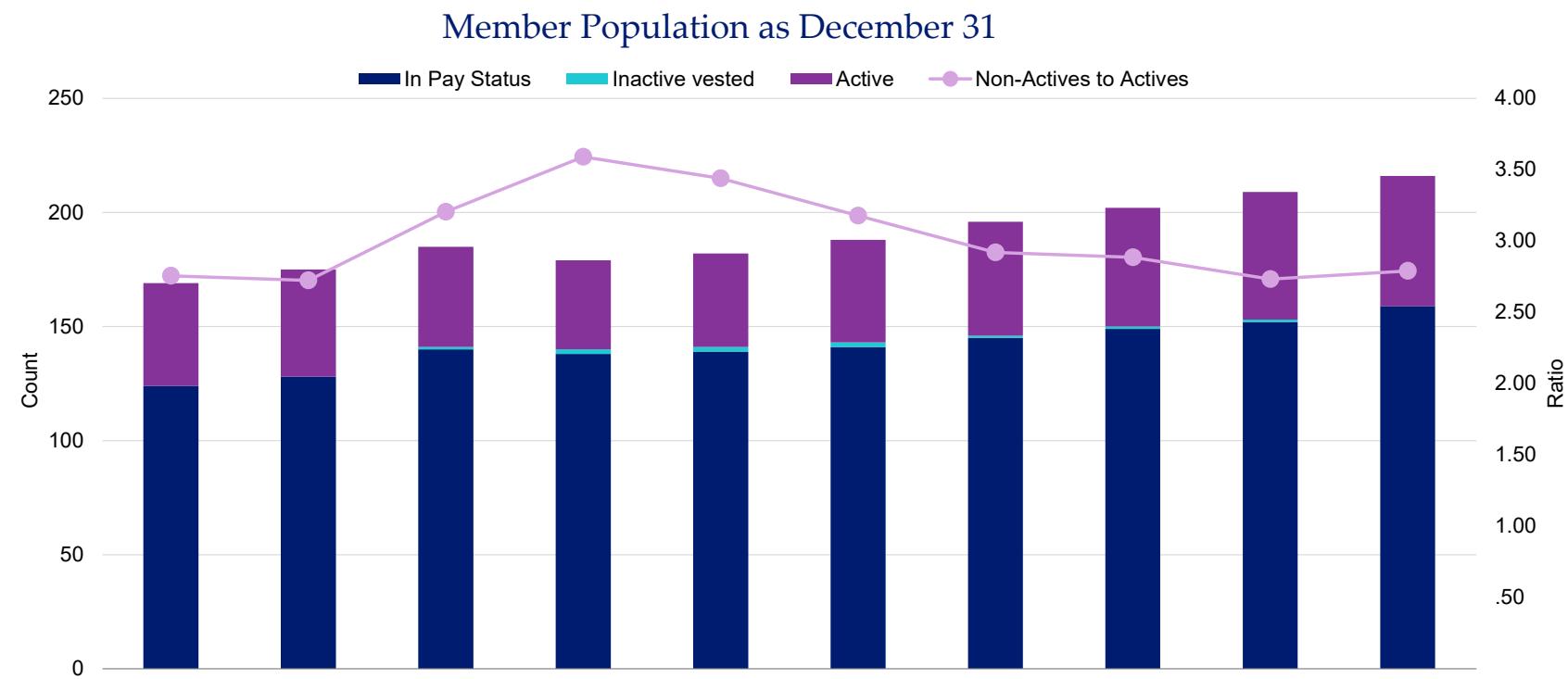
## Section 1: Actuarial Valuation Summary

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The actuarial valuation is prepared at the request of the Retirement Board. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.
- If the Retirement Board is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice and is not acting as a fiduciary to the Dallas Police and Fire Supplemental Plan. The valuation is based on Segal's understanding of applicable guidance in these areas and of the Dallas Police and Fire Supplemental Plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.
- While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.
- Segal's report shall be deemed to be final and accepted by the Board upon delivery and review. Trustees should notify Segal immediately of any questions or concerns about the final content.

# Section 2: Actuarial Valuation Results

## Member information



<sup>1</sup> Excludes beneficiaries who only have a DROP account.

<sup>2</sup> Excluding terminated participants due a refund of employee contributions.

## Section 2: Actuarial Valuation Results

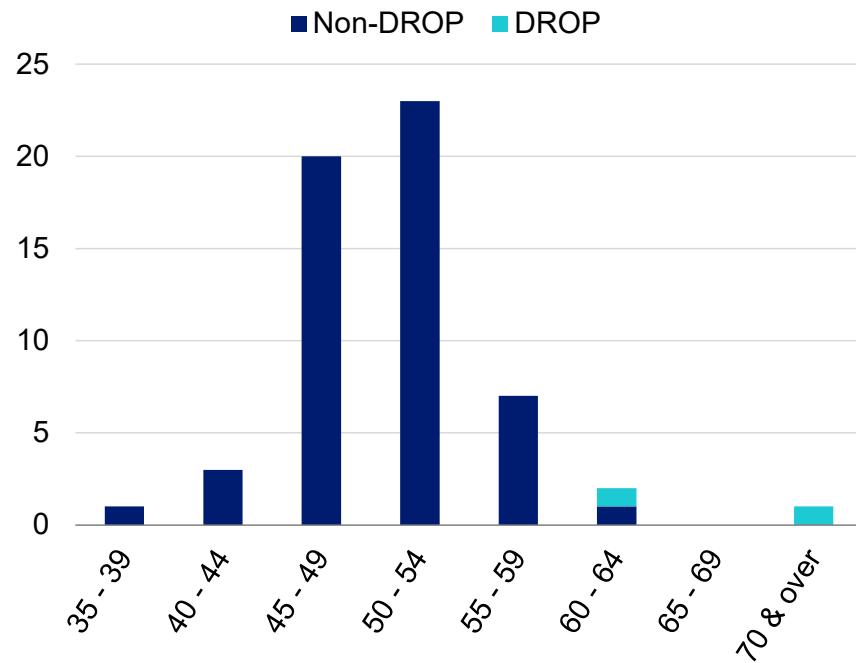
### Active members

Demographic Data	December 31, 2024	December 31, 2023	Change
<b>Firefighters</b>			
Active members	20	19	5.3%
Average age	51.3	50.5	0.8
Average years of service	25.6	25.3	0.3
Average supplemental computation pay	\$38,836	\$35,812	8.4%
<b>Police Officers</b>			
Active members	37	37	0.0%
Average age	51.8	51.6	0.2
Average years of service	26.2	25.3	0.9
Average supplemental computation pay	\$30,421	\$36,776	-17.3%
<b>Total</b>			
Active members	57	56	1.8%
Average age	51.6	51.3	0.3
Average years of service	26.0	25.3	0.7
Average supplemental computation pay	\$33,374	\$36,450	-8.4%

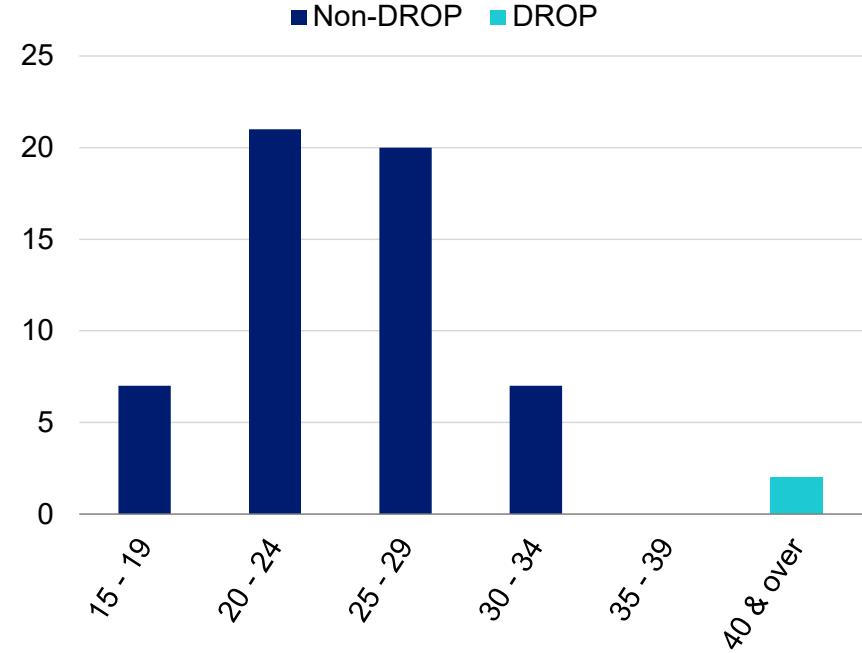
## Section 2: Actuarial Valuation Results

Distribution of Active Members as of December 31, 2024

Actives by Age



Actives by Years of Service

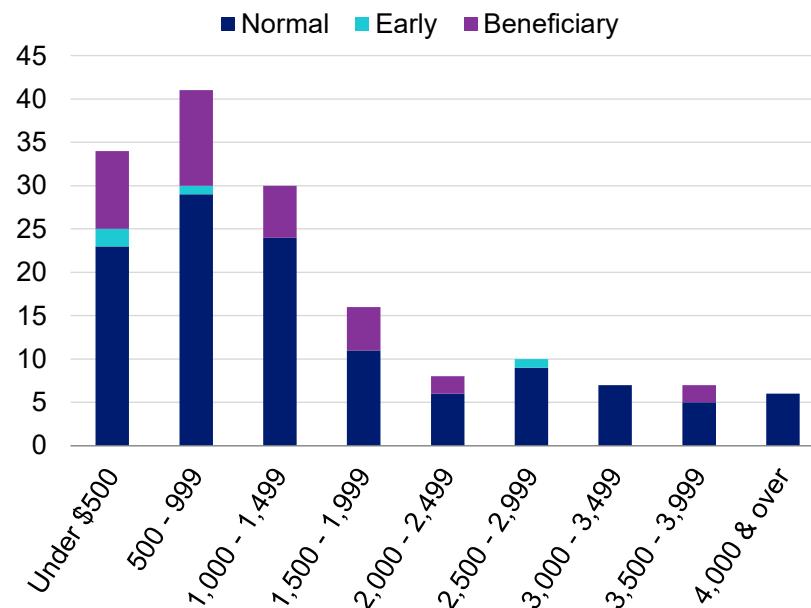


## Section 2: Actuarial Valuation Results

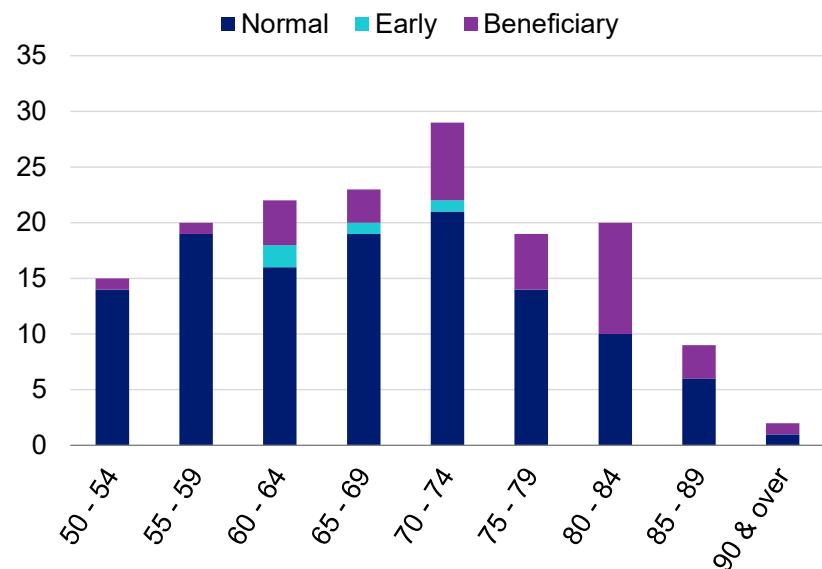
### Retired members and beneficiaries

Demographic Data	December 31, 2024	December 31, 2023	Change
Retired participants	124	118	5.1%
Beneficiaries <sup>1</sup>	35	34	2.9%
Average age	69.2	69.7	-0.5
Average amount	\$1,456	\$1,403	3.8%
Total monthly amount	231,468	213,317	8.5%

#### Distribution of Retired Members and Beneficiaries as of December 31, 2024 By Type and Monthly Amount



#### By Type and Age

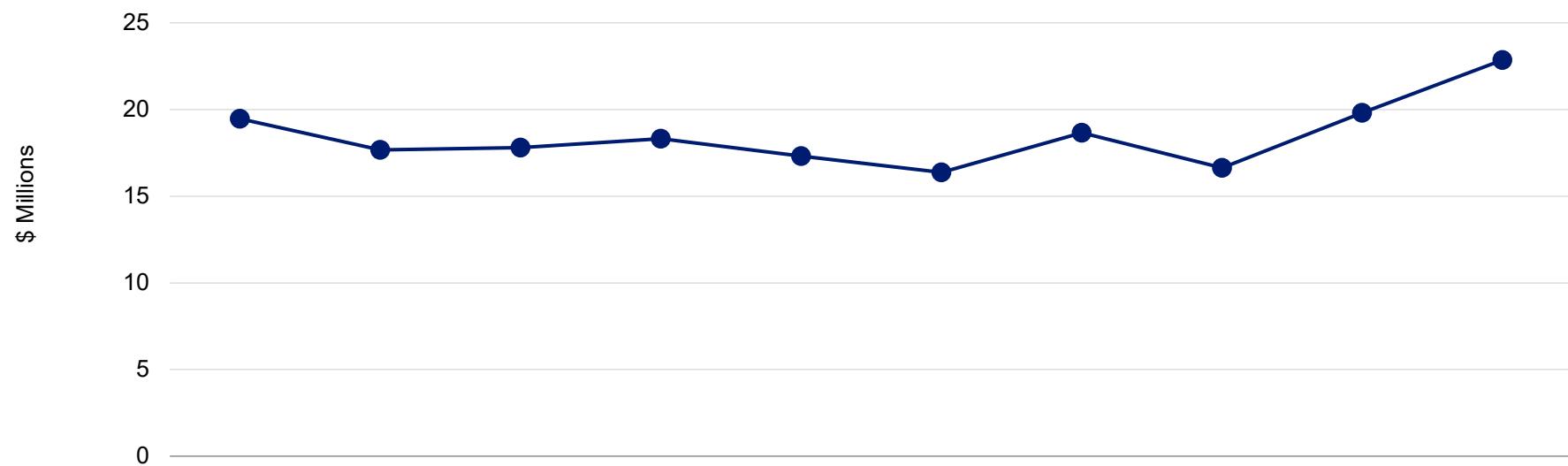


<sup>1</sup> Does not include beneficiaries with annuitized DROP accounts only and no lifetime annuity (3 for 2024 and 3 for 2023)

## Section 2: Actuarial Valuation Results

### Asset history for years ended December 31

Actuarial Value of Assets (equal to Market Value of Assets)



<sup>1</sup> In \$ millions

## Section 2: Actuarial Valuation Results

### Actuarial experience

Assumptions should consider experience and should be based on reasonable expectations for the future.

Each year actual experience is compared to that projected by the assumptions. Differences are reflected in the actuarial valuation.

Assumptions are not changed if experience is believed to be a short-term development that will not continue over the long term. On the other hand, if experience is expected to continue, assumptions are changed.

#### Actuarial Experience for Year Ended December 31, 2024

Source	Amount
1. Net gain from investments <sup>1</sup>	\$556,282
2. Loss from administrative expenses	-30,491
3. Net loss from other experience	-291,928
<b>4. Net experience gain: 1 + 2 + 3</b>	<b>\$233,863</b>

<sup>1</sup> Details on next page

## Section 2: Actuarial Valuation Results

### Investment experience

Actuarial planning is long term. The obligations of a pension plan are expected to continue for the lifetime of all its participants.

The assumed long-term rate of return of 6.50% considers past experience, the asset allocation policy of the Board and future expectations.

#### Investment Experience for Year Ended December 31

Item	2024 Actuarial (Market) Value
1. Net investment income	\$1,881,656
2. Average value of assets	20,390,369
3. Rate of return: <b>1 ÷ 2</b>	9.23%
4. Assumed rate of return	6.50%
5. Expected investment income: <b>2 x 4</b>	\$1,325,374
<b>6. Net investment gain/(loss): <b>1 – 5</b></b>	<b>\$556,282</b>

## Section 2: Actuarial Valuation Results

### Non-investment experience

#### Administrative expenses

Administrative expenses for the year ended December 31, 2024 totaled \$84,546, as compared to the assumption of \$55,000. This resulted in an experience loss of \$30,491 for the year, including an adjustment for interest.

#### Other experience

There are other differences between the expected and the actual experience that appear when the new valuation is compared with the projections from the previous valuation. These include:

- Mortality experience (more or fewer than expected deaths)
- The extent of turnover among members
- Retirement experience (earlier or later than projected)
- The number of disability retirements (more or fewer than projected)
- Salary increases (greater or smaller than projected)

The net loss from this other experience for the year ended December 31, 2024 amounted to \$291,928, which is 0.62% of the actuarial accrued liability.

## Section 2: Actuarial Valuation Results

### Actuarial assumptions

#### January 1, 2024

As part of the Funding Agreement adopted by the Board on December 11, 2025, the following assumption change was effective January 1, 2024:

- The ad hoc COLA start year was moved from 2073 to 2046, based on when the System is assumed to be 70% funded.

This change increased the total normal cost by 2.83%, increased the actuarial accrued liability by 1.22%, increased the Actuarially Determined Contribution by 2.82%, and decreased the funded percentage by 0.53% in the restated January 1, 2024 actuarial valuation results

#### January 1, 2025

Following an Experience Study for the period January 1, 2020 through December 31, 2024, the Trustees adopted the following assumption changes effective January 1, 2025:

- All mortality tables updated to Pub-2016 and projected generationally using Scale MP-2021:
  - Healthy annuitant mortality table, multiplied times 1.25 for males and multiplied by 0.8 for females
  - Contingent beneficiary mortality table, multiplied times 1.1 for males and multiplied by 1.25 for females
  - Disabled annuitant mortality table, set forward five years for males
  - Pre-retirement mortality, set forward five years for males and set back two years for females
- Retirement rates for the following participant groups:
  - DROP actives: Lowered age-based rates covering the same age ranges for Fire and Police
  - Non-DROP actives: Updated age-based rates covering the same age ranges for Fire and Police
  - Inactive vested members: 25% of those who terminate will take a cash out within the first two years after termination. Afterwards, 100% retirement at normal retirement age
- Age-based disability rates lowered
- Service-based turnover rates updated
- Spousal age difference updated from females three years younger than males to two years younger
- Payroll growth increased from 2.50% to 3.50%

## Section 2: Actuarial Valuation Results

- Salary scales based on service, with 10-14% increase based on rank in first year, based on 2025 pay scales.

These changes increased the total normal cost by 13.41%, decreased the actuarial accrued liability by 2.93%, decreased the Actuarially Determined Contribution by 4.24%, and increased the funded percentage by 1.46%.

## Plan provisions

The following plan changes based on Article 6243a-1, as amended by House Bill 4034 (HB 4034) and effective September 1, 2023, are included for the first time in this valuation:

- For active members who pass away while in the line of duty, the surviving spouse benefit was increased to 100% of the member's accrued benefit. Further for Group B members who began active service before March 1, 2011, the benefit multiplier was increased for service earned on and after September 1, 2017 from the 20 & Out Table 2 to 2.5% at all ages. As a part of this plan change, an assumption was added that 30% of pre-retirement active deaths are in the line of duty.
- For Group B members who began active service before March 1, 2011, the disability benefit multiplier was increased for service earned on and after September 1, 2017 from the 20 & Out Table 2 to 2.5% at all ages.

These changes increased the total normal cost by 0.16%, increased the actuarial accrued liability by 0.02%, increased the Actuarially Determined Contribution by 0.08% of projected pay, and had no impact on the funded percentage.

## Section 2: Actuarial Valuation Results

### Unfunded actuarial accrued liability

#### Development of Unfunded Actuarial Accrued Liability for Year Ended December 31, 2024

Component	Amount
1. Unfunded actuarial accrued liability at beginning of year	\$26,000,085
2. Total normal cost at beginning of year, including administrative expenses	1,356,804
3. Total contributions	-4,551,642
4. Interest on 1, 2 & 3	1,631,828
5. Expected unfunded actuarial accrued liability	24,437,075
6. Changes due to:	
a. Net experience gain	-233,863
b. Assumptions	-1,379,510
c. Plan provisions	7,350
d. Total changes	-1,606,023
<b>7. Unfunded actuarial accrued liability at end of year</b>	<b>\$22,831,052</b>

## Section 2: Actuarial Valuation Results

### Actuarially determined contribution

The actuarially determined contribution is equal to the City's normal cost payment and a payment on the unfunded actuarial accrued liability. As of January 1, 2025, the actuarially determined contribution is \$3,354,094, or 176.32% of projected payroll.

The System sets the funding policy used to calculate the actuarially determined contribution based on a closed amortization period of 20 years of the UAAL, established as of January 1, 2020, and a 10-year amortization of any changes in the UAAL thereafter.

Amortization is on a level-percentage-of-pay basis. The payment on the unfunded actuarial accrued liability accounts for 71% of the City's recommended contribution.

The current funding policy is intended to result in predictable employer contributions that eliminate the UAAL within 20 years, thereby providing benefit security to plan participants while balancing the needs of current and future contributors to the plan.

#### Actuarially Determined Contribution

Component	2025 Amount	2024 Amount
1. Total normal cost	\$1,139,331	\$1,303,509
2. Administrative expenses	53,295	53,295
3. Expected member contributions	-256,813	-275,561
4. Employer normal cost: (1) + (2) + (3)	935,813	1,081,243
5. Actuarial accrued liability	45,685,617	45,807,914
6. Actuarial value of assets	22,854,565	19,807,829
7. Unfunded actuarial accrued liability: (5) - (6)	22,831,052	26,000,085
8. Payment on unfunded actuarial accrued liability	2,314,315	2,607,984
9. Adjustment for timing <sup>1</sup>	103,966	118,012
<b>10. Actuarially determined contribution: (4) + (8) + (9)</b>	<b>\$3,354,094</b>	<b>\$3,807,240</b>

The actuarially determined contribution under the funding policy is a "Reasonable Actuarially Determined Contribution" as required under Actuarial Standard of Practice No. 4 *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*.

<sup>1</sup> Actuarially determined contributions are assumed to be paid at the middle of every year

## Section 2: Actuarial Valuation Results

### Reconciliation of actuarially determined contribution

Reconciliation from January 1, 2024 to January 1, 2025

Component	Amount
Actuarially determined contribution as of January 1, 2024	\$3,807,240
<b>Changes in Actuarially Determined Contribution due to:</b>	
• Plan amendments	\$2,716
• Expected change in amortization payment due to payroll growth	67,285
• Change in actuarial assumptions	-148,501
• Investment gain	-67,790
• Other gains and losses on accrued liability	39,291
• Other changes, including composition and number of members	-346,147
<b>• Total change</b>	<b>-\$453,146</b>
<b>Actuarially determined contribution as of January 1, 2025</b>	<b>\$3,354,094</b>

## Section 2: Actuarial Valuation Results

### History of employer contributions

#### Actuarially Determined Contribution (ADC) versus Actual Contribution

Year Ended December 31	ADC Amount	Actual Contribution Amount	Percent Contributed
2016	\$3,063,584	\$3,063,584	100.00%
2017	2,086,639	2,077,059	99.54%
2018	2,273,581	1,979,285	87.06%
2019	1,881,055	1,530,262	81.35%
2020	1,777,311	1,777,311	100.00%
2021	2,098,588	2,098,588	100.00%
2022	2,806,863	2,806,863	100.00%
2023	3,665,783	3,665,783	100.00%
2024	3,807,240	4,256,587	111.80%
2025	3,354,094	N/A	N/A

Note: The contribution deficiencies for 2017 through 2019 represent contributions directed to the Excess Benefit Plan and Trust. The contribution excess for 2024 is due to the recission of the immediate partial COLA.

## Section 2: Actuarial Valuation Results

### Low-Default-Risk Obligation Measure (LDROM)

Actuarial Standard of Practice No. 4 (ASOP 4) *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions* requires the disclosure of a Low-Default-Risk Obligation Measure (LDROM) when performing a funding valuation. The LDROM presented in this report is calculated using the same methodology and assumptions used to determine the Actuarial Accrued Liability (AAL) used for funding, except for the discount rate. The LDROM is required to be calculated using “a discount rate...derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future.”

The LDROM is a calculation assuming a plan’s assets are invested in an all-bond portfolio, generally lowering expected long-term investment returns. The discount rate selected and used for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index Rate, published at the end of each week. The last published rate in December of the measurement period, by The Bond Buyer ([www.bondbuyer.com](http://www.bondbuyer.com)), is 4.08% for use effective December 31, 2024. This is the rate used to determine the discount rate for valuing reported public pension plan liabilities in accordance with Governmental Accounting Standards when plan assets are projected to be insufficient to make projected benefit payments, and the 20-year period reasonably approximates the duration of plan liabilities. The LDROM is not used to determine a plan’s funded status or Actuarially Determined Contribution. The plan’s expected return on assets, currently 6.50%, is used for these calculations.

As of December 31, 2024, the LDROM for the system is \$58,226,486. The difference between the plan’s AAL of \$45,685,617 and the LDROM can be thought of as the increase in the AAL if the entire portfolio were invested in low-default-risk securities. Alternatively, this difference could also be viewed as representing the expected savings from investing in the plan’s diversified portfolio compared to investing only in low-default-risk securities.

ASOP 4 requires commentary to help the intended user understand the significance of the LDROM with respect to the funded status of the plan, plan contributions, and the security of participant benefits. In general, if plan assets were invested exclusively in low-default-risk securities, the funded status would be lower and the Actuarially Determined Contribution would be higher. While investing in a portfolio with low-default-risk securities may be more likely to reduce investment volatility and the volatility of employer contributions, it also may be more likely to result in higher employer contributions or lower benefits.

## Section 2: Actuarial Valuation Results

### Risk

The actuarial valuation results are dependent on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different from the current assumptions.

We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition but have included a brief discussion of some risks that may affect the Plan.

- Economic and Other Related Risks. Potential implications for the Plan due to the following economic effects (that were not reflected as of the valuation date) include:

- Volatile financial markets and investment returns lower than assumed
  - High inflationary environment impacting salary increases and COLAs

- Investment Risk (the risk that returns will be different than expected)

The market value rate of return over the last 10 years has ranged from a low of -11.64% to a high of 17.14%.

- Longevity Risk (the risk that mortality experience will be different than expected)

The actuarial valuation includes an expectation of future improvement in life expectancy. Emerging plan experience that does not match these expectations will result in either an increase or decrease in the actuarially determined contribution.

- Contribution Risk (the risk that actual contributions will be different from actuarially determined contribution)

The contributions of this Plan can fluctuate significantly from year to year, due to its nature as an excess pay plan and the fact the covered population is small. The assets are likely to fluctuate considerably from year to year as well since there is no smoothing method in place. City contributions to this plan are less than 3% of the total amount that the City contributes to the System, and therefore some volatility can be withheld. As long as the City continues to contribute the ADC, risk associated with this Plan should be minimal.

- Demographic Risk (the risk that participant experience will be different than assumed)

Examples of this risk include:

- Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any early retirement subsidies that apply.
  - More or less active participant turnover than assumed.
- There are external factors including legislative or financial reporting changes that could impact the Plan's funding and disclosure requirements. While we do not assume any changes in such external factors, it is important to understand that they could have significant consequences for the Plan.

## Section 2: Actuarial Valuation Results

### Maturity Measures

- As pension plans mature, the cash needed to fulfill benefit obligations will increase over time. Therefore, cash flow projections and analysis should be performed to assure that the Plan's asset allocation is aligned to meet emerging pension liabilities.
- Currently the Plan has a non-active to active participant ratio of 2.79.

### Detailed Risk Assessment

- A more detailed assessment of the risks would provide the Board with a better understanding of the risks inherent in the Plan. This assessment may include scenario testing, sensitivity testing, stress testing, and stochastic modeling.
- A detailed risk assessment could be important for the Plan because:
  - The Plan's asset allocation has potential for a significant amount of investment return volatility.
  - Retired participants account for most of the Plan's liabilities, leaving limited options for reducing plan costs in the event of adverse experience.
  - Potential changes in the covered population may result in participant choices that vary from those assumed.

## Section 2: Actuarial Valuation Results

### GFOA funded liability by type

The Actuarial Accrued Liability represents the present value of benefits earned, calculated using the Plan's actuarial cost method. The Actuarial Value of Assets reflects the financial resources available to liquidate the liability. The portion of the liability covered by assets reflects the extent to which accumulated plan assets are sufficient to pay future benefits, and is shown for liabilities associated with employee contributions, pensioner liabilities, and other liabilities. The Government Finance Officers Association (GFOA) recommends that the funding policy aim to achieve a funded ratio of 100 percent.

#### GFOA Funded Liability by Type as of December 31

Type	2025	2024
<b>Actuarial accrued liability (AAL)</b>		
Active member contributions	\$825,222	\$833,143
Retirees and beneficiaries	33,105,706	32,810,725
Active and inactive members (employer-financed)	11,754,689	12,164,046
<b>Total</b>	<b>\$45,685,617</b>	<b>\$45,807,914</b>
Actuarial value of assets	22,854,565	19,807,829
<b>Cumulative portion of AAL covered</b>		
Active member contributions	<b>100.00%</b>	<b>100.00%</b>
Retirees and beneficiaries	<b>66.54%</b>	<b>57.83%</b>
Active and inactive members (employer-financed)	<b>0.00%</b>	<b>0.00%</b>

## Section 2: Actuarial Valuation Results

### Actuarial balance sheet

An overview of the Plan's funding is given by an Actuarial Balance Sheet. In this approach, first the amount and timing of all future payments that will be made by the Plan for current members is determined. Then these payments are discounted at the valuation interest rate to the date of the valuation, thereby determining the present value, referred to as the "liability" of the Plan.

Second, this liability is compared to the assets. The "assets" for this purpose include the net amount of assets already accumulated by the Plan, the present value of future member contributions, the present value of future employer normal cost contributions, and the present value of future employer amortization payments for the unfunded actuarial accrued liability.

#### Actuarial Balance Sheet

Description	Year Ended December 31, 2024	Year Ended December 31, 2023
<b>Liabilities</b>		
Present value of benefits for retired members and beneficiaries (non-DROP)	\$27,998,435	\$27,259,088
Present value of benefits for retired members and beneficiaries (DROP)	\$5,107,271	5,551,637
Present value of benefits for inactive vested members	0	44,117
Present value of benefits for active members	17,376,328	18,101,534
<b>Total liabilities</b>	<b>\$50,482,034</b>	<b>\$50,956,376</b>
<b>Current and future assets</b>		
Total valuation value of assets	\$22,854,565	\$19,807,829
Present value of future contributions by members	1,168,219	1,303,363
Present value of future employer contributions for:		
• Entry age cost	3,628,198	3,845,099
• Unfunded actuarial accrued liability	22,831,052	26,000,085
<b>Total of current and future assets</b>	<b>\$50,482,034</b>	<b>\$50,956,376</b>

# Section 3: Supplemental Information

## Exhibit A: Table of plan demographics

Demographic Data	December 31, 2024	December 31, 2023	Change
<b>Active members in valuation:</b>			
• Number	57	56	1.8%
• Average age	51.6	51.3	0.3
• Average years of service	26.0	25.3	0.7
• Total supplemental computation pay	\$1,902,315	\$2,041,195	-6.8%
• Average supplemental computation pay	33,374	36,450	-8.4%
• Account balances	825,222	833,143	-1.0%
• Total active vested members	57	55	3.6%
<b>Active members (excluding DROP):</b>			
• Number	55	54	1.9%
• Average age	50.9	50.6	0.3
• Average years of service	25.2	24.5	0.7
• Total supplemental computation pay	\$1,840,032	\$1,991,687	-7.6%
• Average supplemental computation pay	\$33,455	\$36,883	-9.3%
<b>Active members (DROP):</b>			
• Number	2	2	0.0%
• Average age	70.5	69.5	1.0
• Average years of service	48.2	47.2	1.0
• Total supplemental computation pay	\$62,283	\$49,506	25.8%
• Average supplemental computation pay	\$31,142	\$24,754	25.8%
• DROP account balances	132,340	132,340	0.0%

## Section 3: Supplemental Information

Demographic Data	December 31, 2024	December 31, 2023	Change
<b>Inactive members:</b>			
• Inactive vested members	0	1	-100.0%
• Average age	N/A	49.8	N/A
• Average monthly benefit	N/A	\$447	N/A
<b>Retired members:</b>			
• Number in pay status	124	118	5.1%
• Average age	67.5	67.9	-0.4
• Average monthly benefit	\$1,563	\$1,516	3.1%
<b>Beneficiaries:</b>			
• Number in pay status	35	34	2.9%
• Average age	75.2	75.9	-0.7
• Average monthly benefit	\$1,075	\$1,012	6.2%
<b>Beneficiaries with DROP only</b>	<b>3</b>	<b>3</b>	<b>0.0%</b>

## Section 3: Supplemental Information

### Exhibit B: Reconciliation of member data

Description	Active Members	Inactive Vested Members <sup>1</sup>	Retired Members	Beneficiaries <sup>2</sup>	Total
<b>Number as of January 1, 2024</b>	<b>56</b>	<b>1</b>	<b>118</b>	<b>34</b>	<b>209</b>
New members	9	N/A	N/A	N/A	9
Lump sum cash-outs	-1	N/A	N/A	N/A	-1
Retirements	-7	-1	8	N/A	—
Died with beneficiary	—	—	-2	3	1
Died without beneficiary	—	—	—	-2	-2
<b>Number as of January 1, 2025</b>	<b>57</b>	<b>0</b>	<b>124</b>	<b>35</b>	<b>216</b>

<sup>1</sup> Excludes non-vested terminated members due a refund of contributions

<sup>2</sup> Excludes beneficiaries with DROP only

## Section 3: Supplemental Information

### Exhibit C: Summary of income and expenses on a market value basis

Item	Year Ended December 31, 2024	Year Ended December 31, 2023
<b>Contribution and other income:</b>		
• City contributions	\$4,256,587	\$3,665,783
• Member contributions	295,055	278,622
– <b>Total contribution and other income</b>	<b>\$4,551,642</b>	<b>\$3,944,405</b>
<b>Investment income:</b>		
• Investment income	\$1,966,950	\$2,291,344
• Less investment fees	-85,294	-66,354
– <b>Net investment income</b>	<b>\$1,881,656</b>	<b>\$2,224,990</b>
<b>Benefit payments and expenses:</b>		
• Administrative expenses	-\$84,546	-\$61,334
• Benefits paid to members	-3,166,479	-2,940,634
• Refunds to members	-135,537	0
– <b>Total benefit payments and expenses</b>	<b>-\$3,386,562</b>	<b>-\$3,001,968</b>
<b>Change in market value of assets</b>	<b>\$3,046,736</b>	<b>\$3,167,427</b>
<b>Market value of assets, beginning of the year</b>	<b>\$19,807,829</b>	<b>\$16,640,402</b>
<b>Market value of assets, end of the year</b>	<b>\$22,854,565</b>	<b>\$19,807,829</b>

## Section 3: Supplemental Information

### Exhibit D: Summary statement of plan assets

Item	As of December 31, 2024	As of December 31, 2023
<b>Cash equivalents</b>		
• Total cash equivalents	\$952,245	\$755,686
<b>Accounts receivable:</b>		
• Total accounts receivable	\$93,370	\$85,968
<b>Investments:</b>		
• Equity securities	\$12,047,747	\$10,117,626
• Real assets	2,822,290	2,830,683
• Fixed income securities	4,584,868	3,717,369
• Private equity	2,116,165	2,224,030
• Other	315,306	172,577
• Total investments at market value	\$21,886,376	\$19,062,285
<b>Total assets</b>	<b>\$22,931,991</b>	<b>\$19,903,939</b>
<b>Accounts payable:</b>		
• Total accounts payable	-\$77,426	-\$96,110
<b>Net assets at market value</b>	<b>\$22,854,565</b>	<b>\$19,807,829</b>

## Section 3: Supplemental Information

### Exhibit E: History of financial information

Year Ended December 31	City Contributions	Employee Contributions	Net Investment Return <sup>1</sup>	Admin. Expenses <sup>2</sup>	Benefit Payments	Actuarial (Market) Value of Assets at Year-End
2015	\$2,442,790	\$43,358	-\$1,828,695	\$0	\$2,639,617	\$19,456,706
2016	2,985,478	34,612	1,176,323	78,047	5,911,533	17,663,539
2017	2,077,059	66,095	735,567	68,528	2,668,579	17,805,153
2018	1,979,285	73,880	1,220,482	52,636	2,708,271	18,317,893
2019	1,530,262	110,660	168,995	54,598	2,765,779	17,307,433
2020	1,777,311	245,237	-122,726	55,352	2,777,719	16,374,184
2021	2,098,588	227,893	2,764,978	55,359	2,749,573	18,660,711
2022	2,806,863	255,703	-2,181,118	58,731	2,843,026	16,640,402
2023	3,665,783	278,622	2,224,990	61,334	2,940,634	19,807,829
2024	4,256,587	295,055	1,881,656	84,546	3,302,016	22,854,565

<sup>1</sup> On a market basis, net of investment fees

<sup>2</sup> Expenses were subtracted from net investment return prior to 2016

## Section 3: Supplemental Information

### Exhibit F: Table of amortization bases

Type	Date Established	Initial Period	Initial Amount	Annual Payment <sup>1</sup>	Years Remaining	Outstanding Balance
2020 unfunded liability	01/01/2020	20	\$18,523,051	\$1,385,399	15	\$17,143,744
Experience loss	01/01/2021	10	1,173,796	149,469	6	835,980
Change in assumptions	01/01/2021	10	1,558,820	198,497	6	1,110,196
Experience loss	01/01/2022	10	1,499,094	185,399	7	1,193,128
Change in assumptions	01/01/2022	10	-4,477	-554	7	-3,563
Experience loss	01/01/2023	10	3,882,792	466,409	8	3,383,411
Change in assumptions	01/01/2023	10	873,505	104,927	8	761,160
Experience gain	01/01/2024	10	-32,072	-3,742	9	-30,123
Change in assumptions	01/01/2024	10	552,207	64,431	9	518,655
Experience gain <sup>2</sup>	01/01/2025	10	-709,376	-80,400	10	-709,376
Change in assumptions	01/01/2025	10	-1,379,510	-156,353	10	-1,379,510
Plan amendment	01/01/2025	10	7,350	833	10	7,350
<b>Total</b>			<b>\$2,314,315</b>			<b>\$22,831,052</b>

<sup>1</sup> Level percent of payroll

<sup>2</sup> Includes gain due to experience as well as an amount to balance the outstanding balance of the bases with the unfunded actuarial accrued liability

# Section 4: Actuarial Valuation Basis

## Exhibit G: Actuarial assumptions, methods and models

### Rationale for assumptions

The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the Actuarial Experience Study as of December 31, 2024. Current data is reviewed in conjunction with each annual valuation. Assumption changes are listed at the end of this exhibit.

### Net investment return

6.50%. The net investment return assumption was chosen by the System's Board of Trustees, with input from the actuary. This assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes as well as the Plan's target asset allocation.

## Section 4: Actuarial Valuation Basis

### Salary increases

Year	Officers	Corporals, Drivers & Senior Officers	Sergeants, Lieutenants, Captains, Majors, Deputy Chiefs, Assistant Chiefs & Chiefs
2025	10.00%	14.00%	10.00%
2026+	Service based rates	Service based rates	Service based rates
Service		Rate	
		0-2	8.00%
		3-5	7.00%
		6-8	6.00%
		9-11	5.00%
		12-14	4.00%
		15+	3.50%

The salary scale assumption is based on the 2025 pay scales, along with analysis completed in conjunction with an Experience Study Report for the five-year period ended December 31, 2024.

### Payroll growth

3.50%, used to amortize the unfunded actuarial accrued liability as a level percentage of payroll.

### Cost-of-living adjustments

**Prior to October 1, 2046:** 0.00%

**Beginning October 1, 2046:** 1.50%, on original benefit

The assumption for the year the COLA begins is updated periodically and set equal to the year the System is projected to be 70% funded on a market value basis after the COLA is reflected. The COLA assumption will automatically be updated as needed to remain five percentage points less than the net investment return assumption.

## Section 4: Actuarial Valuation Basis

### Administrative expenses

\$55,000 per year, payable monthly (equivalent to \$53,295 at the beginning of the year)

### Mortality rates

**Healthy pre-retirement:** Pub-2016 Public Safety Employee Amount-Weighted Mortality Table, set forward five years for males and set back 2 years for females, projected generationally using Scale MP-2021

**Healthy annuitants and dependent spouses:** Pub-2016 Public Safety Retiree Amount-Weighted Mortality Table, multiplied times 1.25 for males and multiplied times 0.8 for females, projected generationally using Scale MP-2021

**Healthy contingent beneficiaries:** Pub-2016 Public Safety Contingent Survivor Amount-Weighted Mortality Table, multiplied by 1.1 for males and multiplied by 1.25 for females, projected generationally using Scale MP-2021

**Disabled annuitants:** Pub-2016 Public Safety Disabled Retiree Amount-Weighted Mortality Table, set forward five years for males, projected generationally using Scale MP-2021

The tables above, with adjustments as shown and projected to the measurement date, reasonably reflect the mortality experience of the System as of the measurement date. The mortality tables are then generationally projected using Scale MP-2021 to anticipate future mortality improvement.

30% of pre-retirement active deaths are assumed to be in the line of duty.

## Section 4: Actuarial Valuation Basis

### Termination rates (%) before retirement

#### Disability

Years of Service	Disability
20	0.004
25	0.009
30	0.014
35	0.019
40	0.025
45	0.029
50	0.034
55	--
60	--

100% of disabilities are assumed to be service related.

#### Withdrawal

Years of Service	Police	Fire
0	15.0	12.0
1	9.0	9.0
2 – 4	6.5	7.0
5	4.0	5.0
6 – 7	4.0	2.5
8	2.0	2.5
9 – 10	2.0	1.0
11 – 20	1.5	1.0
21 – 24	1.0	1.0
25 & over	0.0	0.0

## Section 4: Actuarial Valuation Basis

### Retirement rates

#### DROP Active Members

Age	Police Retirement Probability (%)	Fire Retirement Probability (%)
Under 52	0	0
52 – 56	11	5
57	20	20
58 – 59	20	30
60	30	30
61	30	20
62 – 64	10	20
65 & over	100	100

75% retirement rate after ten years in DROP.

#### Non-DROP Active Members

Age	Member with at least 20 years of service as of September 1, 2017	Member with less than 20 years of service as of September 1, 2017
	Retirement Probability (%)	Retirement Probability (%)
Under 50	1	1
50 – 51	11	4
52 – 53	15	4
54 – 56	15	7
57 – 58	15	8
59 – 61	30	8
62	100	100

100% retirement rate once benefit multiplier hits 90% maximum.

## Section 4: Actuarial Valuation Basis

### **Weighted average retirement age**

Age 57, determined as follows: The weighted average retirement age for each participant is calculated as the sum of the product of each potential current or future retirement age times the probability of surviving from current age to that age and then retiring at that age, assuming no other decrements. The overall weighted retirement age is the average of the individual retirement ages based on all the active members included in the January 1, 2025 actuarial valuation.

### **Retirement rates for inactive vested participants**

Terminated vested members are assumed to retire at Normal Retirement Age. 25% of members are assumed to take a lump sum cash out within the first two years of termination.

### **DROP utilization**

No members are assumed to elect to enter DROP

### **Interest on DROP accounts**

2.75% on account balances as of September 1, 2017, payable upon retirement

0.00% on account balances accrued after September 1, 2017

### **DROP payment period**

Based on expected lifetime as of the later of September 1, 2017 on retirement date. Expected lifetime determined based on an 85% male/15% female blend of the current healthy annuitant mortality tables.

### **DROP annuitization interest**

2.75% Based on United States Department of Commerce Daily Treasury Yield Curve Rates for durations between 5 and 30 years.

### **Actuarial equivalence**

Actuarial equivalence for optional forms of benefit payments are based on an 85% male/15% female blend of the current healthy annuitant mortality tables, along with an interest rate of 6.50%

## Section 4: Actuarial Valuation Basis

### Unknown data for members

Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.

### Family composition

75% of members are assumed to be married. Females are assumed to be two years younger than their spouses. The youngest child is assumed to be ten years old.

### Benefit election

Married members are assumed to elect the Joint and Survivor annuity form of payment and non-married members are assumed to elect a Life Only annuity.

### Actuarial value of assets

Market value of assets.

### Actuarial cost method

Entry Age Actuarial Cost Method. Entry Age is the age at the time the member commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis, with Normal Cost determined using the plan of benefits applicable to each participant. Actuarial Liability is allocated by salary.

### Amortization methodology

The unfunded actuarial accrued liability as of January 1, 2020 is amortized on a closed, 20-year period. Beginning January 1, 2021, each year's gains and losses are amortized over a closed, 10-year period. Amortization is on a level-percentage-of-pay basis.

## Section 4: Actuarial Valuation Basis

### Models

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuary.

The blended discount rate used for calculating total pension liability for GASB is based on a model developed by our Actuarial Technology and Systems unit, comprised of both actuaries and programmers. The model allows the client team, under the supervision of the responsible actuary, control over the entry of future expected contribution income, benefit payments and administrative expenses. The projection of fiduciary net position and the discounting of benefits is part of the model.

### Justification for change in actuarial assumptions

As part of the Funding Agreement adopted by the Board on December 11, 2025, the following assumption change was effective January 1, 2024:

- The ad hoc COLA start year was moved from 2073 to 2046, based on when the System is assumed to be 70% funded.

Following an Experience Study for the period January 1, 2020 through December 31, 2024, the Trustees adopted the following assumption changes effective January 1, 2025:

- All mortality tables updated to Pub-2016 and projected generationally using Scale MP-2021:
  - Healthy annuitant mortality table, multiplied times 1.25 for males and multiplied by 0.8 for females
  - Contingent beneficiary mortality table, multiplied times 1.1 for males and multiplied by 1.25 for females
  - Disabled annuitant mortality table, set forward five years for males
  - Pre-retirement mortality, set forward five years for males and set back two years for females
- Retirement rates for all participant groups:
  - DROP actives: Lowered age-based rates covering the same age ranges for Fire and Police
  - Non-DROP actives: Updated age-based rates covering the same age ranges for Fire and Police
  - Inactive vested members: 25% of those who terminate will take a cash out within the first two years following termination; afterwards, 100% retirement at Normal Retirement Age
- Age-based disability rates lowered

## Section 4: Actuarial Valuation Basis

- Service-based turnover rates updated
- Spousal age difference updated from females three years younger than males to two years younger
- Payroll growth increased from 2.50% to 3.50%
- Salary scales based on service, with 10-14% increase based on rank in first year, based on 2025 pay scales.

In conjunction with the plan changes for HB 4034, the following actuarial assumption was added effective January 1, 2025:

- 30% of pre-retirement active deaths are assumed to be in the line of duty.

## Section 4: Actuarial Valuation Basis

### Exhibit H: Summary of plan provisions

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

#### Plan year

January 1 through December 31

#### Plan status

Ongoing

### Members whose participation began before March 1, 2011

#### Normal retirement

##### Benefit earned prior to September 1, 2017:

- Age Requirement: 50
- Service Requirement: 5
- Amount: 3.0% of Average Supplemental Computation Pay times years of Pension Service (maximum 96.0%)
- Average Supplemental Computation Pay: Highest 36 consecutive months of Supplemental Computation Pay

##### Benefit earned beginning September 1, 2017

- Age Requirement: 58
- Service Requirement: 5
- Amount: 2.5% of Average Supplemental Computation Pay times years of Pension Service (maximum 90.0%)
- Average Supplemental Computation Pay: Highest 60 consecutive months of Supplemental Computation Pay

## Section 4: Actuarial Valuation Basis

### 20 and out reduced retirement

#### If eligible as of September 1, 2017:

- Age Requirement: None
- Service Requirement: 20 years
- Amount: 20 & Out Multiplier times 36-month (Table 1 Benefit) or 60-month (Table 2 Benefit) Average Supplemental Computation Pay times years of Pension Service

#### Benefit Accrued Before September 1, 2017

##### 20 & Out Table 1

Age	Multiplier
-----	------------

45 & under	2.00%
46	2.25%
47	2.50%
48	2.75%
49	2.75%
50 & above	3.00%

#### Benefit Accrued Beginning September 1, 2017

##### 20 & Out Table 2

Age	Multiplier
-----	------------

53 & under	2.00%
54	2.10%
55	2.20%
56	2.30%
57	2.40%
58 & above	2.50%

#### If not eligible as of September 1, 2017

- Age Requirement: None
- Service Requirement: 20 years
- Amount: 20 & Out Multiplier times 60-month Average Supplemental Computation Pay times years of Pension Service

##### 20 & Out Table

Age	Multiplier
-----	------------

53 & under	2.00%
54	2.10%
55	2.20%
56	2.30%
57	2.40%
58 & above	2.50%

## Section 4: Actuarial Valuation Basis

### Early retirement

**If at least age 45 as of September 1, 2017 and less than age 50:**

- Age Requirement: 45
- Service Requirement: 5
- Amount: Normal pension accrued prior to September 1, 2017 plus the benefit accrued based on the 20 & Out Table 2 for service beginning September 1, 2017, reduced by 2/3 of 1% for each whole month by which the benefit commencement date precedes age 50.

### Non-service-connected disability

- Eligibility: Injury or illness (lasting more than 90 days) not related to or incurred while in the performance of the member's job, preventing the member from performing their departmental duties.
- Amount: Normal pension accrued

### Service-connected disability

- Eligibility: Injury or illness (lasting more than 90 days) obtained while on duty in the performance of the member's job.
- Amount: Normal pension accrued; if the member has less than 20 years of service, the benefit will be calculated as if they had 20 years at the time of disability.

### Benefit supplement

- Age Requirement: 55
- Service Requirement: 20 years, waived if member is receiving a service-connected disability
- Amount: 3% of the total monthly benefit (including any applicable COLA's) payable to the Member when the Member attains age 55. The benefit supplement shall not be less than \$75 per month.
- Beginning September 1, 2017, only those annuitants and their survivors already receiving the supplement will be eligible to maintain their current supplement, which will not change ongoing; no additional retirees will be eligible for the supplement.

## Section 4: Actuarial Valuation Basis

### Members whose Participation Began on or After March 1, 2011

#### Normal retirement

- Age Requirement: 58
- Service Requirement: 5
- Amount: 2.5% of Average Supplemental Computation Pay for each year of Pension Service, maximum 90%.
- Average Supplemental Computation Pay: Highest 60 consecutive months of Supplemental Computation Pay.

#### 20 & out reduced retirement

- Age Requirement: None
- Service Requirement: 20 years
- Amount: 20 & Out Multiplier times 60-month Average Supplemental Computation Pay times years of Pension Service

20 & out table 2

Age	Multiplier
53 & under	2.00%
54	2.10%
55	2.20%
56	2.30%
57	2.40%
58 & above	2.50%

#### Early Retirement

- Age Requirement: 53
- Service Requirement: 5
- Amount: Normal pension accrued, reduced by 2/3 of 1% for each whole month by which the benefit commencement date precedes the normal retirement date.

## Section 4: Actuarial Valuation Basis

### Non-service-connected disability

- Eligibility: Injury or illness (lasting more than 90 days) not related to or incurred while in the performance of the member's job, preventing the member from performing their departmental duties.
- Amount: The Member's accrued benefit, but not less than a pro-rated minimum benefit.

### Service-connected disability

- Eligibility: Injury or illness (lasting more than 90 days) obtained while on duty in the performance of the member's job.
- Amount: The greater of 50% of Average Supplemental Computation Pay and the Member's accrued benefit; if the member has less than 20 years of service, the benefit will be calculated as if they had 20 years of service at the time of disability.

## All Members

### Termination Benefit

- With less than five years of pension service: Upon request, the member's contributions will be returned without interest.
- With at least five years of pension service: The member may either withdraw contributions or leave contributions in the Plan and receive a monthly benefit to commence no earlier than the member's earliest eligibility for retirement benefits. Retirement benefit is equal to the accrued benefit as of the date of termination.

### Pre-retirement death benefit

**While in active service, duty-related deaths:** The greater of 100% of the Member's accrued benefit or a benefit based on 20 years of service. The benefit may not exceed 90% of Average Computation Pay.

**While in active service, off-duty deaths:** The greater of 50% of the Member's accrued benefit or a benefit based on 20 years of service. The benefit may not exceed 45% of Average Supplemental Computation Pay.

**After leaving active service, with fewer than five years:** A lump sum benefit equal to the return of member contributions without interest.

**After leaving active service, with at least five years:** 50% of the Member's accrued benefit, with no early retirement reduction, or a refund of member contributions.

## Section 4: Actuarial Valuation Basis

### Post-retirement death benefit

50% or 100% of the pension the Member was receiving at the time of their death, depending on the form of joint and survivor annuity chosen; if there are no qualifying survivors, no further benefits will be paid.

### Qualified surviving children benefit

50% of the pension the Member was receiving at the time of their death, divided equally among the children, paid until the youngest child is 19 years old or for life if the child becomes disabled prior to age 23

### Special survivor benefit

- Eligibility: Upon leaving active service or joining DROP: a) the Member was at least 55 years old with at least 20 years of pension service, or b) the sum of the Member's age plus Pension Service was at least 78; **and**  
Has no Qualified Surviving Children or disabled children currently eligible for survivor benefits; **and**  
Whose Qualified Surviving Spouse is at least 55 years old. The Qualified Surviving Spouse does not have to be 55 years old at the time of the Member's death.
- Amount: Once all the eligibility conditions are met, the amount the Qualified Surviving Spouse will receive increases from 50% of the Member's pension benefit to a percentage of the Member's pension benefit based on the Member's applicable benefit multiplier times the number of years of Pension Service the Member worked.

### Survivor benefit if no qualified surviving spouse

A lump sum that is the actuarial equivalent of 120 monthly payments of the greater of: 50% of the Member's pension benefit at the time of their death, or a benefit based on 20 years of the Member's service.

### DROP

- Eligibility: Members in active service who are retirement eligible may elect to enter the Deferred Retirement Option Plan (DROP).
- Distribution: The DROP account balance will be paid over the expected future lifetime of annuitants.
- Interest: Based on United States Department of Commerce Daily Treasury Yield Curve Rates for durations between 5 and 30 years; interest rate is based on the expected lifetime of the members at the time they retire. Interest is only paid on DROP account balances as of September 1, 2017.
- Maximum years of crediting: Once an active member reaches 10 years in DROP they will no longer have their pension benefit credited to their DROP account.

## Section 4: Actuarial Valuation Basis

### Supplemental Computation Pay

Supplemental Computation Pay is the current rate of pay received by the member, minus the rate of pay the member would receive for the highest civil service rank the member held.

### Cost of living adjustments (COLAs)

After the Combined Plan is 70% funded, the Board may grant an ad hoc COLA based on the actual market return over the prior five years less 5%, not to exceed 4% of the base benefit, if, after granting a COLA, the funded ratio for the Combined Plan on a market value of assets basis is no less than 70%.

### Member contributions

13.5% of computation pay for all members.

### City contributions

The City will contribute the Actuarially Determined Contribution.

### Forms of Benefits

50% or 100% Joint and Survivor Pension.

## Changes in Plan Provisions

The following plan changes based on Article 6243a-1, as amended by House Bill 4034 (HB 4034) and effective September 1, 2023 are included for the first time in this valuation:

- For active members who pass away while in the line of duty, the surviving spouse benefit was increased to 100% of the member's accrued benefit. Further, for Group B members who began active service before March 1, 2011, the benefit multiplier was increased for service earned on and after September 1, 2017 from the 20 & Out Table 2 to 2.5% at all ages.
- For Group B members who began active service before March 1, 2011, the disability benefit multiplier was increased for service earned on and after September 1, 2017 from the 20 & Out Table 2 to 2.5% at all ages.

# Section 5: GASB Information

## Exhibit I: Net Pension Liability

Components of the Net Pension Liability	Current	Prior <sup>1</sup>
Measurement date and reporting date for the plan under GASB 67	December 31, 2024	December 31, 2023
Total Pension Liability	\$45,703,525	\$45,266,116
Plan Fiduciary Net Position	22,854,565	19,807,829
Net Pension Liability	22,848,960	25,458,287
Plan Fiduciary Net Position as a percentage of the Total Pension Liability <sup>2</sup>	50.01%	43.76%

**Actuarial assumptions.** The Total Pension Liability (TPL) as of December 31, 2024, which was determined based on the results of an actuarial valuation as of January 1, 2025, used the following actuarial assumptions, applied to all periods included in the measurement:

Assumption Type	Assumption
Wage inflation	3.50%
Salary increases	10.00% or 14.00% in 2025, varying by rank, based on the 2025 pay scales; thereafter, 3.50% to 10.00%, varying by service, including inflation
Net investment rate of return	6.50%, net pension investment expense, including inflation

Detailed information regarding all actuarial assumptions can be found in Section 4.

<sup>1</sup> Revised subsequent to publication of the January 1, 2024 actuarial valuation report.

<sup>2</sup> These funded percentages are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligation or the need for or the amount of future contributions.

## Section 5: GASB Information

### Exhibit J: Determination of discount rate and investment rates of return

The long-term expected rate of return on pension plan investments was determined using a building-block method in which expected future real rates of return (expected returns, net of inflation) are developed for each major asset class. These returns are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage, adding expected inflation. The target allocation (approved by the Board) and projected arithmetic real rates of return for each major asset class, after deducting inflation, but before investment expenses, used in the derivation of the long-term expected investment rate of return assumption are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return <sup>1</sup>
Global Equity	54%	6.13%
Emerging Market Equity	4%	7.40%
Private Equity	6%	9.56%
Short-Term Investment Grade Bonds	6%	1.35%
Investment Grade Bonds	4%	1.90%
High Yield Bonds	4%	3.50%
Bank Loans	4%	3.10%
Emerging Markets Debt	3%	3.60%
Private Credit	4%	6.10%
Real Estate	5%	3.50%
Natural Resources	3%	9.85%
Cash	3%	1.10%
<b>Total</b>	<b>100%</b>	

**Discount rate.** The discount rates used to measure the Total Pension Liability (TPL) was 6.50%. The projection of cash flows used to determine the discount rate assumed plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the actuarially determined contribution rates. Based on those assumptions, the Plan Fiduciary Net Position (FNP) was projected to be available to make all projected future benefit payments for current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the TPL.

<sup>1</sup> The real rates of return are provided by Segal Macro Advisors and are net of inflation.

## Section 5: GASB Information

**Actuarial cost method.** In accordance with GASB 67, the TPL for active members is valued as the total present value of benefits once they enter the DROP. For the funding valuation, the liability for these members accumulates from their entry age until they are assumed to leave active service.

### Exhibit K: Discount rate sensitivity

The following presents the Net Pension Liability (NPL) of the Plan as of December 31, 2024 calculated using the discount rate of 6.50%, as well as what the Plan's NPL would be if it were calculated using a discount rate that is 1-percentage-point lower (5.50%) or 1-percentage-point higher (7.50%) than the current rate.

Item	1% Decrease (5.50%)	Current Discount Rate (6.50%)	1% Increase (7.50%)
Net Pension Liability	\$27,393,834	\$22,848,960	\$18,998,334

## Section 5: GASB Information

### Exhibit L: Schedule of changes in Net Pension Liability

Components of the Net Pension Liability	Current	Prior
Measurement date and reporting date for the plan under GASB 67	December 31, 2024	December 31, 2023
<b>Total Pension Liability</b>		
Service cost	\$1,259,524	\$1,261,789
Interest	2,916,851	2,785,783
Change of benefit terms	7,428	0
Differences between expected and actual experience	290,502	1,092,443
Changes of assumptions	-734,880	0
Benefit payments, including refunds of member contributions	-3,302,016	-2,940,634
<b>Net change in Total Pension Liability</b>	<b>\$437,409</b>	<b>\$2,199,381</b>
Total Pension Liability — beginning	45,266,116	43,066,735
<b>Total Pension Liability — ending</b>	<b>\$45,703,525</b>	<b>\$45,266,116</b>
<b>Plan Fiduciary Net Position</b>		
Contributions — employer	\$4,256,587	\$3,665,783
Contributions — employee	295,055	278,622
Net investment income	1,881,656	2,224,990
Benefit payments, including refunds of member contributions	-3,302,016	-2,940,634
Administrative expense	-84,546	-61,334
<b>Net change in Plan Fiduciary Net Position</b>	<b>\$3,046,736</b>	<b>\$3,167,427</b>
Plan Fiduciary Net Position — beginning	19,807,829	16,640,402
<b>Plan Fiduciary Net Position — ending</b>	<b>\$22,854,565</b>	<b>\$19,807,829</b>

## Section 5: GASB Information

Components of the Net Pension Liability	Current	Prior
<b>Net Pension Liability</b>		
Net Pension Liability – ending	\$22,848,960	\$25,458,287
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	50.01%	43.76%
Covered payroll <sup>1</sup>	\$1,837,986	\$1,922,595
Plan Net Pension Liability as percentage of covered payroll	1,243.15%	1,324.16%

### Notes to Schedule:

- **Benefit changes:** The benefit change in 2024 is the addition of the immediate partial COLA effective October 1, 2025.
- **Change of Assumptions:** The assumption changes in 2024 were based on the recommendations in the experience study for the period January 1, 2020 through December 31, 2024 and included changes to the salary scale, mortality rates, withdrawal rates, retirement rates, disability rates, and assumed spousal age.

<sup>1</sup> Covered payroll represents compensation earnable and pensionable compensation. Only compensation earnable and pensionable compensation that would possibly go into the determination of the retirement benefits are included.

## Section 5: GASB Information

### Exhibit M: Schedule of employer contributions

Year Ended December 31	Actuarially Determined Contributions	Contributions in Relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Payroll	Contributions as a Percentage of Covered Payroll
2015	\$2,442,790	\$2,442,790	\$0	\$556,725	438.78%
2016	3,063,584	3,063,584	0	724,503	422.85%
2017	2,086,639	2,077,059	9,580	525,048	395.59%
2018	2,273,581	1,979,285	294,296	916,199	216.03%
2019	1,881,055	1,530,262	350,793	621,622	246.17%
2020	1,777,311	1,777,311	0	584,068	304.30%
2021	2,098,588	2,098,588	0	626,782	334.82%
2022	2,806,863	2,806,863	0	1,631,396	172.05%
2023	3,665,783	3,665,783	0	1,800,170	203.64%
2024	3,907,240	4,256,587	-449,347	1,922,595	221.40%

The contributions for 2017 through 2019 represent contributions redirected to the Excess Benefit Plan and Trust. The contribution excess for 2024 is due to the rescission of the immediate partial COLA.

#### Notes to Schedule:

- Methods and assumptions used to determine contribution rates for the year ended December 31, 2024:** These are not the same assumptions used in the January 1, 2025 actuarial valuation or for the Total Pension Liability as measured as of December 31, 2024.
- Valuation date:** Actuarially determined contribution is calculated using a January 1, 2024 valuation date as of the beginning of the year in which contributions are reported
- Actuarial cost method:** Entry age
- Amortization method:** 20-year level percent of payroll for UAAL as of January 1, 2020, 10-year level percent of payroll for changes to the UAAL thereafter, using 2.50% annual increases

## Section 5: GASB Information

- **Remaining amortization period:** 14 years as of January 1, 2024
- **Asset valuation method:** At market value.
- **Investment rate of return:** 6.50%, including inflation, net of pension plan investment expense
- **Inflation rate:** 2.50%
- **Projected salary increases:** Inflation plus merit increases, varying by group and year
- **Retirement rates:** Group-specific rates based on age
- **Mortality:**
  - **Pre-retirement:** Pub-2010 Public Safety Employee Amount-Weighted Mortality Table, set forward five years for males, projected generationally using Scale MP-2019
  - **Healthy annuitant:** Pub- 2010 Public safety Retiree Amount-Weighted Mortality Table, set back one year for females, projected generationally using Scale MP-2019
  - **Healthy contingent beneficiaries:** Pub-2010 Public Safety Contingent Survivor Amount-Weighted Mortality Table, set back one year for females, projected generationally using Scale MP-2019.
  - **Disabled:** Pub-2010 Public Safety Disabled Retiree Amount-Weighted Mortality Table, set forward four years for males and females, projected generationally using Scale MP-2019.
- **Other information:** See Section 4, Exhibit G of the January 1, 2024 actuarial valuation for a full outline of assumptions. See Exhibit K of this section for the history of changes to plan provisions and assumptions over the last two years.
  - **DROP utilization:** 0% of Police and Fire members are assumed to elect to enter DROP.
  - **Interest on DROP accounts:** Beginning January 1, 2018, 2.75% payable upon retirement on active account balances as of September 1, 2017.

# Appendix A: Definition of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Term	Definition
Actuarial accrued liability for actives	The equivalent of the accumulated normal costs allocated to the years before the valuation date.
Actuarial accrued liability for retirees and beneficiaries	Actuarial Present Value of lifetime benefits to existing retirees and beneficiaries. This sum takes account of life expectancies appropriate to the ages of the annuitants and the interest that the sum is expected to earn before it is entirely paid out in benefits.
Actuarial cost method	A procedure allocating the Actuarial Present Value of Future Benefits to various time periods; a method used to determine the Normal Cost and the Actuarial Accrued Liability that are used to determine the actuarially determined contribution.
Actuarial gain or loss	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two Actuarial Valuation dates. To the extent that actual experience differs from that assumed, Actuarial Accrued Liabilities emerge which may be the same as forecasted or may be larger or smaller than projected. Actuarial gains are due to favorable experience, e.g., assets earn more than projected, salary increases are less than assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, actuarial losses are the result of unfavorable experience, i.e., actual results yield actuarial liabilities that are larger than projected.
Actuarially equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial present value	The value of an amount or series of amounts payable or receivable at various times, determined as of a given date by the application of a particular set of Actuarial Assumptions. Each such amount or series of amounts is: Adjusted for the probable financial effect of certain intervening events (such as changes in compensation levels, marital status, etc.) Multiplied by the probability of the occurrence of an event (such as survival, death, disability, withdrawal, etc.) on which the payment is conditioned, and Discounted according to an assumed rate (or rates) of return to reflect the time value of money.

## Appendix A: Definition of Pension Terms

Term	Definition
Actuarial present value of future benefits	The Actuarial Present Value of benefit amounts expected to be paid at various future times under a particular set of Actuarial Assumptions, taking into account such items as the effect of advancement in age, anticipated future compensation, and future service credits. The Actuarial Present Value of Future Benefits includes the liabilities for active members, retired members, beneficiaries receiving benefits, and inactive members entitled to either a refund of member contributions or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan, as well as Actuarially Determined Contributions.
Actuarial value of assets	The value of the Plan's assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets, but commonly plans use a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution.
Actuarially determined	Values that have been determined utilizing the principles of actuarial science. An actuarially determined value is derived by application of the appropriate actuarial assumptions to specified values determined by provisions of the Plan.
Actuarially determined contribution	The employer's contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under the Plan's funding policy. The ADC consists of the Employer Normal Cost and the Amortization Payment.
Amortization method	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the Unfunded Actuarial Accrued Liability. Under the Level Percentage of Pay method, the stream of payments increases at the assumed rate at which total covered payroll of all active members will increase.
Amortization payment	The portion of the pension plan contribution, or ADC, that is intended to pay off the Unfunded Actuarial Accrued Liability.

## Appendix A: Definition of Pension Terms

Term	Definition
Assumptions or actuarial assumptions	<p>The estimates upon which the cost of the Plan is calculated, including:</p> <p><b>Investment return</b> — the rate of investment yield that the Plan will earn over the long-term future;</p> <p><b>Mortality rates</b> — the rate or probability of death at a given age for employees and retirees;</p> <p><b>Retirement rates</b> — the rate or probability of retirement at a given age or service;</p> <p><b>Disability rates</b> — the rate or probability of disability retirement at a given age;</p> <p><b>Withdrawal rates</b> — the rate or probability at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement;</p> <p><b>Salary increase rates</b> — the rates of salary increase due to inflation, real wage growth and merit and promotion increases.</p>
Closed amortization period	<p>A specific number of years that is counted down by one each year, and therefore declines to zero with the passage of time. For example, if the amortization period is initially set at 20 years, it is 19 years at the end of one year, 18 years at the end of two years, etc. See Open Amortization Period.</p>
Decrements	<p>Those causes/events due to which a member's status (active-inactive-retiree-beneficiary) changes, that is: death, retirement, disability, or withdrawal.</p>
Defined benefit plan	<p>A retirement plan in which benefits are defined by a formula based on the member's compensation, age and/or years of service.</p>
Defined contribution plan	<p>A retirement plan, such as a 401(k) plan, a 403(b) plan, or a 457 plan, in which the contributions to the plan are assigned to an account for each member, the plan's earnings are allocated to each account, and each member's benefits are a direct function of the account balance.</p>
Employer normal cost	<p>The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.</p>
Experience study	<p>A periodic review and analysis of the actual experience of the Plan that may lead to a revision of one or more actuarial assumptions. Actual rates of decrement and salary increases are compared to the actuarially assumed values and modified based on recommendations from the Actuary.</p>
Funded ratio	<p>The ratio of the Actuarial Value of Assets (AVA) to the Actuarial Accrued Liability (AAL). Plans sometimes also calculate a market funded ratio, using the Market Value of Assets (MVA), rather than the AVA.</p>
GASB 67 and GASB 68	<p>Governmental Accounting Standards Board (GASB) Statements No. 67 and No. 68. These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.</p>

## Appendix A: Definition of Pension Terms

Term	Definition
Investment return	The rate of earnings of the Plan from its investments, including interest, dividends and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.
Net Pension Liability (NPL)	The Net Pension Liability is equal to the Total Pension Liability minus the Plan Fiduciary Net Position.
Normal cost	The portion of the Actuarial Present Value of Future Benefits and expenses, if applicable, allocated to a valuation year by the Actuarial Cost Method. Any payment with respect to an Unfunded Actuarial Accrued Liability is not part of the Normal Cost (see Amortization Payment). For pension plan benefits that are provided in part by employee contributions, Normal Cost refers to the total of member contributions and employer Normal Cost unless otherwise specifically stated.
Open amortization period	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. If the initial period is set as 30 years, the same 30-year period is used in each future year in determining the Amortization Period.
Plan Fiduciary Net Position	Market value of assets.
Service costs	The portions of the actuarial present value of projected benefit payments that are attributed to valuation years.
Total Pension Liability (TPL)	The actuarial accrued liability under the entry age normal cost method and based on the blended discount rate as described in GASB 67 and 68.
Unfunded actuarial accrued liability	The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. This value may be negative, in which case it may be expressed as a negative Unfunded Actuarial Accrued Liability, also called the Funding Surplus or an Overfunded Actuarial Accrued Liability.
Valuation date or actuarial valuation date	The date as of which the value of assets is determined and as of which the Actuarial Present Value of Future Benefits is determined. The expected benefits to be paid in the future are discounted to this date.