

# City of Farmington Hills Employees' Retirement System and Retiree Health Plan

Review of System Experience  
July 1, 2018 Through June 30, 2023





June 24, 2024

Retirement Board  
City of Farmington Hills Employees' Retirement System  
and Retiree Health Plan  
31555 Eleven Mile Road  
Farmington Hills, Michigan 48336

Dear Board Members:

Presented in this report are the results of a review of Retirement System experience. The investigation was conducted for the purpose of updating the actuarial assumptions used in valuing the City of Farmington Hills Employees' Retirement System actuarial liabilities and actuarially determined employer contributions.

In addition, this report investigates select assumptions related to the City of Farmington Hills Retiree Health Plan ("OPEB"), for use in computing Plan actuarial liabilities and establishing employer contribution rates.

The investigation was based upon the data furnished for the annual actuarial valuations during the period ***July 1, 2018 through June 30, 2023.***

We believe that the actuarial assumptions recommended in this experience study report represent, individually and in the aggregate, reasonable estimates of future experience of the **City of Farmington Hills Employees' Retirement System** and the **City of Farmington Hills Retiree Health Plan**.

This report should not be relied on for any purpose other than that described above. It was prepared at the request of the Retirement Board and is intended for use by the Board Members and those designated or approved by the Board Members. This report may be provided to parties other than the Board Members only in its entirety and only with the permission of the Board Members. GRS is not responsible for unauthorized use of this report.

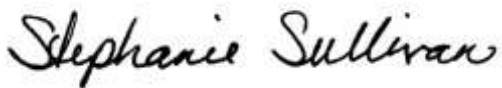
This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. We certify that, to the best of our knowledge, this report is complete and accurate and was made in accordance with standards of practice promulgated by the Actuarial Standards Board. We have shown the expected impact of the proposed changes on valuation results as of June 30, 2023. This information is shown in Section D of this report.

James D. Anderson and Stephanie Sullivan are independent of the plan sponsor, Members of the American Academy of Actuaries (MAAA) and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,  
Gabriel, Roeder, Smith & Company



James D. Anderson, FSA, EA, FCA, MAAA



Stephanie Sullivan, ASA, MAAA

JDA/SS:sc

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# Introduction

Each year, as of June 30<sup>th</sup>, the actuarial liabilities of the City of Farmington Hills Employees' Retirement System are valued (the City of Farmington Hills Retiree Health Plan is valued on a biennial valuation basis). In order to perform the valuation, assumptions must be made regarding the future experience of the System with regard to the following risk areas:

- Rates of **termination** of active members.
- Rates of **disability** among active members.
- Rates of **retirement** among active members.
- Rates of **mortality** among active members, retirants and beneficiaries.
- Long-term rates of **investment return** to be generated by the assets of the System.
- Patterns of **salary increases** to active members.

Note that the rates of termination and retirement were historically developed separately for the Retirement System and Retiree Health Plan, but since both plans are now open to the same membership, we develop a unified set of assumptions in this study.

Additionally, during the study period, the COVID-19 pandemic influenced mortality and potentially other demographic experience. The impact of the COVID-19 pandemic varies considerably by occupation, income, geography, etc. We considered some recognition of the impact of COVID-19 on the mortality assumption; however, the impact would have been minimal at this time so no adjustment has been made.

Assumptions should be carefully chosen and continually monitored. Continued use of outdated assumptions can lead to:

- Understated costs resulting in either an inability to pay benefits when due, or sharp increases in required contributions at some point in the future; or
- Overstated costs resulting in either benefit levels that are kept below the level that could be supported by the computed rate or an unnecessarily large burden on the current generation of members, employers and taxpayers.

A single set of assumptions will not be suitable indefinitely. Things change, and our understanding of things also changes. In recognition of this, assumptions used to value the liabilities of the Retirement System should be reviewed and adjusted periodically to recognize changes in experience trends, a changing economic environment (or changing perceptions of the economic environment) and to maintain consistency within the universe of public employee retirement systems. The results of this analysis are shown in Sections A and B of this report.

A common practice among public employee retirement systems is that the actuary recommends a set of demographic assumptions and suggests a range of reasonable alternate economic assumptions. Following discussion involving the actuary, the plan governing body, and other professionals, the plan governing body makes a final choice from the various alternatives.



## **SECTION A**

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### **DEMOGRAPHIC ASSUMPTIONS**

## Normal Retirement

**Discussion:** Rates of normal or regular retirement are used to measure the probabilities of an eligible member retiring from City employment during the next year.

During the study period, the actual number of retirements among general, court, and fire employees was generally consistent with the number projected by current assumptions. This experience suggests that the current normal retirement rates are a good fit with System experience for these groups

During the same period, the actual number of command officer retirements was significantly higher than the number projected by the current assumptions. Approximately 75% of the officers who retired during the study period were in the 50-54 age range, including one command officer who retired under the “30 & out” provision. This experience suggests a need to increase the rates of retirement for this group, in particular at early eligibility ages.

The number of patrol officer retirements during the study period was significantly higher than anticipated by actuarial assumptions. Currently, we assume that all police patrol officers hired before 2008 retire immediately upon reaching the pension benefit maximum (75% of FAC). During the study period, all retiring patrol officers left on or before reaching the pension benefit maximum. This experience suggests a need for changing the retirement rates for this group.

The experience during the study period is summarized below and on the following page:

<b>General</b>			<b>Court</b>		
<b>Number of Regular Retirements</b>			<b>Number of Regular Retirements</b>		
<b>Year</b>	<b>Expected</b>	<b>Actual</b>	<b>Year</b>	<b>Expected</b>	<b>Actual</b>
2018-2019	8.05	7	2018-2019	2.05	1
2019-2020	7.85	9	2019-2020	1.90	1
2020-2021	9.60	9	2020-2021	2.00	2
2021-2022	6.30	5	2021-2022	1.50	4
2022-2023	6.50	5	2022-2023	0.95	0
<b>Total</b>	<b>38.30</b>	<b>35</b>	<b>Total</b>	<b>8.40</b>	<b>8</b>



## Normal Retirement

### Police Patrol

#### Number of Regular Retirements

Year	Expected	Actual
2018-2019	0.60	2
2019-2020	0.30	1
2020-2021	0.90	3
2021-2022	0.60	2
2022-2023	0.60	1
<b>Total</b>	<b>3.00</b>	<b>9</b>

### Police Command

#### Number of Regular Retirements

Year	Expected	Actual
2018-2019	0.30	1
2019-2020	0.20	1
2020-2021	0.75	3
2021-2022	1.35	3
2022-2023	1.70	5
<b>Total</b>	<b>4.30</b>	<b>13</b>

### Fire

#### Number of Regular Retirements

Year	Expected	Actual
2018-2019	2.30	1
2019-2020	2.30	1
2020-2021	3.20	3
2021-2022	3.20	4
2022-2023	3.20	4
<b>Total</b>	<b>14.20</b>	<b>13</b>

**Recommendation:** We recommend no change to the current normal retirement rates for general, court and firefighter division employees. We recommend changing the police patrol and police command officer retirement rates to the rates shown on page 5.



# Normal Retirement Rates

## Current Rates of Regular Retirement

Retirement Ages	Percent of Eligible Active Members Retiring				
	General	Court	Police Command	Years of Service	Police Command
50			30%	25	
51			30	26	
52			30	27	
53			30	28	
54			30	29	
55	30%	20%	20	30	40%
56	25	15	15	31	40
57	25	15	15	32	40
58	25	15	15	33	40
59	25	15	15	34	40
60	25	20	100	35	100
61	25	25			
62	30	30			
63	20	20			
64	25	25			
65	25	25			
66	30	30			
67	30	30			
68	30	30			
69	30	30			
70	100	100			

### Percent of Eligible Active Members Retiring

Years of Service	Police Patrol and Fire
25	30%
26	30
27	30
28	30
29	30
30	100

**Retirement System:** The incidence of retirement for firefighter members is assumed to be 100% at age 62.

**Retiree Health Care Plan:** For Tier 2 Fire members, it was assumed that a 1% incidence of early retirement decrement applied at each age where the conditions for an early retirement pension benefit were satisfied but the conditions for a normal retirement pension benefit were not.



# Normal Retirement Rates

## Proposed Rates of Regular Retirement

Retirement Ages	Percent of Eligible Active Members Retiring				
	General	Court	Police Command	Years of Service	Police Command
50			40%	25	
51			40	26	
52			40	27	
53			40	28	
54			40	29	
55	30%	20%	20	30	40%
56	25	15	15	31	40
57	25	15	15	32	40
58	25	15	15	33	40
59	25	15	15	34	40
60	25	20	100	35	100
61	25	25			
62	30	30			
63	20	20			
64	25	25			
65	25	25			
66	30	30			
67	30	30			
68	30	30			
69	30	30			
70	100	100			

Percent of Eligible Active Members Retiring		
Years of Service	Police Patrol	Fire
25	40%	30%
26	40	30
27	40	30
28	40	30
29	40	30
30	100	100

The incidence of retirement for firefighter members is assumed to be 100% at age 62.



## Early Reduced Retirement

**Discussion:** Rates of early reduced retirement are used to measure the probabilities of an eligible member retiring from City employment during the next year under the early retirement provisions. During the study period, the actual number of early retirements was generally consistent with actuarial expectations. This suggests that the current rates continue to be a good fit with actual System experience.

### General

#### Number of Early Retirements

Year	Expected	Actual
2018-2019	0.09	0
2019-2020	0.09	0
2020-2021	0.04	0
2021-2022	0.03	0
2022-2023	0.02	0
<b>Total</b>	<b>0.27</b>	<b>0</b>

### Court

#### Number of Early Retirements

Year	Expected	Actual
2018-2019	0.03	0
2019-2020	0.03	0
2020-2021	0.03	0
2021-2022	0.02	0
2022-2023	0.01	0
<b>Total</b>	<b>0.12</b>	<b>0</b>

### Police Patrol

#### Number of Early Retirements

Year	Expected	Actual
2018-2019	0.07	0
2019-2020	0.10	1
2020-2021	0.07	0
2021-2022	0.06	0
2022-2023	0.05	0
<b>Total</b>	<b>0.35</b>	<b>1</b>

### Police Command

#### Number of Early Retirements

Year	Expected	Actual
2018-2019	0.04	1
2019-2020	0.03	0
2020-2021	0.04	0
2021-2022	0.02	0
2022-2023	0.01	0
<b>Total</b>	<b>0.14</b>	<b>1</b>

### Fire

#### Number of Early Retirements

Year	Expected	Actual
2018-2019	0.09	0
2019-2020	0.09	0
2020-2021	0.08	0
2021-2022	0.05	0
2022-2023	0.02	0
<b>Total</b>	<b>0.33</b>	<b>0</b>

**Recommendation:** We recommend no changes to the early reduced retirement rates for any employment group.



# Early Reduced Retirement Rates

## Current and Proposed Rates of Early Retirement

Retirement Ages	Percent of Eligible Active Members Retiring (Early Retirement)	
	General & Court	Police & Fire
50		1%
51		1
52		1
53		1
54		1
55		1
56		1
57	1%	1
58	1	1
59	1	1

**Retiree Health Care Plan:** For Tier 2 Fire members, it was assumed that a 1% incidence of early retirement decrement applied at each age where the conditions for an early retirement pension benefit were satisfied but the conditions for a normal retirement pension benefit were not.

# Turnover

**Discussion:** This assumption measures the probabilities of members terminating City employment. Turnover rates are generally higher during the early years of employment and lower in subsequent years. A select period of 5 years is used to model this. Rates of separation from active membership (turnover rates) do not apply to members who are eligible to retire from the System.

We reviewed terminations among employee members of the System based on their years of service at the time their City employment terminated. General and Court individuals are eligible for a deferred pension benefit at the time of termination if they have completed 8 or more years of service. Police and Fire individuals are eligible for a deferred pension benefit at the time of termination if they have completed 15 or more years of service. If a member terminates employment with less than 8 years of service for general and court and 15 years for police and fire, they are only eligible for a refund of their contributions.

During the study period, the number of vested terminated members who chose to defer their pension benefit was generally consistent with expectations. This suggests that the current rates of termination/benefit deferral are a good match with the actual System experience. We also reviewed terminations from these groups who received a refund of employee contributions during the study period. The results were consistent with what was expected for general, court, and fire members. The number of non-vested terminations in the police patrol group was significantly higher than the number anticipated by current actuarial assumptions. This suggests a need for increasing the rates of turnover for the patrol group. In addition, approximately 85% of the actual non-vested terminations from this group had less than 5 years of service at termination.

The experience during the study period is summarized below and on the following page:

## General

Number of Vested Deferred Terminations			Number of Other Terminations		
Year	Expected	Actual	Year	Expected	Actual
2018-2019	0.72	0	2018-2019	0.56	0
2019-2020	0.64	0	2019-2020	0.47	0
2020-2021	0.55	0	2020-2021	0.38	0
2021-2022	0.54	2	2021-2022	0.32	0
2022-2023	0.52	1	2022-2023	0.24	0
<b>Total</b>	<b>2.97</b>	<b>3</b>	<b>Total</b>	<b>1.97</b>	<b>0</b>

## Court

Number of Vested Deferred Terminations			Number of Other Terminations		
Year	Expected	Actual	Year	Expected	Actual
2018-2019	0.25	0	2018-2019	0.25	1
2019-2020	0.21	0	2019-2020	0.20	0
2020-2021	0.23	0	2020-2021	0.11	0
2021-2022	0.25	0	2021-2022	0.04	0
2022-2023	0.24	0	2022-2023	0.04	0
<b>Total</b>	<b>1.18</b>	<b>0</b>	<b>Total</b>	<b>0.64</b>	<b>1</b>



# Turnover

## Police Patrol

Number of Vested Deferred Terminations			Number of Other Terminations		
Year	Expected	Actual	Year	Expected	Actual
2018-2019	0.09	0	2018-2019	1.42	2
2019-2020	0.04	0	2019-2020	1.84	3
2020-2021	0.07	0	2020-2021	1.57	1
2021-2022	0.12	0	2021-2022	1.92	6
2022-2023	0.11	0	2022-2023	2.06	2
<b>Total</b>	<b>0.43</b>	<b>0</b>	<b>Total</b>	<b>8.81</b>	<b>14</b>

## Police Command

Number of Vested Deferred Terminations			Number of Other Terminations		
Year	Expected	Actual	Year	Expected	Actual
2018-2019	0.09	0	2018-2019	0.01	0
2019-2020	0.12	0	2019-2020	0.00	0
2020-2021	0.10	0	2020-2021	0.01	0
2021-2022	0.11	0	2021-2022	0.00	0
2022-2023	0.12	0	2022-2023	0.00	0
<b>Total</b>	<b>0.54</b>	<b>0</b>	<b>Total</b>	<b>0.02</b>	<b>0</b>

## Fire

Number of Vested Deferred Terminations			Number of Other Terminations		
Year	Expected	Actual	Year	Expected	Actual
2018-2019	0.09	0	2018-2019	0.67	0
2019-2020	0.09	0	2019-2020	1.12	1
2020-2021	0.06	0	2020-2021	0.95	1
2021-2022	0.09	0	2021-2022	1.01	1
2022-2023	0.11	0	2022-2023	1.05	1
<b>Total</b>	<b>0.44</b>	<b>0</b>	<b>Total</b>	<b>4.80</b>	<b>4</b>

**Recommendation:** We recommend no changes to the turnover rates for the general, court, police command and fire employment groups. We recommend changing the turnover rates for the police patrol group to the rates shown on page 10.

# Turnover Rates

## Current Rates of Turnover – Retirement System

% of Active Members  
Separating within Next Year

Sample Ages	Years of Service	General	Court	Police	Fire
ALL	0	11.00%	12.00%	8.00%	7.00%
	1	10.00	12.00	6.00	5.00
	2	8.00	10.00	5.00	3.50
	3	8.00	9.00	4.00	3.50
	4	7.00	9.00	3.00	3.00
20	5 & Over	6.00	6.00	3.00	3.00
25		5.50	5.50	3.00	3.00
30		4.40	4.40	2.50	2.50
35		3.90	3.90	1.00	1.50
40		3.40	3.40	0.70	0.70
45		3.00	3.00	0.50	0.50
50		2.00	2.00	0.50	0.50
55	1.40	1.40	0.50	0.50	
60	1.40	1.40	0.50	0.50	

## Current Rates of Turnover – Retiree Health Care Plan

% of Active Members  
Separating within Next Year

Years of Service	General	Court	Police	Fire
10	2.70%	2.70%	1.10%	1.10%
15	1.40	1.40	0.50	0.50
20	1.40	1.40	0.40	0.40
25	1.40	1.40	0.40	0.40
30 & over	1.40	1.40	0.40	0.40

## Proposed Rates of Turnover

% of Active Members  
Separating within Next Year

Sample Ages	Years of Service	General	Court	Police	Fire
ALL	0	11.00%	12.00%	<b>10.00%</b>	7.00%
	1	10.00	12.00	<b>8.00</b>	5.00
	2	8.00	10.00	<b>6.00</b>	3.50
	3	8.00	9.00	4.00	3.50
	4	7.00	9.00	3.00	3.00
20	5 & Over	6.00	6.00	3.00	3.00
25		5.50	5.50	3.00	3.00
30		4.40	4.40	2.50	2.50
35		3.90	3.90	1.00	1.50
40		3.40	3.40	0.70	0.70
45		3.00	3.00	0.50	0.50
50		2.00	2.00	0.50	0.50
55	1.40	1.40	0.50	0.50	
60	1.40	1.40	0.50	0.50	



## Disability

**Discussion:** Rates of disability are used to measure the probabilities of an eligible member becoming disabled and retiring from City employment with disability benefits. Disability rates do not apply to members who are eligible for normal or early retirement. During the study period, there were no disability retirements. Approximately 1.27 were expected. This suggests that the current disability rates continue to be a good fit with System experience. The experience during the study period is summarized below:

<b>Number of Disability Retirements</b>		
<b>Group</b>	<b>Expected</b>	<b>Actual</b>
General	0.49	0
Court	0.11	0
Police Patrol	0.28	0
Police Command	0.19	0
Fire	0.20	0
<b>Total</b>	<b>1.27</b>	<b>0</b>

**Proposal:** We recommend no change to the current disability rates at this time. The current and proposed rates are shown below:

## Disability Rates

### Current and Proposed Rates of Disability

<b>Sample Ages</b>	<b>Number of Disabilities Per 100 Eligible Members</b>
20	0.01
25	0.02
30	0.04
35	0.07
40	0.12
45	0.19
50	0.28
55	0.40
60	0.57



# Mortality

**Discussion:** The mortality assumption is used in the annual valuation of the City of Farmington Hills Employee's Retirement System and City of Farmington Hills Retiree Health Plan to measure the probabilities of members dying before retirement and the probability of each benefit payment being made after retirement. The incidence of pre-retirement mortality is a relatively minor ingredient in the determination of System liabilities. This is due to the small incidence of death among current employees. In contrast, the assumed incidence of post-retirement mortality is a more significant component of the System liabilities. The mortality tables currently being used in the annual valuations of the Retirement System and Retiree Health Plan are the Pub-2010 General amount-weighted tables for the general and court groups and the Pub-2010 Safety headcount-weighted tables for the police and fire groups -- projected generationally through 2025 using scale MP-2018. Finally, note that the Pub-2010 mortality tables have also become the basis for the uniform assumptions required under Michigan Public Act 202 reporting.

**Actuarial Standards of Practice:** Actuarial Standards of Practice (ASOP) No. 35 Disclosure Section 4.1.1 states, "The disclosure of the mortality assumption should contain sufficient detail to permit another qualified actuary to understand any adjustment to reflect mortality improvement from the effective date of the table to the measurement date and the provision made for future mortality improvement. If the actuary assumes zero mortality improvement after the measurement date, the actuary should state that no provision was made for future mortality improvement." The current mortality rates used in the valuation include a provision for future mortality improvement.

**Updated Projection Scale:** Beginning with the MP-2015 projection scale, the SOA released updated projection scales each year to refine the projection of mortality improvements into the future based on updated information. The latest published table is called the MP-2021 projection scale, which accounts for future improvements in mortality that are expected to occur, based on the most recently examined experience.

**Proposal:** We recommend the continued use of the Pub-2010 amount-weighted General tables for general and court and Pub-2010 headcount-weighted Safety tables for Police and Fire. Since the retirement system and retiree health plan are both now open to new members, we recommend application of the MP-2021 projection scale on a fully generational basis without an "end" year:

## **General and Court**

- **Healthy Pre-Retirement:** The Pub-2010 Amount-Weighted, General, Employee, Male and Female tables, with future mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
- **Healthy Post-Retirement:** The Pub-2010 Amount-Weighted, General, Healthy Retiree, Male and Female tables, with future mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
- **Disability Retirement:** The Pub-2010 Amount-Weighted, General, Disabled Retiree, Male and Female, with future mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.

# Mortality

## Police and Fire

- **Healthy Pre-Retirement:** The Pub-2010 Headcount-Weighted, Safety, Employee, Male and Female tables, with future mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
- **Healthy Post-Retirement:** The Pub-2010 Headcount-Weighted, Safety, Healthy Retiree, Male and Female tables, with future mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.
- **Disability Retirement:** The Pub-2010 Headcount-Weighted, Safety, Disabled Retiree, Male and Female, with future mortality improvements using the fully generational MP-2021 projection scale from a base year of 2010.

### Summary of Life Expectancies under the Current Tables

Sample Ages*	General and Court					
	Healthy Pre-Retirement		Healthy Post-Retirement		Disabled Retirement	
	Future Life Expectancy (Years)		Future Life Expectancy (Years)		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
50	37.72	39.84	33.79	36.65	24.62	27.11
55	33.00	35.02	29.29	32.05	21.52	24.08
60	28.37	30.26	24.93	27.54	18.72	21.22
65	23.86	25.57	20.75	23.12	16.09	18.27
70	19.43	20.95	16.75	18.85	13.50	15.17
75	15.08	16.44	13.04	14.84	10.94	12.12
80	10.82	12.06	9.73	11.20	8.52	9.37

Sample Ages*	Police and Fire					
	Healthy Pre-Retirement		Healthy Post-Retirement		Disabled Retirement	
	Future Life Expectancy (Years)		Future Life Expectancy (Years)		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
50	36.28	39.00	32.74	35.20	31.04	32.59
55	31.51	34.21	28.17	30.56	26.73	28.17
60	26.83	29.47	23.73	26.12	22.61	24.07
65	22.28	24.78	19.57	21.88	18.75	20.18
70	17.87	20.15	15.63	17.85	15.13	16.41
75	13.67	15.69	12.02	14.10	11.78	12.91
80	9.72	11.51	8.85	10.74	8.81	9.93

\* The Pub-2010 life expectancies shown above were based on a generational projection of mortality rates through the year 2025 using the MP-2018 projection scale and sample ages as of the valuation date.



# Mortality

## Summary of Life Expectancies under the Proposed Tables

### General and Court

Sample Ages	Pre-Retirement Future Life Expectancy (Years) <sup>^</sup>		Healthy Post-Retirement Future Life Expectancy (Years) <sup>^</sup>		Disabled Retirement Future Life Expectancy (Years) <sup>^</sup>	
	Men	Women	Men	Women	Men	Women
	50	39.14	41.30	35.52	38.45	26.29
55	34.13	36.20	30.63	33.48	22.79	25.64
60	29.23	31.17	25.91	28.61	19.62	22.31
65	24.47	26.24	21.42	23.88	16.69	19.04
70	19.82	21.41	17.16	19.34	13.88	15.67
75	15.28	16.69	13.23	15.09	11.12	12.37
80	10.86	12.14	9.75	11.27	8.53	9.43

<sup>^</sup> Based on sample ages in 2023. Future years will reflect improvements in life expectancy.

### Police and Fire

Sample Ages	Pre-Retirement Future Life Expectancy (Years) <sup>^</sup>		Healthy Post-Retirement Future Life Expectancy (Years) <sup>^</sup>		Disabled Retirement Future Life Expectancy (Years) <sup>^</sup>	
	Men	Women	Men	Women	Men	Women
	50	37.79	40.54	34.49	37.12	32.81
55	32.71	35.45	29.52	32.06	28.08	29.73
60	27.73	30.43	24.71	27.22	23.57	25.19
65	22.90	25.48	20.23	22.66	19.39	20.97
70	18.26	20.61	16.03	18.35	15.52	16.91
75	13.86	15.94	12.20	14.36	11.95	13.16
80	9.75	11.58	8.87	10.81	8.82	9.98

<sup>^</sup> Based on sample ages in 2023. Future years will reflect improvements in life expectancy.



## Merit and Longevity Portion of Pay Increases

**Discussion:** Pay increases granted to individual active members consist in principle of two parts. The first part is an across-the-board economic type of increase related to inflation or cost-of-living changes. The second part, merit and longevity increases, relates to the performance of individual active members during a given year or scheduled step rates that are often experienced during the first few years of employment. Overall, merit and longevity pay increases and wage inflation were close to the expected rates during the experience period.

**Proposal:** We recommend no change to the merit and longevity increases and no change to the base wage inflation rate. The base wage inflation rate is discussed further in Section B of this report.

The current and proposed rates are shown below:

### Current and Proposed Rates

Years of Service	General and Court Members		
	Base (Economic)	Merit & Longevity	Total
1 to 5	3.0%	4.0%	7.0%
6 to 10	3.0%	2.0%	5.0%
thereafter	3.0%	1.0%	4.0%

Years of Service	Police Members			Fire Members		
	Base (Economic)	Merit & Longevity	Total	Base (Economic)	Merit & Longevity	Total
1	3.0%	20.0%	23.0%	3.0%	17.0%	20.0%
2	3.0%	15.0%	18.0%	3.0%	12.0%	15.0%
3	3.0%	7.0%	10.0%	3.0%	12.0%	15.0%
thereafter	3.0%	1.0%	4.0%	3.0%	1.0%	4.0%

## **SECTION B**

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### **ECONOMIC ASSUMPTIONS**

# Economic Assumptions

## Investment Return and Wage Inflation

Economic assumptions include **long-term rates of investment return** (investment expenses) and **wage inflation** (the across-the-board portion of salary increases). Unlike demographic activities, economic activities do not lend themselves to analysis solely on the basis of internal historical patterns because both salary increases and investment return are affected more by external forces; namely inflation (both wage and price), general productivity changes and the local economic environment which defy accurate long-term prediction. Estimates of economic activities are generally selected on the basis of the expectations in an inflation-free environment and then both long-term rates of investment return and wage inflation are increased by some provision for long-term inflation.

If inflation and/or productivity increases are lower than expected, it will probably result in both actual rates of salary increases and investment return below the assumed rates. Salaries increasing at rates less than expected produce lower liabilities. However, actual investment return below the assumed rate of investment return (whether due to manager performance, change in the mix of assets, or general market conditions) results in lower than expected asset amounts.

Sources considered in the analysis of the price inflation assumptions included:

- Congressional Budget Office's expectations;
- Expectations from the Federal Reserve Banks of Philadelphia, Cleveland, and St. Louis;
- Comparisons of Treasury yields and Treasury Inflation Protected Securities (TIPS);
- Social Security Trustees report; and
- Future expectations for various investment consultants that GRS monitors.

Sources considered in the analysis of the investment return assumptions included:

- Future expectations of various investment consultants that GRS monitors.

Sources considered in the wage inflation and merit and longevity pay increases included:

- Actual Retirement System experience over the last 5 years (i.e., merit and longevity pay increases); and
- Historical observations of inflation statistics (both price and wage) nationally.

Current economic assumptions for the System are as follows:

Price Inflation	2.50%
Wage Inflation	3.00%
Investment Return	7.00%



## Economic Assumptions – ASOP No. 27

Guidance regarding the selection of economic assumptions for measuring pension obligations is provided by Actuarial Standards of Practice (ASOP) No. 27. The standard requires that the selected economic assumptions be consistent with each other. That is, the selection of the investment return assumption should be consistent with the selection of the wage inflation and price inflation assumptions.

ASOP No. 27 defines a reasonable economic assumption as an assumption that has the following characteristics:

- (a) It is appropriate for the purpose of the measurement;
- (b) It reflects the actuary's professional judgment;
- (c) It takes into account historical and current economic data that is relevant as of the valuation date;
- (d) It reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in market data, or a combination thereof; and
- (e) It has no significant bias (i.e., it is not significantly optimistic or pessimistic), except when provisions for adverse deviation or plan provisions that are difficult to measure are included and disclosed under Section 3.5.1, or when alternative assumptions are used for the assessment of risk.

ASOP No. 27 acknowledges that for any given economic assumption, there is a reasonable range of opinions on that assumption.

**Public Act 202.** Under Public Act 202 of the State of Michigan, Michigan municipalities are required to report liabilities under new uniform assumption guidelines. While the current guidelines are currently only for reporting purposes (and not funding), city governments will be encouraged to use these new assumptions for funding. The recommendations include the following (for fiscal year 2024 reporting):

- Investment return no higher than 6.90%;
- Assumed wage inflation no lower than 3.25%\*;
- Mortality assumption that uses a version of the Pub-2010 table with future mortality improvement projected generationally using Scale MP-2021\*;
- Amortization period no longer than 15 years for Pension Plans and 25 years for Retiree Health Plans.

*\* Or based on an actuarial experience study conducted within the last five years.*

**Price inflation** underlies both the wage inflation and investment return assumptions. Since price inflation underlies the wage inflation assumption and the investment return assumption, we recommend that a specific price inflation assumption be adopted in conjunction with this Experience Study. For the actuarial valuation, a 2.50% price inflation assumption is currently used and is compatible with the wage inflation and investment return assumptions. The table on the following page shows forward-looking price inflation forecasts.



## Summary of Findings – Economic Assumptions

Forward-Looking Price Inflation Forecasts <sup>a</sup>	
<b>Congressional Budget Office<sup>b</sup></b>	
5-Year Annual Average	2.32%
10-Year Annual Average	2.26%
<b>Federal Reserve Bank of Philadelphia<sup>c</sup></b>	
5-Year Annual Average	2.30%
10-Year Annual Average	2.24%
<b>Federal Reserve Bank of Cleveland<sup>d</sup></b>	
10-Year Expectation	2.22%
20-Year Expectation	2.31%
30-Year Expectation	2.39%
<b>Federal Reserve Bank of St. Louis<sup>e</sup></b>	
10-Year Breakeven Inflation	2.31%
20-Year Breakeven Inflation	2.45%
30-Year Breakeven Inflation	2.27%
<b>U.S. Department of the Treasury<sup>f</sup></b>	
10-Year Breakeven Inflation	2.21%
20-Year Breakeven Inflation	2.43%
30-Year Breakeven Inflation	2.26%
50-Year Breakeven Inflation	2.36%
100-Year Breakeven Inflation	2.44%
<b>Social Security Trustees<sup>g</sup></b>	
Ultimate Intermediate Assumption	2.40%

<sup>a</sup> End of the First Quarter, 2024. Version 2024-04-16 by Gabriel, Roeder, Smith & Company.

<sup>b</sup> The Budget and Economic Outlook: 2024 to 2034, Release Date: February 2024, Consumer Price Index (CPI-U), Percentage Change from Year to Year, 5-Year Annual Average (2024 - 2028), 10-Year Annual Average (2024 - 2033).

<sup>c</sup> First Quarter 2024 Survey of Professional Forecasters, Release Date: February 9, 2024, Headline CPI, Annualized Percentage Points, 5-Year Annual Average (2024 - 2028), 10-Year Annual Average (2024 - 2033).

<sup>d</sup> Inflation Expectations, Model output date: March 1, 2024.

<sup>e</sup> The breakeven inflation rate represents a measure of expected inflation derived from X-Year Treasury Constant Maturity Securities and X-Year Treasury Inflation-Indexed Constant Maturity Securities. Observation date: March, 2024.

<sup>f</sup> The Treasury Breakeven Inflation (TBI) Curve, Monthly Average Rates, March, 2024.

<sup>g</sup> The 2023 Annual Report of The Board of Trustees of The Federal Old-Age And Survivors Insurance and Federal Disability Insurance Trust Funds, March 31, 2023, p. 10, Key Assumptions and Summary Measures for the Last 65 Years of the Long-Range (75-year) Projection Period, Intermediate, Consumer Price Index (CPI-W).

The previous table shows forward-looking price inflation forecasts at various time horizons. The CBO and Federal Reserve Bank of Philadelphia's 5-year annual average inflation assumptions are 2.32% and 2.30% respectively, while their 10-year annual average assumptions are 2.26% and 2.24% respectively. This suggests that price inflation is expected to decrease very slightly and stabilize in years 6 through 10.

For the firms included in the 2023 version of the GRS Capital Market Assumption Modeler (CMAM), the average price inflation assumption used in the forward-looking capital market expectations was 2.52% over the next 10 years (with a range of 2.26% to 2.90%) and 2.56% over the next 20 to 30 years.

The current assumption is in line with inflation forecasters' and investment firms' forward-looking expectations. **Therefore, we recommend no change to the current price inflation assumption of 2.50%.**





## Summary of Findings – Economic Assumptions

Year	Annual Increase in		
	Prices (CPI-U)	Wages (NAE)	Difference
3-Year Avg.	5.6 %	5.9 %	0.3 %
5-Year Avg.	4.1 %	4.9 %	0.8 %
10-Year Avg.	2.8 %	4.0 %	1.2 %
20-Year Avg.	2.6 %	3.4 %	0.8 %
30-Year Avg.	2.5 %	3.6 %	1.1 %
50-Year Avg.	3.9 %	4.4 %	0.6 %

Payroll growth (wage inflation) represents the expected growth in total payroll for a stable population. Increases or decreases in covered population that lead to a change in total payroll are not reflected in this assumption which consists of two components: 1) a portion due to pure price inflation (i.e., increases due to changes in the CPI); and 2) increases in average salary levels in excess of pure price inflation (i.e., increases due to changes in productivity levels, supply and demand in the labor market and other macroeconomic factors).

The current payroll growth assumption is 3.00%, which is comprised of a 2.50% price inflation assumption, plus a real wage growth assumption of 0.50%. Before the addition of new participants (due to plan reopening) in the June 30, 2023 valuation, average salaries in the Retirement System have risen at approximately 3.1% annually over the previous 5 years.

We are generally comfortable with the wage inflation assumption exceeding the price inflation assumption by 0.50% to 1.00%. Given our recommendation for a 2.50% price inflation assumption, we believe a reasonable range for this assumption is 3.00% to 3.50% per year. **Based on these statistics, we recommend no change to the current wage growth assumption of 3.00%.**

## Economic Assumptions

**Investment Return:** The investment return assumption is the actuarial assumption that has the largest impact on the actuarial valuation results of the Retirement System. As more of the actuarial accrued liabilities are related to non-active members, the nominal (as opposed to real) investment return assumption becomes a more prominent factor. Since one of the Retirement System's fundamental financial objectives is the receipt of level contributions over time, the discount rate assumption is set equal to the investment return assumption (with perhaps an adjustment for conservatism).

Presented below is the approximate target asset allocation for the City of Farmington Hills Employees' Retirement System:

<b>Asset Class</b>	<b>Target Allocation</b>
Domestic Equity	41.00%
International Equity	16.00%
Domestic Bonds	20.00%
Real Estate	10.00%
Alternative Assets	11.00%
Cash and Equivalents	2.00%
<b>Total</b>	<b>100.00%</b>

Based upon the target asset allocation, future expectations of investment returns for this portfolio were analyzed using the capital market expectations of various investment advisors. The final expected nominal investment return results are based upon a 2.50% price inflation assumption, which is the recommended assumption. The following page shows the results of this analysis.



# Economic Assumptions

## Investment Return Expectations

GRS 2024 CMAM								
Capital Market Assumption Set (CMA)	CMA Expected Nominal Return	CMA Inflation Assumption	Expected Real Return (2)-(3)	Actuary Inflation Assumption	Expected Nominal Return (4)+(5)	Investment Expenses	Expected Nominal Return Net of Expenses (6)-(7)	Standard Deviation of Expected Return (1-Year)
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)
1	5.99%	2.60%	3.39%	2.50%	5.89%	0.00%	5.89%	12.25%
2	6.79%	2.70%	4.09%	2.50%	6.59%	0.00%	6.59%	12.32%
3	6.35%	2.25%	4.10%	2.50%	6.60%	0.00%	6.60%	12.30%
4	6.82%	2.40%	4.42%	2.50%	6.92%	0.00%	6.92%	11.17%
5	6.91%	2.21%	4.70%	2.50%	7.20%	0.00%	7.20%	13.08%
6	7.23%	2.44%	4.79%	2.50%	7.29%	0.00%	7.29%	11.74%
7	7.37%	2.50%	4.87%	2.50%	7.37%	0.00%	7.37%	12.36%
8	7.16%	2.21%	4.95%	2.50%	7.45%	0.00%	7.45%	12.95%
9	7.33%	2.20%	5.13%	2.50%	7.63%	0.00%	7.63%	11.93%
10	7.95%	2.51%	5.44%	2.50%	7.94%	0.00%	7.94%	12.92%
11	8.01%	2.51%	5.50%	2.50%	8.00%	0.00%	8.00%	12.26%
12	7.68%	2.13%	5.55%	2.50%	8.05%	0.00%	8.05%	12.19%
<b>Average</b>	<b>7.13%</b>	<b>2.39%</b>	<b>4.74%</b>	<b>2.50%</b>	<b>7.24%</b>	<b>0.00%</b>	<b>7.24%</b>	<b>12.29%</b>
<b>Average from last 3 CMAMs</b>							<b>6.82%</b>	<b>12.29%</b>

GRS 2024 CMAM				
Capital Market Assumption Set (CMA)	Distribution of 10-Year Average Geometric Net Nominal Return			Probability of exceeding 7.00%
	40th	50th	60th	
(1)	(2)	(3)	(4)	(5)
1	4.22%	5.19%	6.16%	31.95%
2	4.91%	5.89%	6.87%	38.71%
3	4.93%	5.90%	6.88%	38.79%
4	5.45%	6.34%	7.23%	42.53%
5	5.38%	6.41%	7.45%	44.27%
6	5.73%	6.65%	7.59%	46.27%
7	5.69%	6.66%	7.65%	46.54%
8	5.66%	6.68%	7.71%	46.83%
9	6.03%	6.97%	7.92%	49.70%
10	6.15%	7.17%	8.20%	51.71%
11	6.35%	7.31%	8.29%	53.27%
12	6.40%	7.37%	8.34%	53.82%
<b>Average</b>	<b>5.57%</b>	<b>6.54%</b>	<b>7.52%</b>	<b>45.37%</b>
<b>Average from last 3 CMAMs</b>		<b>6.12%</b>		



## Economic Assumptions

### Investment Return Expectations

Actuaries are bound by Actuarial Standards of Practice (ASOP) and ASOP No. 27 provides guidance for the selection of economic assumptions for measuring pension obligations. The standard requires that economic assumptions be internally consistent with wage inflation and price inflation assumptions used in the valuation of the plan. The ASOP defines a reasonable assumption to have the following characteristics:

- It is appropriate for the purpose of the measurement;
- It reflects the actuary's professional judgement;
- It takes into account relevant current and historical economic data as of the measurement date;
- It reflects the actuary's estimate of future experience, the actuary's observation of the estimates inherent in the market data or a combination of the two; and
- It has no significant bias (it is not significantly optimistic or pessimistic).

ASOP No. 27 suggests that either the expected geometric return (i.e., 50th percentile) or the expected arithmetic return is suitable for use as a reasonable investment return assumption. Based on the average of each of the investment consultants' expectations, this would result in a range of 6.54% to 7.24% (the 3-year CMAM average is 6.12% to 6.82%).

**Based upon the results of our analysis, and given the variation of future expectations, we recommend maintaining the investment return assumption of 7.00%.**

We have illustrated the approximate impact on contribution requirements if the investment return assumption were changed to 6.75%.

## SECTION C

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### **PENSION AND OPEB ASSUMPTIONS AND METHODS**

# Actuarial Methods

## Amortization Policy

**Retirement System:** The June 30, 2023 valuation uses a 16-year closed amortization period for the general and court groups and a 20-year closed amortization period for the police and fire groups, based on the level percent of payroll method. **We recommend continuing the current amortization periods until each respective amortization period reaches 15 years (June 30, 2024 for general groups and June 30, 2028 for police and fire groups). Once at 15 years, we recommend incorporating layered amortization under which, once the period reaches 15 years, the initial Unfunded Actuarial Accrued Liability (UAAL) would wind down until it is fully amortized. For each subsequent valuation, any new UAAL created by gains/losses, assumption changes and/or plan changes for that valuation will be amortized over new, closed 15-year periods.**

**Retiree Health Plan:** The June 30, 2023 valuation uses a 12-year closed amortization period, based on level dollar method. While we do not recommend changing the period at this time, when the remaining period reduces below 10 years contributions will become more volatile. **We recommend continuing the current amortization period until the amortization period reaches 10 years (June 30, 2025 valuation). Once at 10 years, we recommend incorporating layered amortization under which, once the period reaches 10 years, the initial Unfunded Actuarial Accrued Liability (UAAL) would wind down until it is fully amortized. For each subsequent valuation, any new UAAL created by gains/losses, assumption changes and/or plan changes for that valuation will be amortized over new, closed 15-year period, consistent with the Retirement System.**

## Actuarial Cost Method

The actuarial cost method is the liability allocation method the actuary uses to develop City contributions. The Retirement System and the Retiree Health Plan currently use the entry age normal cost method. **We recommend no change to the current actuarial cost method.**

## Asset Valuation Method

**Retirement System:** The June 30, 2023 valuation currently uses a 5-year asset smoothing method with an 80% corridor. The funding value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased-in over closed 5-year periods. This is a very common method among public employee retirement systems and most Michigan systems use an averaging period of 4 or 5 years. **We recommend no change to the current asset valuation method.**

**Retiree Health Plan:** The June 30, 2023 valuation currently uses a 5-year asset smoothing method with no corridor. **We recommend establishing a 'corridor', so that the funding value of assets does not diverge too far from the underlying market value. A corridor of 80% (consistent with the Retirement System) would first be reflected in the next actuarial valuation as of June 30, 2025.**



# Actuarial Assumptions

## Loads

**Retirement System Load for Administrative Expenses:** Administrative expenses used in the contribution determination are based on the average dollar amount over the last six years (a rolling period), ending on the valuation date one year preceding the current valuation date. The flat dollar administrative expense load is allocated between the General group, the Court group, and the Public Safety groups based on the funding value of assets as of the administrative expense calculation date. The flat dollar portion of the administrative expense is then converted to a percent of pay based on the projected fiscal year payroll for the General group, the Court group, and the combined Public Safety group, respectively. **Since the Retirement System is now open to new employees for all groups, we recommend updating to a single percentage of pay developed across all groups.**

**Retiree Health Plan Load for Administrative Expenses:** Currently, administrative expenses used in the contribution determination are based on the actual administrative expenses paid during the appropriate fiscal year. This flat dollar administrative expense load is allocated between the General, Court, Police, and Fire groups evenly (a 25% share). **We recommend no change to the Retiree Health Plan Load for Administrative Expenses.**

**Retirement System Stipend Benefit Election:** Ten percent of eligible active RHC plan members are assumed to elect cash payments (the pension stipend). **We recommend no change to the Retirement System stipend benefit election.**

**Retiree Health Plan Other Load:** OPEB Liabilities were loaded by 18% for future contingencies including fluctuation in health care claims experience and volatility associated with the size of the Plan. **Note that this assumption is reviewed with the trend analysis for each biannual valuation of the Plan.**

## Health Care Coverage at Retirement

**Retiree Health Plan Health care coverage at retirement and continuation percentage to survivor – Traditional DB:** 90% of eligible future retirees are assumed to elect coverage from this plan at the time of retirement. **Note that this assumption is reviewed for each biannual valuation of the Plan.**

### General and Court

	One-Person	Two-Person/Family		Opt-Out
		Electing	Continuing	
Male	36%	54%	100%	10%
Female	36%	54%	100%	10%

### Police and Fire

	One-Person	Two-Person/Family		Opt-Out
		Electing	Continuing	
Male	23%	67%	100%	10%
Female	23%	67%	100%	10%



## Actuarial Assumptions

### Retiree Health Plan Health care coverage at retirement and continuation percentage to survivor –

**Stipend:** 100% of future Tier 2 retirees who satisfy the eligibility for the stipend are assumed to receive it.

**Note that this assumption is reviewed for each biannual valuation of the Plan.**

Group	Portion with		Continuation %
	1-Person Stipend	2-Person Stipend	
TPOAM, Executive, General Exempt, Dispatch, Teamster, Court	40%	60%	100%
Police Patrol, Police Command, Fire	20%	80%	100%

### Health Care Cost Trend Rates

Trend rates are used to project results from the experience period to the rating period. While experience is often the best starting point for future costs, we do not rely on a group’s experience in setting trend assumptions since trends vary significantly from year-to-year and are not credible for most groups. Therefore, professional judgment and industry benchmarks are used in conjunction with historical experience in setting the trend assumptions. Various benefit segments of the health care environment are studied including non-Medicare medical, Medicare medical, prescription drug, dental, and vision.

The current health care trend assumption begins at 7.25% for non-Medicare retirees and 6.50% for Medicare retirees. The trend decreases by each year until reaching the ultimate health care trend of 3.50%. **Note that this assumption is reviewed for each biannual valuation of the Plan.**

Year Beginning July 1,	Retiree Health Care Cost Increases	
	Non-Medicare	Medicare
2024	7.25%	6.50%
2025	7.00	6.25
2026	6.75	6.00
2027	6.50	5.75
2028	6.25	5.75
2029	6.00	5.50
2030	5.75	5.25
2031	5.50	5.00
2032	5.00	4.75
2033	4.75	4.50
2034	4.50	4.25
2035	4.25	4.25
2036	4.00	4.00
2037	3.75	3.75
2038	3.50	3.50
Thereafter	3.50	3.50





## **SECTION D**

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### **CONTRIBUTIONS BASED ON PROPOSED CHANGES**

## Summary of Current and Proposed Assumptions

Assumption Set	Economic Assumptions			Demographic Assumptions
	Net Rate of Investment Return	Rate of Inflation		
		Wage	Spread	
A. Current	7.00%	3.00%	4.00%	Current
B. Proposed Demographics	7.00	3.00	4.00	Proposed
C. Alternate I	6.75	3.00	3.75	Proposed

Proposed demographic assumptions and methods include all of the recommended changes shown in Sections A and C of this report.

The most recent valuation of the Retirement System includes a 16-year period for the general and court divisions and a 20-year period for the police and fire divisions. The most recent OPEB valuation for the Retiree Health Plan includes a 12-year period.

## Effect of Recommended Changes in Actuarial Assumptions on Pension Actuarial Liabilities and Contributions Illustrative Results as of June 30, 2023

Assumption Set	General			Court		
	Current	Proposed Demographics	Proposed Demographics	Current	Proposed Demographics	Proposed Demographics
Interest Rate	7.00%	7.00%	6.75%	7.00%	7.00%	6.75%
Wage Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Amortization Period	16	16	16	16	16	16
1. Actuarial Accrued Liability	\$ 93,326,174	\$ 94,721,592	\$ 97,123,907	\$ 11,012,051	\$ 11,182,610	\$ 11,492,419
2. Actuarial Value of Assets	71,888,522	71,888,522	71,888,522	8,551,603	8,551,603	8,551,603
3. Unfunded Accrued Liability (1. - 2.)	21,437,652	22,833,070	25,235,385	2,460,448	2,631,007	2,940,816
4. Funded Percent (2. / 1.)	77.0%	75.9%	74.0%	77.7%	76.5%	74.4%
<b>Contributions for Fiscal Year Beginning July 1, 2024</b>						
	% of Active Payroll			% of Active Payroll		
1. Normal cost of benefits	15.35%	15.86%	16.77%	17.53%	18.04%	19.04%
2. Net Member contributions	3.65	3.65	3.66	4.00	4.00	4.01
3. Administrative expenses	0.71	0.79	0.79	0.92	0.79	0.79
4. Employer normal cost (1. + 2. + 3.)	12.41	13.00	13.90	14.45	14.83	15.82
5. Unfunded accrued liability payment	12.02	12.87	14.06	14.18	15.25	16.88
6. Computed employer contribution (4. + 5.)	24.43%	25.87%	27.96%	28.63%	30.08%	32.70%
7. Employer Contribution \$	\$ 3,633,209	\$ 3,847,364	\$ 4,158,187	\$ 411,130	\$ 431,952	\$ 469,576



## Effect of Recommended Changes in Actuarial Assumptions on Pension Actuarial Liabilities and Contributions Illustrative Results as of June 30, 2023

Assumption Set	Police			Fire		
	Current	Proposed Demographics	Proposed Demographics	Current	Proposed Demographics	Proposed Demographics
Interest Rate	7.00%	7.00%	6.75%	7.00%	7.00%	6.75%
Wage Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Amortization Period	20	20	20	20	20	20
1. Actuarial Accrued Liability	\$ 103,688,200	\$ 106,703,516	\$ 109,736,222	\$ 35,983,297	\$ 36,649,992	\$ 37,796,554
2. Actuarial Value of Assets	70,014,306	70,014,306	70,014,306	27,378,396	27,378,396	27,378,396
3. Unfunded Accrued Liability (1. - 2.)	33,673,894	36,689,210	39,721,916	8,604,901	9,271,596	10,418,158
4. Funded Percent (2. / 1.)	67.5%	65.6%	63.8%	76.1%	74.7%	72.4%
	<b>% of Active Payroll</b>			<b>% of Active Payroll</b>		
<b>Contributions for Fiscal Year Beginning July 1, 2024</b>						
1. Normal cost of benefits	19.07%	20.17%	21.46%	19.14%	19.79%	21.03%
2. Net Member contributions	4.13	4.10	4.11	4.12	4.12	4.13
3. Administrative expenses	0.86	0.79	0.79	0.86	0.79	0.79
4. Employer normal cost (1. + 2. + 3.)	15.80	16.86	18.14	15.88	16.46	17.69
5. Unfunded accrued liability payment	22.26	24.39	25.93	10.57	11.44	12.65
6. Computed employer contribution (4. + 5.)	38.06%	41.25%	44.07%	26.45%	27.90%	30.34%
7. Employer Contribution \$	\$ 4,177,004	\$ 4,527,099	\$ 4,836,588	\$ 1,568,862	\$ 1,654,868	\$ 1,799,595



**Effect of Recommended Changes in Actuarial Assumptions on  
Pension Actuarial Liabilities and Employer Contributions  
Summary of Illustrative Results as of June 30, 2023**

<b>Assumption Set</b>	<b>Current</b>	<b>Proposed Demographics</b>	<b>Proposed Demographics</b>
<b>Interest Rate</b>	<b>7.00%</b>	<b>7.00%</b>	<b>6.75%</b>
<b>Wage Inflation</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>
Accrued Liability	\$ 244,009,722	\$ 249,257,710	\$ 256,149,102
Funding Value of Assets	177,832,827	177,832,827	177,832,827
Funding Percent	72.9%	71.3%	69.4%
Employer Contribution \$	9,790,205	10,461,283	11,263,946

## Effect of Recommended Changes in Actuarial Assumptions on OPEB Actuarial Liabilities and Contributions Illustrative Results as of June 30, 2023

Assumption Set	General			Court		
	Current	Proposed Demographics	Proposed Demographics	Current	Proposed Demographics	Proposed Demographics
Interest Rate	7.00%	7.00%	6.75%	7.00%	7.00%	6.75%
Wage Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Amortization Period	12	12	12	12	12	12
1. Actuarial Accrued Liability	\$ 29,104,077	\$ 29,545,347	\$ 30,321,258	\$ 3,174,337	\$ 3,208,475	\$ 3,303,971
2. Actuarial Value of Assets	37,450,900	37,450,900	37,450,900	3,677,375	3,677,375	3,677,375
3. Unfunded Accrued Liability (1. - 2.)	(8,346,823)	(7,905,553)	(7,129,642)	(503,038)	(468,900)	(373,404)
4. Funded Percent (2. / 1.)	128.7%	126.8%	123.5%	115.8%	114.6%	111.3%
<b>Contributions for Fiscal Year Beginning July 1, 2024</b>						
1. Normal cost of benefits	\$ 235,157	\$ 212,444	\$ 225,606	\$ 56,466	\$ 53,525	\$ 56,825
2. Net Member contributions	38,334	39,757	39,756	10,273	12,021	12,021
3. Administrative expenses	16,859	16,859	16,859	16,858	16,858	16,858
4. Employer normal cost (1. + 2. + 3.)	213,682	189,546	202,709	63,051	58,362	61,662
5. Amortization charges / (credits)	(1,063,913)	(1,006,456)	(892,341)	(59,615)	(55,170)	(42,112)
6. Actuarially Determined Contribution (4. + 5.)	\$ 0	\$ 0	\$ 0	\$ 3,436	\$ 3,192	\$ 19,550



## Effect of Recommended Changes in Actuarial Assumptions on OPEB Actuarial Liabilities and Contributions Illustrative Results as of June 30, 2023

Assumption Set	Police			Fire		
	Current	Proposed Demographics	Proposed Demographics	Current	Proposed Demographics	Proposed Demographics
Interest Rate	7.00%	7.00%	6.75%	7.00%	7.00%	6.75%
Wage Inflation	3.00%	3.00%	3.00%	3.00%	3.00%	3.00%
Amortization Period	12	12	12	12	12	12
1. Actuarial Accrued Liability	\$ 36,180,490	\$ 37,564,311	\$ 38,650,917	\$ 12,581,194	\$ 12,819,565	\$ 13,185,691
2. Actuarial Value of Assets	40,868,836	40,868,836	40,868,836	12,037,784	12,037,784	12,037,784
3. Unfunded Accrued Liability (1. - 2.)	(4,688,346)	(3,304,525)	(2,217,919)	543,410	781,781	1,147,907
4. Funded Percent (2. / 1.)	113.0%	108.8%	105.7%	95.7%	93.9%	91.3%
<b>Contributions for Fiscal Year Beginning July 1, 2024</b>						
1. Normal cost of benefits	\$ 465,351	\$ 458,679	\$ 487,399	\$ 188,616	\$ 166,707	\$ 177,258
2. Net Member contributions	60,443	58,506	58,504	25,501	23,187	23,358
3. Administrative expenses	16,858	16,858	16,858	16,858	16,858	16,858
4. Employer normal cost (1. + 2. + 3.)	421,766	417,031	445,753	179,973	160,378	170,758
5. Amortization charges / (credits)	(558,541)	(378,354)	(233,394)	62,563	93,601	139,228
6. Actuarially Determined Contribution (4. + 5.)	\$ 0	\$ 38,677	\$ 212,359	\$ 242,536	\$ 253,979	\$ 309,986



**Effect of Recommended Changes in Actuarial Assumptions on  
OPEB Actuarial Liabilities and Employer Contributions  
 Summary of Illustrative Results as of June 30, 2023**

<b>Assumption Set</b>	<b>Current</b>	<b>Proposed Demographics</b>	<b>Proposed Demographics</b>
<b>Interest Rate</b>	<b>7.00%</b>	<b>7.00%</b>	<b>6.75%</b>
<b>Wage Inflation</b>	<b>3.00%</b>	<b>3.00%</b>	<b>3.00%</b>
Accrued Liability	\$ 81,040,098	\$ 83,137,698	\$ 85,461,837
Funding Value of Assets	94,034,895	94,034,895	94,034,895
Funding Percent	116.0%	113.1%	110.0%
Employer Contribution \$	245,972	295,848	541,895



## **SECTION E**

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### **OPTIONAL FORMS OF PAYMENT**

## Factors for Optional Forms of Payment

Discussion: When a member of the Retirement System retires, the member receives a monthly pension benefit. The normal form of benefit (straight life) does not depend on age; it depends on a benefit multiplier, Final Average Compensation (FAC) and service at retirement. If a 55-year-old member has the same multiplier, FAC and service as a 65-year-old member, the 55-year-old member's monthly benefit and the 65-year-old member's monthly benefit will be exactly the same. The value of the 55-year-old member's pension will be greater than the 65-year-old member's pension because those age 55 on average will live longer into the future than those age 65 and will, therefore, receive more benefit payments.

When a member elects a Joint and Survivorship (J&S) form of payment, the expected future "lifetime" associated with the member's pension increases because the pension is payable not only while the member is alive, but also while the member's beneficiary is alive. If the expected future "lifetime" of a monthly pension increases, the value of the pension also increases unless the amount of monthly pension payment is reduced. The Retirement System reduces the J&S monthly pension payment to an amount that yields the same actuarial value as a straight life pension based on life expectancy. This reduction is based on factors for optional forms of payment. These factors ("option factors") are based on an assumed life expectancy (using the proposed mortality table), interest (7.0%) and the ages of the individuals receiving the benefit. When one or more of these assumptions is updated for use in the annual valuations of the System it is appropriate to review the assumptions used for optional forms of payment. **The proposed factors include a static mortality improvement projection to 2030. If the new assumptions are adopted, we recommend the new option factors be adopted for retirements on or after January 1, 2025 to allow time for administrative changes. We would also recommend that any such change be reviewed by legal counsel.** A sample of proposed option factors is shown below:

### General and Court Retirees Factors for Optional Forms of Payment

Age at Retirement		50% Joint & Survivor		75% Joint & Survivor		100% Joint & Survivor	
		With Pop- Up		With Pop- Up		With Pop- Up	
Retiree	Beneficiary	Present Factor	Proposed Factor	Present Factor	Proposed Factor	Present Factor	Proposed Factor
50	45	0.96033	0.96146	0.94166	0.94328	0.92370	0.92578
55	50	0.94934	0.95083	0.92589	0.92802	0.90357	0.90628
60	55	0.93531	0.93708	0.90601	0.90849	0.87848	0.88160
65	60	0.91699	0.91910	0.88045	0.88336	0.84670	0.85030

### Police and Firefighter Retirees Factors for Optional Forms of Payment

Age at Retirement		50% Joint & Survivor		75% Joint & Survivor		100% Joint & Survivor	
		With Pop- Up		With Pop- Up		With Pop- Up	
Retiree	Beneficiary	Present Factor	Proposed Factor	Present Factor	Proposed Factor	Present Factor	Proposed Factor
50	45	0.95346	0.95425	0.93178	0.93291	0.91106	0.91251
55	50	0.93888	0.94021	0.91104	0.91292	0.88480	0.88716
60	55	0.91963	0.92142	0.88410	0.88659	0.85122	0.85429
65	60	0.89655	0.89875	0.85246	0.85544	0.81250	0.81612



## **SECTION F**

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### **COMPLETE LISTING OF RECOMMENDED ASSUMPTIONS**

## Proposed Normal Retirement Rates

Retirement Ages	Percent of Eligible Active Members Retiring				
	General	Court	Police Command	Years of Service	Police Command
50			40%	25	
51			40	26	
52			40	27	
53			40	28	
54			40	29	
55	30%	20%	20	30	40%
56	25	15	15	31	40
57	25	15	15	32	40
58	25	15	15	33	40
59	25	15	15	34	40
60	25	20	100	35	100
61	25	25			
62	30	30			
63	20	20			
64	25	25			
65	25	25			
66	30	30			
67	30	30			
68	30	30			
69	30	30			
70	100	100			

Percent of Eligible Active Members Retiring		
Years of Service	Police Patrol	Fire
25	40%	30%
26	40	30
27	40	30
28	40	30
29	40	30
30	100	100

The incidence of retirement for firefighter members is assumed to be 100% at age 62.



## Proposed Early Retirement Rates (Same as Current Rates)

Retirement Ages	Percent of Eligible Active Members Retiring (Early Retirement)	
	General & Court	Police & Fire
50		1%
51		1
52		1
53		1
54		1
55		1
56		1
57	1%	1
58	1	1
59	1	1

# Proposed Turnover Rates

Sample Ages	Years of Service	% of Active Members Separating within Next Year			
		General	Court	Police	Fire
ALL	0	11.00%	12.00%	<b>10.00%</b>	7.00%
	1	10.00	12.00	<b>8.00</b>	5.00
	2	8.00	10.00	<b>6.00</b>	3.50
	3	8.00	9.00	4.00	3.50
	4	7.00	9.00	3.00	3.00
20	5 & Over	6.00	6.00	3.00	3.00
21		6.00	6.00	3.00	3.00
22		6.00	6.00	3.00	3.00
23		6.00	6.00	3.00	3.00
24		6.00	6.00	3.00	3.00
25		5.50	5.50	3.00	3.00
26		5.50	5.50	3.00	3.00
27		5.50	5.50	3.00	3.00
28		5.50	5.50	3.00	3.00
29		5.50	5.50	3.00	3.00
30		4.40	4.40	2.50	2.50
31		4.40	4.40	2.50	2.50
32		4.40	4.40	2.50	2.50
33		4.40	4.40	2.50	2.50
34		4.40	4.40	2.50	2.50
35		3.90	3.90	1.00	1.50
36		3.90	3.90	1.00	1.50
37		3.90	3.90	1.00	1.50
38		3.90	3.90	1.00	1.50
39		3.90	3.90	1.00	1.50
40		3.40	3.40	0.70	0.70
41		3.40	3.40	0.70	0.70
42		3.40	3.40	0.70	0.70
43		3.40	3.40	0.70	0.70
44		3.40	3.40	0.70	0.70
45		3.00	3.00	0.50	0.50
46		3.00	3.00	0.50	0.50
47		3.00	3.00	0.50	0.50
48		3.00	3.00	0.50	0.50
49		3.00	3.00	0.50	0.50
50		2.00	2.00	0.50	0.50
51		2.00	2.00	0.50	0.50
52		2.00	2.00	0.50	0.50
53		2.00	2.00	0.50	0.50
54		2.00	2.00	0.50	0.50
55		1.40	1.40	0.50	0.50
56	1.40	1.40	0.50	0.50	
57	1.40	1.40	0.50	0.50	
58	1.40	1.40	0.50	0.50	
59	1.40	1.40	0.50	0.50	
60	1.40	1.40	0.50	0.50	
61	1.40	1.40	0.50	0.50	
62	1.40	1.40	0.50	0.50	
63	1.40	1.40	0.50	0.50	
64	1.40	1.40	0.50	0.50	
65	1.40	1.40	0.50	0.50	



## Proposed Disability Rates (Same as Current Rates)

Sample Ages	Number of Disabilities Per 100 Eligible Members
20	0.01
21	0.01
22	0.01
23	0.01
24	0.02
25	0.02
26	0.02
27	0.03
28	0.03
29	0.03
30	0.04
31	0.04
32	0.05
33	0.06
34	0.06
35	0.07
36	0.08
37	0.09
38	0.10
39	0.11
40	0.12
41	0.13
42	0.14
43	0.16
44	0.17
45	0.19
46	0.20
47	0.22
48	0.24
49	0.26
50	0.28
51	0.30
52	0.33
53	0.35
54	0.38
55	0.40
56	0.43
57	0.47
58	0.50
59	0.53
60	0.57
61	0.61
62	0.65
63	0.69
64	0.73
65	0.78



## Proposed Pre-Retirement Mortality Rates

Age	% Dying Next Year*		% Dying Next Year*	
	General and Court		Police and Fire	
	Male	Female	Male	Female
20	0.0382%	0.0142%	0.0444%	0.0174%
21	0.0378%	0.0133%	0.0452%	0.0189%
22	0.0354%	0.0125%	0.0462%	0.0205%
23	0.0342%	0.0117%	0.0475%	0.0210%
24	0.0330%	0.0108%	0.0490%	0.0227%
25	0.0330%	0.0111%	0.0508%	0.0246%
26	0.0367%	0.0126%	0.0539%	0.0278%
27	0.0394%	0.0142%	0.0572%	0.0298%
28	0.0435%	0.0160%	0.0607%	0.0332%
29	0.0465%	0.0177%	0.0642%	0.0367%
30	0.0508%	0.0208%	0.0677%	0.0389%
31	0.0551%	0.0226%	0.0710%	0.0423%
32	0.0592%	0.0257%	0.0740%	0.0456%
33	0.0632%	0.0272%	0.0767%	0.0486%
34	0.0668%	0.0299%	0.0805%	0.0527%
35	0.0715%	0.0324%	0.0822%	0.0549%
36	0.0756%	0.0345%	0.0847%	0.0579%
37	0.0790%	0.0376%	0.0864%	0.0604%
38	0.0830%	0.0389%	0.0888%	0.0623%
39	0.0862%	0.0412%	0.0904%	0.0636%
40	0.0898%	0.0430%	0.0912%	0.0645%
41	0.0927%	0.0457%	0.0927%	0.0662%
42	0.0960%	0.0470%	0.0936%	0.0677%
43	0.0988%	0.0492%	0.0952%	0.0691%
44	0.1023%	0.0513%	0.0978%	0.0704%
45	0.1066%	0.0545%	0.1001%	0.0730%
46	0.1119%	0.0577%	0.1035%	0.0757%
47	0.1171%	0.0611%	0.1070%	0.0787%
48	0.1244%	0.0649%	0.1117%	0.0832%
49	0.1322%	0.0700%	0.1178%	0.0881%
50	0.1404%	0.0755%	0.1253%	0.0937%
51	0.1512%	0.0825%	0.1344%	0.1008%
52	0.1628%	0.0901%	0.1442%	0.1096%
53	0.1764%	0.0992%	0.1558%	0.1191%
54	0.1909%	0.1089%	0.1702%	0.1292%
55	0.2084%	0.1210%	0.1856%	0.1407%
56	0.2279%	0.1334%	0.2048%	0.1534%
57	0.2503%	0.1467%	0.2258%	0.1660%
58	0.2744%	0.1607%	0.2504%	0.1792%
59	0.2995%	0.1760%	0.2773%	0.1915%
60	0.3264%	0.1924%	0.3070%	0.2048%
61	0.3543%	0.2084%	0.3388%	0.2166%
62	0.3826%	0.2248%	0.3723%	0.2278%
63	0.4120%	0.2427%	0.4079%	0.2387%
64	0.4409%	0.2618%	0.4440%	0.2491%
65	0.4705%	0.2816%	0.4826%	0.2597%
66	0.5006%	0.3040%	0.5352%	0.2901%
67	0.5327%	0.3295%	0.5940%	0.3250%
68	0.5670%	0.3576%	0.6586%	0.3648%
69	0.6059%	0.3895%	0.7307%	0.4106%

\* Based on ages in 2023. Actual tables extend further than sample ages shown. Rates in future years are determined by the fully generational MP-2021 projection scale.





# Proposed Healthy Post-Retirement Mortality Rates

Age	% Dying Next Year*		% Dying Next Year*	
	General and Court		Police and Fire	
	Male	Female	Male	Female
50	0.2808%	0.2019%	0.2591%	0.1692%
51	0.2997%	0.2136%	0.2745%	0.1888%
52	0.3220%	0.2284%	0.2903%	0.2117%
53	0.3471%	0.2448%	0.3089%	0.2391%
54	0.3772%	0.2622%	0.3301%	0.2699%
55	0.4102%	0.2814%	0.3569%	0.3060%
56	0.4472%	0.3018%	0.3921%	0.3449%
57	0.4879%	0.3239%	0.4378%	0.3891%
58	0.5318%	0.3461%	0.4949%	0.4357%
59	0.5798%	0.3707%	0.5626%	0.4856%
60	0.6293%	0.3972%	0.6395%	0.5368%
61	0.6808%	0.4270%	0.7209%	0.5912%
62	0.7353%	0.4597%	0.8033%	0.6460%
63	0.7911%	0.4972%	0.8825%	0.7031%
64	0.8513%	0.5372%	0.9592%	0.7620%
65	0.9179%	0.5832%	1.0365%	0.8257%
66	0.9923%	0.6340%	1.1170%	0.8944%
67	1.0772%	0.6918%	1.2084%	0.9703%
68	1.1731%	0.7590%	1.3172%	1.0558%
69	1.2831%	0.8371%	1.4482%	1.1534%
70	1.4083%	0.9273%	1.6022%	1.2658%
71	1.5500%	1.0324%	1.7830%	1.3939%
72	1.7130%	1.1544%	1.9901%	1.5410%
73	1.8988%	1.2954%	2.2243%	1.7091%
74	2.1134%	1.4577%	2.4866%	1.8995%
75	2.3595%	1.6442%	2.7817%	2.1175%
76	2.6419%	1.8558%	3.1174%	2.3631%
77	2.9660%	2.0980%	3.5025%	2.6384%
78	3.3377%	2.3747%	3.9487%	2.9492%
79	3.7625%	2.6899%	4.4693%	3.2953%
80	4.2488%	3.0513%	5.0756%	3.6816%
81	4.8055%	3.4662%	5.7731%	4.1115%
82	5.4397%	3.9419%	6.5623%	4.5890%
83	6.1522%	4.4846%	7.4367%	5.1182%
84	6.9525%	5.1075%	8.3919%	5.7233%
85	7.8450%	5.8187%	9.4174%	6.4161%
86	8.8261%	6.6299%	10.5115%	7.1864%
87	9.8981%	7.5487%	11.6798%	8.0458%
88	11.0666%	8.5779%	12.9368%	9.0046%
89	12.3336%	9.7117%	14.2971%	10.0692%
90	13.6909%	10.9353%	15.7737%	11.2476%
91	15.1283%	12.2314%	17.2923%	12.5078%
92	16.6286%	13.5756%	18.8017%	13.8187%
93	18.1830%	14.9675%	20.2815%	15.1743%
94	19.7852%	16.3974%	21.7340%	16.5640%
95	21.4159%	17.8816%	23.1619%	18.1532%
96	23.1963%	19.5107%	24.7233%	20.0454%
97	25.0390%	21.2340%	26.3533%	22.0203%
98	26.9392%	23.0570%	28.0737%	24.0549%
99	28.9050%	24.9819%	29.9106%	26.1261%
100	30.9068%	27.0025%	31.8375%	28.2261%
101	32.9303%	29.0910%	33.8250%	30.3377%
102	34.9512%	31.2103%	35.8011%	32.4709%
103	36.9580%	33.3360%	37.7583%	34.5982%
104	38.9211%	35.4488%	39.6685%	36.7008%
105	40.8237%	37.5385%	41.5148%	38.7698%
106	42.6707%	39.5696%	43.3042%	40.7701%
107	44.4580%	41.5472%	45.0338%	42.7070%
108	46.1426%	43.4536%	46.6608%	44.5668%
109	47.7554%	45.2673%	48.2188%	46.3266%
110	49.0681%	46.9890%	49.0681%	47.9890%

\* Based on ages in 2023. Actual tables extend further than sample ages shown. Rates in future years are determined by the fully generational MP-2021 projection scale.



# Proposed Disabled Post-Retirement Mortality Rates

Age	% Dying Next Year*		% Dying Next Year*	
	General and Court		Police and Fire	
	Male	Female	Male	Female
50	1.5124%	1.3489%	0.4288%	0.2883%
51	1.5982%	1.4069%	0.4546%	0.3245%
52	1.6917%	1.4736%	0.4857%	0.3668%
53	1.7926%	1.5499%	0.5216%	0.4168%
54	1.9000%	1.6310%	0.5643%	0.4733%
55	2.0118%	1.7139%	0.6129%	0.5362%
56	2.1259%	1.7937%	0.6694%	0.6066%
57	2.2382%	1.8670%	0.7323%	0.6814%
58	2.3498%	1.9301%	0.8022%	0.7580%
59	2.4570%	1.9817%	0.8784%	0.8335%
60	2.5611%	2.0230%	0.9598%	0.9029%
61	2.6612%	2.0528%	1.0453%	0.9668%
62	2.7606%	2.0767%	1.1354%	1.0237%
63	2.8612%	2.0984%	1.2277%	1.0760%
64	2.9611%	2.1195%	1.3227%	1.1278%
65	3.0602%	2.1462%	1.4225%	1.1844%
66	3.1590%	2.1810%	1.5276%	1.2486%
67	3.2597%	2.2301%	1.6391%	1.3226%
68	3.3636%	2.2967%	1.7610%	1.4116%
69	3.4761%	2.3843%	1.8965%	1.5190%
70	3.6002%	2.4967%	2.0488%	1.6505%
71	3.7436%	2.6343%	2.2217%	1.8100%
72	3.9083%	2.8009%	2.4202%	2.0027%
73	4.1016%	2.9976%	2.6479%	2.2326%
74	4.3260%	3.2278%	2.9103%	2.5038%
75	4.5864%	3.4953%	3.2101%	2.8195%
76	4.8843%	3.7995%	3.5514%	3.1692%
77	5.2251%	4.1446%	3.9367%	3.5474%
78	5.6118%	4.5341%	4.3687%	3.9516%
79	6.0495%	4.9699%	4.8479%	4.3799%
80	6.5396%	5.4551%	5.3791%	4.8340%
81	7.0903%	5.9952%	5.9698%	5.3160%
82	7.6985%	6.5913%	6.6262%	5.8307%
83	8.3635%	7.2464%	7.4367%	6.3827%
84	9.0902%	7.9645%	8.3919%	6.9801%
85	9.8758%	8.7501%	9.4174%	7.6323%
86	10.7199%	9.5697%	10.5115%	8.3446%
87	11.6245%	10.4096%	11.6798%	9.1308%
88	12.6005%	11.2634%	12.9368%	9.9984%
89	13.8227%	12.1273%	14.2971%	10.9533%
90	15.1662%	13.0087%	15.7737%	11.9968%
91	16.5419%	13.9318%	17.2923%	13.1436%
92	17.9227%	14.9066%	18.8017%	14.3889%
93	19.3044%	15.9569%	20.2815%	15.7396%
94	20.6953%	17.0894%	21.7340%	17.1798%
95	22.0980%	18.3309%	23.1619%	18.7165%
96	23.6006%	19.7762%	24.7233%	20.4299%
97	25.3117%	21.3922%	26.3533%	22.2471%
98	27.0654%	23.1325%	28.0737%	24.1608%
99	28.9410%	25.0030%	29.9106%	26.1567%
100	30.9068%	27.0025%	31.8375%	28.2261%
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\* Based on ages in 2023. Actual tables extend further than sample ages shown. Rates in future years are determined by the fully generational MP-2021 projection scale.



**Proposed Merit and Longevity Portion of Pay Increases with  
3.00% Wage Inflation  
(Same as Current Rates)**

Years of Service	General and Court Members		
	Base (Economic)	Merit & Longevity	Total
1	3.0%	4.0%	7.0%
2	3.0%	4.0%	7.0%
3	3.0%	4.0%	7.0%
4	3.0%	4.0%	7.0%
5	3.0%	4.0%	7.0%
6	3.0%	2.0%	5.0%
7	3.0%	2.0%	5.0%
8	3.0%	2.0%	5.0%
9	3.0%	2.0%	5.0%
10	3.0%	2.0%	5.0%
thereafter	3.0%	1.0%	4.0%

Years of Service	Police Members			Fire Members		
	Base (Economic)	Merit & Longevity	Total	Base (Economic)	Merit & Longevity	Total
1	3.0%	20.0%	23.0%	3.0%	17.0%	20.0%
2	3.0%	15.0%	18.0%	3.0%	12.0%	15.0%
3	3.0%	7.0%	10.0%	3.0%	12.0%	15.0%
thereafter	3.0%	1.0%	4.0%	3.0%	1.0%	4.0%



June 24, 2024

Retirement Board  
City of Farmington Hills Employees' Retirement System  
and Retiree Health Plan  
31555 Eleven Mile Road  
Farmington Hills, Michigan 48336

Dear Board Members:

Enclosed is one copy of the experience study report.

We look forward to meeting with the Board to discuss the results of our review.

Sincerely,  
Gabriel, Roeder, Smith & Company

A handwritten signature in black ink that reads "James D. Anderson". The signature is written in a cursive, flowing style.

James D. Anderson, FSA, EA, FCA, MAAA

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

Stephanie Sullivan, ASA, MAAA

JDA/SS:sc  
Enclosure