BOARD OF TRUSTEES MEETING

UNIFORM & NON-UNIFORM PENSION PLANS

The meeting will be held in the

CITY OF OVERLAND COUNCIL CHAMBERS

9119 LACKLAND ROAD, OVERLAND, MO 63114

THURSDAY, OCTOBER 26, 2023, at 1:30 p.m.

TENTATIVE AGENDA

1:30 p.m. – Joint Boards of Trustees

1. Call to Order

2. Roll Call

3. Approval of Minutes
   - Joint Board of Trustees Meeting – August 3, 2023

4. Staff Report: Fiduciary Insurance

5. Approval of Bills

6. Staff Report
   - Police Pension – Retirement Application

7. Actuary Report

8. Legal Counsel Report

9. Financial Advisor Report

10. Discussion
    - Next Joint Boards of Trustees Meeting Date

11. Adjournment

CITY OF OVERLAND
JOINT PENSION BOARD MEETING MINUTES
CITY COUNCIL CHAMBERS
August 3, 2023, at 1:30 p.m.

Mayor Marty Little called the meeting to order at 1:30 p.m.

ROLL CALL

Scott Pope	Ken Crowder	Sgt. Justin Lydon
Julie Drew	Mayor Marty Little	Lt. Joe Carollo
Mark Giroux	Stephen Boyce	Chief Andy Mackey

APPROVAL OF MINUTES

Joint Boards of Trustees Quarterly Meeting – May 4, 2023

Mr. Ken Crowder made a motion to approve the minutes of the May 4, 2023, Joint Boards of Trustees Quarterly Meeting. Mr. Mark Giroux seconded. The vote was recorded as follows: Pope – "yes," Drew – "yes," Giroux – "yes," Crowder – "yes," Little – "yes," Boyce – "yes," Sgt. Lydon – "yes," Lt. Carollo – "yes," and Chief Mackey – "yes." Motion carried.

APPROVAL OF BILLS

Non-Uniform Bills

Mr. Giroux made a motion to approve the payment of bills in the amount of $8,031.03. Mrs. Julie Drew seconded. The vote was recorded as follows: Pope – "yes," Drew – "yes," Giroux – "yes," Crowder – "yes," and Mayor Little – "yes." Motion carried.

Police Bills

Mr. Crowder made a motion to approve the payment of bills in the amount of $9,315.36. Lt. Carollo seconded. The vote was recorded as follows: Giroux – "yes," Crowder – "yes," Mayor Little – "yes," Boyce – "yes," Sgt. Lydon – "yes," Lt. Carollo – "yes," and Chief Mackey – "yes." Motion carried.

STAFF REPORT

- **Non-Uniform Plan Addition: "Small Benefit Provision" –** Allows for the distribution of employee contributions of less than $1,000 to former employees after 90 day notice.

  Mrs. Drew made a motion to recommend approval of the amendment to the Non-Uniform Pension Plan. Mr. Giroux seconded. The vote was recorded as follows: Pope – "yes," Drew – "yes," Giroux – "yes," Crowder – "yes," and Mayor Little – "yes." Motion carried.

- **Police Plan Amendments –**
  - **Add "Small Benefit Provision" –** Allows for the distribution of employee contributions of less than $1,000 to former employees after 90 day notice.

    Lt. Carollo made a motion to recommend approval of the amendment to the Police Pension Plan by the addition of the "Small Benefit Provision." Chief Mackey seconded. The vote was recorded as follows: Giroux – "yes," Crowder – "yes," Mayor Little – "yes," Boyce – "yes," Sgt. Lydon – "yes," Lt. Carollo – "yes," and Chief Mackey – "yes." Motion carried.

- **Eliminate Section 200.430 "Early Retirement" and All Associated Cross References** – Section 200.430 allows early retirement when three conditions were met: a covered employee attained 60 years of age, completed at least 15 years of credited service, and who leaves service involuntarily due to force reduction.

  Discussion took place regarding retirement options remaining in the plan, including "Normal Retirement" for an employee who attains 62 years of age with 18 years of credited service, and "Deferred Retirement" available for someone who leaves employment after 15 years of credited service and chooses to leave his/her employee contributions in the plan upon separation. For an individual electing a "Deferred Retirement," he/she would be eligible to collect a monthly benefit beginning the 1st of the month following his/her 60th birthday.

  Lt. Carollo made a motion to recommend approval of the amendment to the Police Pension Plan by the elimination of Section 200.430 "Early Retirement" and all associated cross references. Chief Mackey seconded. The vote was recorded as follows: Giroux – "yes," Crowder – "yes," Mayor Little – "yes," Boyce – "yes," Sgt. Lydon – "yes," Lt. Carollo – "yes," and Chief Mackey – "yes." Motion carried.

LEGAL COUNSEL REPORT

Heather Mehta, Greensfelder, indicated there is no new legislation impacting the plans at this time.

FINANCIAL ADVISOR REPORT

Alex Nixon, ACG, provided a review of the second quarter investment returns. Second quarter, Non-Uniform plan had an investment return of 3.75 percent, while the Police plan had a return of 4.12 percent. The five-year return for Non-Uniform was 5.60 percent and for Police was 6.00 percent, which is below the target long term return rate of 6.75 percent.

Mr. Nixon indicated one of the investment strategies is under review due to lower ranking among peer strategies.

DISCUSSION

Next Joint Quarterly Meeting is scheduled for Thursday, November 2, 2023, at 1:30 p.m.

ADJOURNMENT

There being no further business to discuss, Mr. Giroux made a motion to adjourn. Chief Mackey seconded. The vote was recorded as follows: Pope – "yes," Drew – "yes," Giroux – "yes," Crowder – "yes," Little – "yes," Boyce – "yes," Sgt. Lydon – "yes," Lt. Carollo – "yes," and Chief Mackey – "yes." Motion carried.

October 2023 Bills

Bill Date	Payee	Description	Amount
7/24/2023	IR+M	Investment Management Fee through 6/30/2023	$ 1,878.12
8/9/2023	Greensfelder	Legal services through 07/31/2023	$ 136.50
9/21/2023	Milliman	April 1, 2023 Valuation Report	$ 8,500.00
10/2/2023	ACG	Investment Consulting Services through 9/30/2023	$ 6,250.00
		Total Non-Uniform Pension Bills Due	**$ 16,764.62**

INCOME RESEARCH + MANAGEMENT

City of Overland

Melissa Burton
City Clerk
City of Overland
9119 Lackland Road
Overland, MO 63114

Billing Period:	04/01/2023 - 06/30/2023
Invoice Date:	7/24/2023
Invoice Number:	48750
EIN:	04 2955404
Account:	City of Overland

INVESTMENT MANAGEMENT FEE FOR THE PERIOD ENDED 06/30/2023

MARKET VALUES

Portfolio	Date	
City of Overland Non-Uniformed Pension Fund	June 30, 2023	$1,926,277.90
	Total	***$4,109,693.59***

Market value represents the average daily market value for the quarter

FEE CALCULATION

Tier	Assets	Annual Rate	Quarter Rate	Quarter Fee
First	4,109,693.59	0.3900%	0.0975%	$4,006.95
Total	**4,109,693.59**	**0.3900%**	**0.0975%**	**$4,006.95**

Investment management fee for the period ended June 30, 2023 **$1,878.12**

WIRE INSTRUCTIONS

Bank Name:	Bank of America
Bank Address:	100 Federal Street, FL3, Boston, MA 02110
Bank Account Number:	0000-6033-4521
ABA Number:	026009593
ACH Number:	011000138
Account Name:	Income Research & Mgmt
Reference Information:	Please list invoice #48750

PAYMENT INSTRUCTIONS

For standard mail please remit checks to:
Income Research + Management
PO Box 418868
Boston, MA 02241-8830

For UPS/FedEx please remit to:
Bank of America Lockbox Services
Lockbox Number 418868 / MA5-527-07
2 Morrissey Blvd., Dorchester, MA 02125

GREENSFELDER
ATTORNEYS AT LAW

Greensfelder, Hemker & Gale, PC
10 South Broadway
Suite 2000
St. Louis, MO 63102
T 314-241-9090
F 314-241-8624

FEIN 43-1313567

CONFIDENTIAL

City of Overland
Melissa J. Burton
City Clerk
9119 Lackland Road
Overland, MO 63114

August 9, 2023

20553
Invoice No. 762992

For legal services rendered through July 31, 2023

20553.031 **Non-Uniform Pension**

07/03/23	H. Mehta	Draft amendment to add small benefits cash-out provision.	0.3	136.50
		Total Hours:	0.3	

TOTAL LEGAL FEES **136.50**

Milliman

September 21, 2023

12790 Merit Drive
Suite 800
Dallas, TX 75251 USA

Tel +1 (214) 863-5500
Fax +1 (214) 863-5501

milliman.com

Melissa Burton
City of Overland
9119 Lackland Road
Overland, MO 63114

Invoice No. **52OVN01092311**

INVOICE

Services for August 1, 2023 through August 31, 2023

Professional services performed in connection with the City of Overland

Actuarial Services

Completion of April 1, 2023 Valuation	$ 8,500.00
TOTAL AMOUNT DUE	**$ 8,500.00**

Remittance Instructions (if amount due)

Physical Address:
Milliman
PO Box 75553
Chicago, IL 60675-5553

Electronic Payment Info:
Wells Fargo Bank
420 Montgomery St.
San Francisco, CA 94104
ABA: 121000248 Acct: 4121331599
email: AR@milliman.com

To alleviate any delivery delays or processing disruptions, we encourage all clients to consider making payments electronically.

If this invoice pertains to an ERISA employee benefit plan, certain reasonable expenses are permitted to be paid from the trust to administer the plan if its terms authorize the payment of such expenses. The plan administrator is the fiduciary with the responsibility to decide which expenses may be paid by the plan and should rely on legal counsel for advice with respect to this issue. The allocation of fees above, if categorized as payable or not payable from the plan, is based on our understanding of Department of Labor guidelines and should not be construed as our acting in a fiduciary or legal capacity.

ACG | ASSET CONSULTING GROUP

231 South Bemiston Avenue
14th Floor
Saint Louis, Missouri 63105
Ph 314.862.4848
Fax 314.862.5967
www.acgnet.com

October 2, 2023

City of Overland Police/Non-Uniformed
Melissa Burton, City Clerk
9119 Lackland Road
Overland, MO 63114

Invoice #: 11681

Based on Annual Fee Amount of $50,000.00

Professional Fees for Investment Consulting for the Period
July 1, 2023 through September 30, 2023.

$12,500.00

Please remit payment within 15 days

Remit Check to:
Asset Consulting Group, LLC
Attention: Accounts Receivable
231 S. Bemiston, 14th Floor
St. Louis, MO 63105
Federal ID #26-0887580

By ACH/Wire:
Asset Consulting Group, LLC
BMO Harris Bank
Acct # 179-051-8
ABA # 071-000-288
Invoice #11681

CITY OF OVERLAND, MISSOURI
NON-UNIFORMED EMPLOYEES' RETIREMENT PLAN

Actuarial Valuation Report
April 1, 2023

Prepared by

Michael A. Sudduth, FSA
Consulting Actuary

R. Ryan Falls, FSA
Consulting Actuary

Milliman, Inc.
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St. Louis, MO 63102 USA
Tel +1 314 231 3031
milliman.com

August 29, 2023

Table of Contents

Introduction and Purpose

In this report, we present the results of the April 1, 2023 actuarial valuation for the City of Overland, Missouri Non-Uniformed Employees' Retirement Plan.

Purposes of the Valuation

The actuarial valuation of the Plan is intended to accomplish several purposes:

(a) In general, the determination of current levels of employer contributions which, together with prior funding, will accumulate monies sufficient to meet benefit payments when due under the terms of the Plan;

(b) provide information required under applicable governmental accounting standards;

(c) review plan experience for the year ended on the valuation date to ascertain whether the assumptions and methods employed for valuation purposes are reflective of actual events and remain appropriate for prospective application; and

(c) assessment of the relative funded position of the plan on an ongoing basis, i.e., through a comparison of plan assets and projected plan liabilities.

Actuarial Certification

As requested, we have performed an actuarial valuation of the City of Overland, Missouri Non-Uniformed Employees' Retirement Plan as of April 1, 2023 for the Plan Year ending March 31, 2024. Our findings are set forth in this actuary's report. This report reflects the benefit provisions in effect on April 1, 2023.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the City's administrative staff and Asset Consulting Group. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the Plan have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Plan. Further, in our opinion, each actuarial assumption used is reasonably related to the experience of the Plan and to reasonable expectations which, in combination, represent our best estimate of anticipated experience under the Plan.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

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 (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The City has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in this report. The valuation results were developed using models intended for valuations that use standard actuarial techniques.

Actuarial computations presented in this report are for purposes of determining the actuarially determined contribution for the Fund. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Fund's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Actuarial Certification

Milliman's work is prepared solely for the internal business use of the City of Overland, Missouri. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

(a) The Plan may provide a copy of Milliman's work, in its entirety, to the Plan's professional service advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the Plan.

(b) The Plan may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the City. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and has been prepared in accordance with generally recognized accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We respectfully submit the following report, and we look forward to discussing it with you.

Michael A. Sudduth, FSA	R. Ryan Falls, FSA
Consulting Actuary	Consulting Actuary

Discussion of Valuation Results

Actuarially Determined Contribution (ADC)

The results of this valuation are used to determine the actuarially determined contribution amount for the Plan for the April 1, 2023 - March 31, 2024 plan year. A comparison of actuarially determined contribution amounts for the current and immediately preceding valuation are summarized below:

	Valuation Date **April 1, 2022**	Valuation Date **April 1, 2023**
Actuarially Determined Employer Contribution	$538,260	$536,089
As a % of eligible compensation	28.1%	29.8%
Actual Employer Contribution	$531,681	N/A

Section 125.080 of the City statutes provide that annual funding by the City should be 2.25 times the amount contributed by employees, or the actuarially determined amount, if greater.

The calculation of the ADC first identifies the Present Value of Future Normal Costs (PVFNC) as the Present Value of Future Benefits in excess of: (i) the Actuarial Value of Assets, and (ii) the Present Value of Future Employee Contributions. Using the Aggregate Cost Method, the PVFNC is then allocated across the future earnings of the current active members. This cost allocation procedure sets a goal of fully funding the entire PVB of the Plan over the remaining working lifetime of the current active members. This procedure will ensure that the Plan accumulate adequate assets to make benefit payments when due.

Plan Assets

The market value of plan assets decreased from $13,730,228 at April 1, 2022 to $12,494,589 at April 1, 2023. A statement of income and disbursements is presented on page 7. Investment income, net of expenses, was $-801,680 for a return of -5.9%. City contributions to the Plan were $531,681, employee contributions were $113,065 and benefit payments were $967,666, plus refunded contributions of $111,039.

On an actuarial value basis, fund assets are $13,382,707 at April 1, 2023, compared to $13,173,984 on April 1, 2022. Under the asset valuation method used, recognized investment income was $642,682 for a return of 5%. During the prior year, investment return was 8.5%. The actuarial asset valuation method is described on page 11.

Actuarial Assumptions, Methods and Plan Provisions

All actuarial assumptions, methods, and Plan provisions remained the same as the prior valuation. Descriptions of these can be found on pages 11-15.

Plan Population

The number of active participants decreased from 39 to 35 on April 1, 2023. The number of retirees/beneficiaries/disableds increased from 63 to 64 and the number of deferred vested participants remained at 1.

Discussion of Valuation Results

Plan Experience

The ADC decreased from $538,260 for the prior valuation to $536,089 for the current valuation. The investment experience increased the ADC by $61,968 and the other experience decreased the ADC by $64,139. The primary cause of the other experience was salary increases being less than assumed, and COLA increases and mortality being greater than assumed.

GASB 67/68

Results under GASB 67 and 68 were presented in a separate report.

Funded Status - Accrued Benefit Basis

Another measure of a plan's funded status is the relationship of the market value of plan assets to the present value of benefits accrued to date. The amounts for the current and prior year are shown in the following table:

	Valuation Date **April 1, 2022**	Valuation Date **April 1, 2023**
a) Present Value of Vested Accrued Benefits	$14,060,321	$14,275,903
b) Present Value of All Accrued Benefits	14,574,973	14,774,341
c) Market Value of Assets	13,730,228	12,494,589
d) Ratio: (c)/(a)	97.7%	87.5%
e) Ratio: (c)/(b)	94.2%	84.6%

The interest discount utilized for this purpose is 6.75%. The discount rate that is required to value plan liabilities on a settlement basis is typically lower than the "ongoing basis" discount rate. Therefore, these amounts should not be used to assess the plan's funded status on a settlement basis.

The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement plan. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

Summary of Valuation Results

	Valuation Date April 1, 2022	Valuation Date April 1, 2023
Participant Data		
Number of Participants		
Active participants	39	35
Terminated vested participants	1	1
Retirees and beneficiaries	63	64
Total	103	100
Annual Compensation		
Under Normal Retirement Age	1,913,262	1,799,561
Over Normal Retirement Age	93,306	118,189
Total	2,006,568	1,917,750
Average Annual Compensation	51,450	54,793
Assets		
Market Value of Assets	13,730,228	12,494,589
Investment Yield	1.7%	-5.9%
Actuarial Value of Assets	13,173,984	13,382,707
Investment Yield	8.5%	5.0%
Actuarial Present Values		
Present Value of Future Benefits	18,370,605	18,400,640
- Present Value of Future Participant Contributions	938,325	864,347
- Actuarial Value of Assets	13,173,984	13,382,707
Present Value of Future Normal Costs	4,258,296	4,153,586
Costs and Contributions		
Normal Cost	504,225	502,191
Actuarially Determined Contribution	538,260	536,089
Actuarially Determined Contribution on a per Hour Worked Basis	6.64	7.36
Funded Status of Accumulated Benefits		
Present Value of Accrued Benefits	14,574,973	14,774,341
Funded Ratio (Market Value Basis)	94.20%	84.57%

Statement of Income and Disbursements

Market Value of Assets as of April 1, 2022	$13,730,228
Income	
Employer Contributions	531,681
Employee Contributions	113,065
Net Earnings	(749,392)
Total Income	(104,646)
Expenses	
Employee Benefit Distributions	967,666
Refund of Employee Contributions	111,039
Administrative Expenses	40,858
Investment Expenses	11,430
Total Expenses	1,130,993
Net Increase (Decrease)	(1,235,639)
Market Value of Assets as of March 31, 2023	$12,494,589
Net Rate of Return	-5.9%

Development of Actuarial Value of Assets

1. Actuarial Value Beginning of Year	$13,173,984
2. Market Value End of Year	12,494,589
3. Market Value Beginning of Year	13,730,228
4. Non-Investment Cash Flows [(1)]	(433,959)
5. Investment Income	
a. Market Total: (2) - (3) - (4)	(801,680)
b. Assumed Rate of Return	6.75%
c. Expected Investement Return [(2)]	912,144
d. Gain/(Loss): (5a) - (5c)	(1,713,824)
6. Phased-In Recognition of Investment Income	
a. Current Year: 80% x (5d)	(1,371,059)
b. 60% of Gain/(Loss) during plan year ending March 31, 2022	(414,252)
c. 40% of Gain/(Loss) during plan year ending March 31, 2021	1,196,083
d. 20% of Gain/(Loss) during plan year ending March 31, 2020	(298,890)
e. Phased-In Investment Gain to be Recognized in Future Years	(888,118)
7. Preliminary Actuarial Value End of Year: (2) - (6e)	13,382,707
8. Actuarial Value End of Year: Minimum of 120% of (2) or (7), not less than 80% of (2)	$13,382,707
9. Excess of Market Value over Actuarial Value: (2) - (8)	(888,118)
10. Approximate Rate of Return on Actuarial Value	5.0%

(1) Contributions (Employer and Employee) and Misc. receipts and Prior Year Adjustment less Benefit Payments & Refunds
(2) Assumed Rate times (3) + (4) times Assumed Rate/2

Statement of Accrued Benefits

	April 1, 2022	April 1, 2023
1. Accumulated Plan Benefits		
a. Actuarial Present Value of Vested Benefits		
i. Participants currently receiving payments	$10,472,928	$10,662,947
ii. Active Participants	3,484,603	3,612,466
iii. Deferred Vested Participants	102,790	490
iv. Total Vested Benefis	14,060,321	14,275,903
b. Actuarial Present Value of Non-Vested Benefits	514,652	498,438
c. Total Actuarial Present Value of Accumulated Plan Benefits: (aiv) + (b)	14,574,973	14,774,341
2. Net Assets (Market Value) available for benefits	13,730,228	12,494,589
3. Funded Ratio		
a. Vested Benefits: (2) / (1aiv)	97.7%	87.5%
b. Accumulated Benefits: (2) / (1c)	94.2%	84.6%

The Actuarial Present Value of Accumulated Plan Benefits is developed using the Unit Credit actuarial cost method which develops an accrued liability based on the benefit accrued as of the valuation date. The benefit accrued for the year is the retirement benefit based on pay and service accrued as of the valuation date.

Development of Actuarially Determined Contribution

	April 1, 2023
1. Present Value of Future Benefits	
a. Active Participants	$7,737,203
b. Terminated Vested Participants	490
c. Retired Participants	10,662,947
d. Total	18,400,640
2. Actuarial Value of Assets	13,382,707
3. Present Value of Future Employee Contributions	864,347
4. Present Value of Future Normal Costs: (1d) - (2) - (3), no less than 0	4,153,586
5. Present Value of Future Earnings	14,884,047
6. Normal Cost Rate: (4) / (5)	27.9063%
7. Eligible Payroll	
a. Under Normal Retirement Age	1,799,561
b. Attained Normal Retirement Age	118,189
c. Total	1,917,750
8. Normal Cost: (6) x (7a)	502,191
9. Normal Cost as of the end of the year: (8) x 1.0675	536,089
10. Minimum City Contribution: 13.50% x (7c)	258,896
11. Actuarially Determined City Contribution: Maximum of (9) and (10)	536,089

Actuarial Methods

Following are brief descriptions of the actuarial cost and asset valuation methods used in the valuation.

Actuarial Cost Method

Aggregate Cost Method:

The normal cost rate as a percentage of covered payroll is equal to (a) divided by (b) where

(a) is the actuarial present value of future benefits on the valuation date, minus the actuarial value of assets on the valuation date, minus the present value of future employee contributions on the valuation date, and

(b) is the present value of future salaries on the valuation date.

The normal annual cost is the product of the normal cost rate times covered payroll on the valuation date.

Actuarial gains or (losses) will decrease (increase) the normal rate and be spread as a constant percent of payroll for the overall group.

Asset Valuation Method

An asset valuation method is used to help smooth short term fluctuations in market value.

The actuarial value of assets is equal to market value of assets minus:

4/5 of the gain/(loss) for the prior year
3/5 of the gain/(loss) for the second prior
2/5 of the gain/(loss) for the third prior
1/5 of the gain/(loss) for the fourth prior

The result is limited within a corridor between 80% and 120% of the market value

This method became effective with the April 1, 2014 valuation.

Actuarial Assumptions

Following are the primary actuarial assumptions used in performing the valuation.

Interest Rates (effective 4/1/2021)
6.75% per annum, net of expenses

Annual Pay Increases (effective 4/1/2014)
3.50% per year

Healthy Mortality (effective 4/1/2022)
Pub-2010 General Headcount-Weighted Mortality Tables, male and female rates, projected generationally using MP-2021

Disabled Mortality (effective 4/1/2021)
Pub-2010 General Headcount-Weighted Disabled Mortality Tables, male and female rates

We have reviewed the Plan's historical experience to develop this assumption and believe it to be reasonable

The Plan is not large enough to develop a credible mortality table bases exclusively on plan experience. We have relied on the above referenced published mortality table in which credible experience was analyzed. We believe the mortality assumption selected is reasonable.

Turnover
Rates at selected ages:

Age	Percentage Terminating in the Next Year
25	15.0%
30	10.5%
35	7.5%
50	2.0%
55	1.0%

We have reviewed the Plan's historical experience to develop this assumption and believe it to be reasonable

Rate of Disability
Rates at selected ages:

Age	Rate
35	0.00%
40	0.15%
45	0.30%
50	0.50%
55	0.75%
60	0.00%

We have reviewed the Plan's historical experience to develop this assumption and believe it to be reasonable

Actuarial Assumptions

Retirement Rates at selected ages for active participants:

Retirement Age	Percentage Terminating in the Next Year
40 - 59	3%
60	50%
61	30%
62	30%
63	30%
64	30%
65 & over	100%

Deferred vested participants are assumed to retire at age 58.

We have reviewed the Plan's historical experience to develop this assumption and believe it to be reasonable

Expenses None assumed.

Marriage For retired members, actual marital status and spouse birth date is used. For active members, 100% are assumed married with males assumed three years older than their spouses.

Increases to 415 Dollar Limit and 401(a)(17) Compensation Limit 3% annually.

Cost-of-Living Adjustmen 1.5% each April 1 to those eligible (60% of a 2.5% CPI assumption)
(effective 4/1/2014)

Summary of Plan Provisions

A summary of the current primary provisions of the Plan are described below. A complete description of the provisions can be found in the local statutes.

Effective Date	May 15, 1968. Most recent restatement adopted January 2011.
Eligibility	Eligible after six months of employment as a regular, full-time employee of the City of Overland, except those covered by the City's Police Retirement Plan.
Credited Service	The number of calendar years of service, where a fractional year of six months or more is rounded up to the next whole year and a fractional year of less than six months is rounded down.
Average Monthly Compensation	Highest 60 consecutive month average over the last 120 months.
Accrued Benefit	2.25% of Average Monthly Salary multiplied by years of Credited Service not to exceed 60% of Average Monthly Salary.
Normal Retirement Age	Earlier of: 1. 25 years of Credited Service 2. Age 58 and 5 years of Credited Service
Normal Retirement Benefit	A benefit equal to the Accrued Benefit. In addition, contributions made before April 1, 2017 will be returned, without interest.
Early Retirement Age	Age 53 and 15 years of Credited Service.
Early Retirement Benefit	Accrued Benefit, reduced by 5/12% per month by which the Early Retirement Age precedes Normal Retirement Age. In addition, contributions made before April 1, 2017 will be returned, without interest.
Disability Retirement	Eligibility occurs when an employee is totally and permanently disabled with 10 years of Credited Service. The benefit is a monthly benefit in the amount of the Accrued Benefit. At Normal Retirement Age, the employee's contributions made before April 1, 2017, without interest, are returned.
Pre-Retirement Death Benefit	A death benefit is payable to any employee whose death occurs prior to retirement, and after attainment of 15 years of Credited Service. The benefit is an annuity payable for life or until remarriage to a surviving spouse, or if no surviving spouse, to unmarried children until age 18 in the amount of 50% of the Accrued Benefit.

Summary of Plan Provisions

Vested Termination

Employees who terminate employment before age 58 with at least 5 years of Credited Service are eligible for a monthly benefit calculated in the same manner as the Normal Retirement Benefit commencing at age 58, multiplied by the applicable vesting percentage:

Full Years of Service	Percentage of Accrued Benefit
Less than 5 years	0%
5 years, but less than 6	25%
6 years, but less than 7	30%
7 years, but less than 8	35%
8 years, but less than 9	40%
9 years, but less than 10	45%
10 years, but less than 11	50%
11 years, but less than 12	60%
12 years, but less than 13	70%
13 years, but less than 14	80%
14 years, but less than 15	90%
15 or more years	100%

Employees who terminate employment are eligible for a return of their contributions, with interest, instead of receiving their Normal Retirement Benefit.

Cost-of-Living Adjustments

Benefits for employees who retire or die on or after November 1, 1992 are subject to cost-of-living adjustments. The annual adjustment is 60% of the CPI for all St. Louis metropolitan area consumers, up to 3%. Benefits are not subject to increase until the May 15 following the calendar year in which attains, or would have attained, age 62.

Employee Contributions

Employees are required to contribute 6% of salary.

Employer Contributions

Employer contributions equal the greater of 2.25 times the amount contributed by employees or the amount necessary to meet the sum of the administrative expenses of the plan and the actuarially determined required contribution.

Distribution of Active Members by Age and by Years of Service

Number of Participants by Age-Service Groups

	Years of Service										
Attained Age	**Under 1**	**1 to 4**	**5 to 9**	**10 to 14**	**15 to 19**	**20 to 24**	**25 to 29**	**30 to 34**	**35 to 39**	**40 and up**	**Total**
Under 25	0	1	0	0	0	0	0	0	0	0	1
25 to 29	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	1	0	2	0	0	0	0	0	0	3
35 to 39	0	0	1	1	2	0	0	0	0	0	4
40 to 44	0	1	1	1	2	0	0	0	0	0	5
45 to 49	0	0	0	1	0	1	1	0	0	0	3
50 to 54	0	1	2	1	1	0	2	0	0	0	7
55 to 59	0	2	4	0	1	0	0	0	0	0	7
60 to 64	0	1	0	1	1	0	0	0	0	0	3
65 to 69	0	0	0	0	0	1	1	0	0	0	2
70 and up	0	0	0	0	0	0	0	0	0	0	0
Total	0	7	8	7	7	2	4	0	0	0	35

Average Age 48.8

Average Service 11.9

Inactive Participants - Summary by Age

Deferred Vested Participants

Age Group	No. of	Total Monthly Benefit Amount	Average Monthly Benefit Amount
Less than 40	1	$0	$0
40 - 44	0	0	0
45 - 49	0	0	0
50 - 54	0	0	0
55 - 59	0	0	0
60 and over	0	0	0
Total	1	0	0

Retired Participants

Age Group	No. of	Total Monthly Benefit Amount	Average Monthly Benefit Amount
Less than 55	1	$2,130	$2,130
55 - 59	4	6,047	1,512
60 - 64	12	18,982	1,582
65 - 69	10	12,827	1,283
70 - 74	16	15,764	985
75 - 79	7	10,173	1,453
80 - 84	7	8,562	1,223
85 - 89	5	5,934	1,187
90 and over	2	691	346
Total	64	81,110	1,267

Summary of Changes in Member Data

	Active Participants	Retired Participants	Terminated Vested Participants	Total
Count as of April 1, 2022	39	63	1	103
New Entrants	5	0	0	5
Rehired	0	0	0	0
Retired	(3)	4	(1)	0
Lump Sum Payouts	(5)	0	0	(5)
Died with Beneficiary	0	(3)	0	(3)
New Beneficiaries	0	3	0	3
Died without Beneficiary	0	(3)	0	(3)
Terminated with Vesting	0	0	0	0
Terminated without Vesting	(1)	0	1	0
Data Corrections	0	0	0	0
Total Changes	(4)	1	0	(3)
Count as of April 1, 2023	35	64	1*	100*

*One participant due return of contributions only

Actuarial Standard of Practice 51 (ASOP 51)

The purpose of this appendix is to identify, assess, and provide illustrations of risks that are significant to the Plan, and in some cases to the Plan's participants.

The results of the actuarial valuation are based on one set of reasonable assumptions. However, it is almost certain that future experience will not exactly match the assumptions. As an example, investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these potential differences when making decisions that may affect the future financial health of the Plan, or of the Plan's participants.

In addition, as plans mature they accumulate larger pools of assets and liabilities. This increases the potential risk to plan funding and the finances of those who are responsible for plan funding. As an example, it is more difficult for a plan sponsor to deal with the effects of a 10% investment loss on a plan with $1 Billion in assets and liabilities than if the same plan sponsor is responsible for a 10% investment loss on a plan with $1 Million in assets and liabilities. Since pension plans make long-term promises and rely on long-term funding, it is important to consider how mature the plan is today, and how mature it may become in the future.

Actuarial Standard of Practice No. 51 (ASOP 51) addresses these issues by providing actuaries with guidance for assessing and disclosing the risk associated with measuring pension liabilities and the determination of pension plan contributions. Specifically, it directs the actuary to:

- Identify risks that may be significant to the plan.
- Assess the risks identified as significant to the plan.
- Disclose plan maturity measures and historical information that are significant to understanding the plan's risks.

ASOP 51 states that if in the actuary's professional judgment, a more detailed assessment would be significantly beneficial in helping the individuals responsible for the plan to understand the risks identified by the actuary, then the actuary should recommend that such an assessment be performed.

This appendix uses the framework of ASOP 51 to communicate important information about: significant risks to the Plan, the Plan's maturity, and relevant historical Plan data.

Maturity Risk

- Definition: This is the potential for total plan liabilities to become more heavily weighted toward inactive liabilities over time.
- Identification: The Plan is subject to maturity risk because as Plan assets and liabilities continue to grow, the impact of any gains or losses on the assets or liabilities also becomes larger.
- Assessment: Currently assets are equal to 19 times last year's contributions indicating a one-year asset loss of 10% would be equal to 1.9 times last year's contributions.
- Definition: The potential that mortality or other demographic experience will be different than expected.

Retirement Risk

- Definition: This is the potential for participants to retire and receive subsidized benefits more valuable than expected.
- Identification: This plan has valuable early retirement benefits. If participants retire at earlier ages than anticipated by the actuarial assumptions, it is expected that additional funding will be required.

Actuarial Standard of Practice 51 (ASOP 51)

Investment Risk

- Definition: The potential that investment returns will be different than expected.
- Identification: To the extent that actual investment returns differ from the assumed investment return, the plan's future assets, funding contributions and funded status may differ significantly from those presented in this valuation.
- Assessment: The plan's target allocation represents a balance of risk and return. Investing in lower-returning asset classes should reduce future investment returns and therefore increase future City contributions, but the lower risk levels would result in lower year-over-year volatility in the Actuarially Determined Contribution (ADC) and might provide more benefit security for plan members. Conversely, investing in higher-returning asset classes should increase future investment returns and therefore reduce future City contributions, but would also increase the volatility of those contributions and potentially reduce benefit security for plan members. If the plan were invested in a low-default-risk portfolio (e.g.,100% in the Bond Buyer GO 20-Bond Municipal Index*), it would impact the interest rate assumption and therefore the Present Value of Accumulated Plan Benefits, Funded Ratio, and ultimately the City's ADC; the volatility of the ADC would also change based on the risk level of the portfolio.

	Bond Buyer Index	Plan's Current
Interest Rate	3.50%	6.75%
Actuarial Present Value of Accumulated Plan Benefits on April 1, 2023	$22.1 million	$14.8 million
Funded Ratio on April 1, 2023	56%	85%

* This would be considered a "low-default-risk obligation measure (LDROM)" using the language of ASOP 4.

** Calculated using the same actuarial assumptions and methods that were used for this valuation, except for the interest rate.

Interest Rate Risk

- Definition: The potential that interest rates will be different than expected.
- Identification: The pension liabilities reported herein have been calculated by computing the present value of expected future benefit payments using the interest rate(s) described in the report. If interest rate(s) in future valuations are different from those used in this valuation, future pension liabilities, funding contributions and funded status may differ significantly from those presented in this valuation. As a general rule, using a higher interest rate to compute the present value of future benefit payments will result in a lower pension liability, and vice versa. One aspect that can be used to estimate the impact of different interest rates is the plan's duration.
- Assessment: If the interest rate changes by 1%, the estimated percentage change in pension liability is approximately 12%.

Demographic Risks

- Definition: The potential that mortality or other demographic experience will be different than expected.
- Identification: The pension liabilities reported herein have been calculated by assuming that participants will follow patterns of demographic experience (e.g. mortality, withdrawal, disability, retirement, form of payment election, etc.) as described in The appendix. If actual demographic experience or future demographic assumptions are different from what is assumed to occur in this valuation, future pension liabilities, funding contributions and funded status may differ significantly from those presented in this valuation.

October 2023 Bills

Bill Date	Payee	Description	Amount
7/24/2023	IR+M	Investment Management Fee through 6/30/2023	$ 2,128.83
8/9/2023	Greensfelder	Legal services through 07/31/2023	$ 364.00
8/28/2023	Milliman	April 1, 2023 Valuation Report	$ 8,000.00
8/28/2023	Milliman	Funding Study	$ 7,500.00
9/11/2023	Greensfelder	Legal services through 08/31/2023	$ 1,456.00
10/2/2023	ACG	Investment Consulting through 9/30/2023	$ 6,250.00
		Total Police Pension Bills Due	**$ 25,698.83**

INCOME RESEARCH + MANAGEMENT

City of Overland

Melissa Burton
City Clerk
City of Overland
9119 Lackland Road
Overland, MO 63114

Billing Period:	04/01/2023 - 06/30/2023
Invoice Date:	7/24/2023
Invoice Number:	48755
EIN:	04 2955404
Account:	City of Overland

INVESTMENT MANAGEMENT FEE FOR THE PERIOD ENDED 06/30/2023

MARKET VALUES

Portfolio	Date		
Retirement Plan for the Police Department of the City of Overland	June 30, 2023	$2,183,415.69	
		Total	$4,109,693.59

Market value represents the average daily market value for the quarter

FEE CALCULATION

Tier	Assets	Annual Rate	Quarter Rate	Quarter Fee
First	4,109,693.59	0.3900%	0.0975%	$4,006.95
Total	4,109,693.59	0.3900%	0.0975%	$4,006.95

Investment management fee for the period ended June 30, 2023 | $2,128.83

WIRE INSTRUCTIONS

Bank Name:	Bank of America
Bank Address:	100 Federal Street, FL3, Boston, MA 02110
Bank Account Number:	0000-6033-4521
ABA Number:	026009593
ACH Number:	011000138
Account Name:	Income Research & Mgmt
Reference Information:	Please list invoice #48755

PAYMENT INSTRUCTIONS

For standard mail please remit checks to:
Income Research + Management
PO Box 418868
Boston, MA 02241-8830

For UPS/FedEx please remit to:
Bank of America Lockbox Services
Lockbox Number 418868 / MA5-527-07
2 Morrissey Blvd., Dorchester, MA 02125

GREENSFELDER
ATTORNEYS AT LAW

Greensfelder, Hemker & Gale, PC
10 South Broadway
Suite 2000
St. Louis, MO 63102
T 314-241-9090
F 314-241-8624

FEIN 43-1313567

CONFIDENTIAL

City of Overland
Melissa J. Burton
City Clerk
9119 Lackland Road
Overland, MO 63114

August 9, 2023

20553
Invoice No. 762992

For legal services rendered through July 31, 2023

20553.030 Police Pension

07/03/23	H. Mehta	Continue drafting amendment to add small benefits cash-out provision and remove early retirement provision.	0.8	364.00
		Total Hours:	0.8	

TOTAL LEGAL FEES **364.00**

GREENSFELDER
ATTORNEYS AT LAW

Greensfelder, Hemker & Gale, PC
10 South Broadway
Suite 2000
St. Louis, MO 63102
T. 314-241-9090
F. 314-241-8624

FEIN: 43-1313567

CONFIDENTIAL

City of Overland
Melissa J. Burton
City Clerk
9119 Lackland Road
Overland, MO 63114

September 11, 2023

20553
Invoice No. 765078

For legal services rendered through August 31, 2023

20553.030 **Police Pension**

08/11/23	H. Mehta	Review rollover regulations; draft email to M. Burton regarding notice that must be provided to individuals before cashing them out.	0.3	136.50
08/11/23	H. Mehta	Conference with M. Burton and J. McConachie regarding whether benefits could be offset by debt to city.	0.3	136.50
08/17/23	H. Mehta	Research case law regarding whether removal of provision allowing for cost-of-living adjustment would present risk of litigation.	1.0	455.00
08/18/23	H. Mehta	Research whether eliminating cost-of-living adjustment would pose risks; draft email to M. Burton regarding same.	1.1	500.50
08/21/23	H. Mehta	Draft email to M. Burton regarding reducing or eliminating COLAs.	0.3	136.50
08/30/23	H. Mehta	Review email regarding individual who has applied for a refund of contributions indicating a different marital status than other records and draft recommended language to include in a response to him.	0.2	91.00
		Total Hours:	3.2	

TOTAL LEGAL FEES		1,456.00
TOTAL THIS STATEMENT	$	1,456.00
PRIOR OUTSTANDING BALANCE	$	2,093.00
BALANCE DUE	$	3,549.00

GREENSFELDER
ATTORNEYS AT LAW

City of Overland
Melissa J. Burton
City Clerk
9119 Lackland Road
Overland, MO 63114

Client Number: 20553
PAYMENT DUE BY 09/26/23
September 11, 2023
Invoice Number: 765078

Total Due: 1,456.00

Amount Paid: $ ____________________

RETURN THIS PAGE WITH YOUR REMITTANCE OR VISIT https://www.greensfelder.com/payments.html TO PAY ELECTRONICALLY

Remit To: GREENSFELDER, HEMKER & GALE, PC
PO BOX 875072
KANSAS CITY, MO 64187-5094

Fee charges and expenses which have not been posted to date against your account will appear on a later statement.

Milliman

12790 Merit Drive
Suite 800
Dallas, TX 75251 USA

Tel +1 (214) 863-5500
Fax +1 (214) 863-5501

milliman.com

August 28, 2023

Invoice No. **52OVP01082312**

Melissa Burton
City of Overland
9119 Lackland Road
Overland, MO 63114

INVOICE

Services for July 1, 2023 through July 31, 2023

Professional services performed in connection with the City of Overland

Actuarial Services

Completion of April 1, 2023 Valuation Report $ 8,000.00

Additional Services

Funding Study $ 7,500.00

- Prepare Projections
- Plan Design Strategies
- Attendance at July 18 Meeting
- Total $ 7,500.00

TOTAL AMOUNT DUE **$ 15,500.00**

Remittance Instructions (if amount due)

Physical Address:
Milliman
PO Box 75553
Chicago, IL 60675-5553

Electronic Payment Info:
Wells Fargo Bank
420 Montgomery St.
San Francisco, CA 94104
ABA: 121000248 Acct: 4121331599
email: AR@milliman.com

To alleviate any delivery delays or processing disruptions, we encourage all clients to consider making payments electronically.

If this invoice pertains to an ERISA employee benefit plan, certain reasonable expenses are permitted to be paid from the trust to administer the plan if its terms authorize the payment of such expenses. The plan administrator is the fiduciary with the responsibility to decide which expenses may be paid by the plan and should rely on legal counsel for advice with respect to this issue. The allocation of fees above, if categorized as payable or not payable from the plan, is based on our understanding of Department of Labor guidelines and should not be construed as our acting in a fiduciary or legal capacity.

ACG | ASSET CONSULTING GROUP

231 South Bemiston Avenue
14th Floor
Saint Louis, Missouri 63105
Ph 314.862.4848
Fax 314.862.5967
www.acgnet.com

October 2, 2023

City of Overland Police/Non-Uniformed
Melissa Burton, City Clerk
9119 Lackland Road
Overland, MO 63114

Invoice #: 11681

Based on Annual Fee Amount of $50,000.00

Professional Fees for Investment Consulting for the Period
July 1, 2023 through September 30, 2023.

$12,500.00

Please remit payment within 15 days

Remit Check to:
Asset Consulting Group, LLC
Attention: Accounts Receivable
231 S. Bemiston, 14th Floor
St. Louis, MO 63105
Federal ID #26-0887580

By ACH/Wire:
Asset Consulting Group, LLC
BMO Harris Bank
Acct # 179-051-8
ABA # 071-000-288
Invoice #11681

CITY OF OVERLAND, MISSOURI
POLICE RETIREMENT PLAN

Actuarial Valuation Report
April 1, 2023

Prepared by

Michael A. Sudduth, FSA
Consulting Actuary

R. Ryan Falls, FSA
Consulting Actuary

Milliman, Inc.
500 North Broadway, Suite 1750
St. Louis, MO 63102 USA
Tel +1 314 231 3031
milliman.com

August 25, 2023

Table of Contents

Introduction and Purpose

In this report, we present the results of the April 1, 2023 actuarial valuation for the City of Overland, Missouri Police Retirement Plan.

Purposes of the Valuation

The actuarial valuation of the Plan is intended to accomplish several purposes:

(a) In general, the determination of current levels of employer contributions which, together with prior funding, will accumulate monies sufficient to meet benefit payments when due under the terms of the Plan;

(b) provide information required under applicable governmental accounting standards;

(c) review plan experience for the year ended on the valuation date to ascertain whether the assumptions and methods employed for valuation purposes are reflective of actual events and remain appropriate for prospective application; and

(c) assessment of the relative funded position of the plan on an ongoing basis, i.e., through a comparison of plan assets and projected plan liabilities.

Actuarial Certification

As requested, we have performed an actuarial valuation of the City of Overland, Missouri Police Retirement Plan as of April 1, 2023 for the Plan Year ending March 31, 2024. Our findings are set forth in this actuary's report. This report reflects the benefit provisions in effect on April 1, 2023.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the City's administrative staff and Asset Consulting Group. This information includes, but is not limited to, statutory provisions, employee data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, rates of interest, and other factors for the Plan have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations); and which, in combination, offer our best estimate of anticipated experience affecting the Plan. Further, in our opinion, each actuarial assumption used is reasonably related to the experience of the Plan and to reasonable expectations which, in combination, represent our best estimate of anticipated experience under the Plan.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits, only the timing of Plan contributions. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

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 (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements. The City has the final decision regarding the appropriateness of the assumptions and adopted them as indicated in this report. The valuation results were developed using models intended for valuations that use standard actuarial techniques.

Actuarial computations presented in this report are for purposes of determining the actuarially determined contribution for the Fund. The calculations in the enclosed report have been made on a basis consistent with our understanding of the Fund's funding requirements and goals. Determinations for purposes other than meeting these requirements may be significantly different from the results contained in this report. Accordingly, additional determinations may be needed for other purposes.

Actuarial Certification

Milliman's work is prepared solely for the internal business use of the City of Overland, Missouri. To the extent that Milliman's work is not subject to disclosure under applicable public records laws, Milliman's work may not be provided to third parties without Milliman's prior written consent. Milliman does not intend to benefit or create a legal duty to any third party recipient of its work product. Milliman's consent to release its work product to any third party may be conditioned on the third party signing a Release, subject to the following exceptions:

(a) The Plan may provide a copy of Milliman's work, in its entirety, to the System's professional advisors who are subject to a duty of confidentiality and who agree to not use Milliman's work for any purpose other than to benefit the System.

(b) The Plan may provide a copy of Milliman's work, in its entirety, to other governmental entities, as required by law.

No third party recipient of Milliman's work product should rely upon Milliman's work product. Such recipients should engage qualified professionals for advice appropriate to their specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

The signing actuaries are independent of the City. We are not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and has been prepared in accordance with generally recognized accepted actuarial principles and practices. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

We respectfully submit the following report, and we look forward to discussing it with you.

Michael A. Sudduth, FSA	R. Ryan Falls, FSA
Consulting Actuary	Consulting Actuary

Discussion of Valuation Results

Actuarially Determined Contribution (ADC)

The results of this valuation are used to determine the actuarially determined contribution amount for the Plan for the April 1, 2023 - March 31, 2024 plan year. A comparison of actuarially determined contribution amounts for the current and immediately preceding valuation are summarized below:

	Valuation Date **April 1, 2022**	Valuation Date **April 1, 2023**
Actuarially Determined Employer Contribution	$1,444,401	$1,445,974
Actuarially Determined Tax Rate (per $100 of assessed valuation)		
Using 2022 Assessment Roll	$0.512	$0.513
Using 2023 Preliminary Assessment Roll	N/A	$0.394
Actuarially Determined Employer Contribution per hour worked	$16.15	$17.83

The current tax rates are 24 cents for residential real estate, and 36 cents for personal property and commercial real estate. These were recently increased from 12 cents, but are still below the actuarially determined rate.

The calculation of the ADC first identifies the Present Value of Future Normal Costs (PVFNC) as the Present Value of Future Benefits in excess of: (i) the Actuarial Value of Assets, and (ii) the Present Value of Future Employee Contributions. Using the Aggregate Cost Method, the PVFNC is then allocated across the future earnings of the current active members. This cost allocation procedure sets a goal of fully funding the entire PVB of the Plan over the remaining working lifetime of the current active members. This procedure will ensure that the Plan accumulate adequate assets to make benefit payments when due.

Plan Assets

The market value of plan assets decreased from $15,176,281 at April 1, 2022 to $13,357,004 at April 1, 2023. A statement of income and disbursements is presented on page 7. Investment income, net of expenses, was $-1,227,979 for a return of -8.3%. City contributions (taxes) to the Plan were $798,213, employee contributions were $258,228 and benefit payments were $1,540,278, plus refunded contributions of $107,461.

On an actuarial value basis, Plan assets are $14,479,416 at April 1, 2023, compared to $14,380,146 on April 1, 2022. Under the asset valuation method used, recognized investment income was $690,568 for return of 4.9%. During the prior year, investment return was 9.1%. The actuarial asset valuation method is described on page 11.

Actuarial Assumptions, Methods and Plan Provisions

All other actuarial assumptions, methods, and Plan provisions remained the same as the prior valuation. Descriptions of these can be found on pages 11-16.

Discussion of Valuation Results

Plan Population

The number of active participants decreased from 43 to 39 on April 1, 2023. The number of retirees/beneficiaries/disableds decreased from 43 to 42, and the number of deferred vested participants increased from 1 to 2.

Plan Experience

The ADC increased from $1,444,401 for the prior valuation to $1,445,974 for the current valuation. The investment experience increased the ADC by $27,074 and the other experience decreased the ADC by $25,501. The primary cause of the other experience was salary increases being less than assumed, and COLA increases and mortality being greater than assumed.

The Actuarially Determined Tax rate, determined per $100 of Assessed Valuation, increased from $0.512 to $0.513.

GASB 67/68

Results under GASB 67 and 68 are presented in a separate report.

Funded Status - Accrued Benefit Basis

Another measure of a plan's funded status is the relationship of the market value of plan assets to the present value of benefits accrued to date. The amounts for the current and prior year are shown in the following table:

	Valuation Date **April 1, 2022**	Valuation Date **April 1, 2023**
a) Present Value of Vested Accrued Benefits	$20,685,522	$21,354,390
b) Present Value of All Accrued Benefits	22,874,791	23,440,808
c) Market Value of Assets	15,176,281	13,357,004
d) Ratio: (c)/(a)	73.4%	62.5%
e) Ratio: (c)/(b)	66.3%	57.0%

The interest discount utilized for this purpose is 6.75%. The discount rate that is required to value plan liabilities on a settlement basis is typically lower than the "ongoing basis" discount rate. Therefore, these amounts should not be used to assess the plan's funded status on a settlement basis.

The funded status is one of many metrics used to show trends and develop future expectations about the health of a retirement plan. The funded status measure itself is not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations or assessing the need for or the amount of future contributions since it does not reflect normal cost contributions, the timing of amortization payments, or future experience other than expected.

Summary of Valuation Results

	Valuation Date April 1, 2022	Valuation Date April 1, 2023
Participant Data		
Number of Participants		
Active participants	43	39
Terminated vested participants	1	2
Retirees and beneficiaries	43	42
Total	87	83
Annual Compensation		
Under Normal Retirement Age	$2,938,957	$2,732,711
Over Normal Retirement Age	0	0
Total	2,938,957	2,732,711
Average Annual Compensation	68,348	70,070
Assets		
Market Value of Assets	15,176,281	13,357,004
Investment Yield	2.6%	-8.3%
Actuarial Value of Assets	14,380,146	14,479,416
Investment Yield	9.1%	4.9%
Actuarial Present Values		
Present Value of Future Benefits	30,954,190	30,916,845
- Present Value of Future Participant Contributions	2,257,323	2,526,992
- Actuarial Value of Assets	14,380,146	14,479,416
Present Value of Future Normal Costs	14,316,721	13,910,437
Costs and Contributions		
Normal Cost	1,353,069	1,354,542
Actuarially Determined Contribution	1,444,401	1,445,974
Assessed Valuation provided by the City	282,108,502	367,243,314
Actuarially Determined Tax Rate (per $100)	0.512	0.394
Funded Status of Accumulated Benefits		
Present Value of Accrued Benefits	22,874,791	23,440,808
Funded Ratio (Market Value Basis)	66.35%	56.98%

Statement of Income and Disbursements

Market Value of Assets as of April 1, 2022	$15,176,281
Income	
Employer Contributions (Taxes)	798,213
Employee Contributions	258,228
Net Earnings	(1,161,717)
Total Income	(105,276)
Expenses	
Employee Benefit Distributions	1,540,278
Refund of Employee Contributions	107,461
Administrative Expenses	59,784
Investment Expenses	6,478
Total Expenses	1,714,001
Net Increase (Decrease)	(1,819,277)
Market Value of Assets as of April 1, 2023	$13,357,004
Net Rate of Return	-8.3%

Development of Actuarial Value of Assets

1. Actuarial Value Beginning of Year	$14,380,146
2. Market Value End of Year	13,357,004
3. Market Value Beginning of Year	15,176,281
4. Non-Investment Cash Flows [(1)]	(591,298)
5. Investment Income	
a. Market Total: (2) - (3) - (4)	(1,227,979)
b. Assumed Rate of Return	6.75%
c. Expected Investement Return [(2)]	1,004,443
d. Gain/(Loss): (5a) - (5c)	(2,232,422)
6. Phased-In Recognition of Investment Income	
a. Current Year: 80% x (5d)	(1,785,938)
b. 60% of Gain/(Loss) during plan year ending March 31, 2022	(378,899)
c. 40% of Gain/(Loss) during plan year ending March 31, 2021	1,372,414
d. 20% of Gain/(Loss) during plan year ending March 31, 2020	(329,989)
e. Phased-In Investment Gain to be Recognized in Future Years	(1,122,412)
7. Preliminary Actuarial Value End of Year: (2) - (6e)	14,479,416
8. Actuarial Value End of Year: Minimum of 120% of (2) or (7), not less than 80% of (2)	$14,479,416
9. Excess of Market Value over Actuarial Value: (2) - (8)	(1,122,412)
10. Approximate Rate of Return on Actuarial Value	4.9%

[(1)] Contributions (Employer and Employee) and Misc. receipts and Prior Year Adjustment less Benefit Payments & Refunds
[(2)] Assumed Rate times (3) + (4) times Assumed Rate/2

Statement of Accrued Benefits

	April 1, 2022	April 1, 2023
1. Accumulated Plan Benefits		
a. Actuarial Present Value of Vested Benefits		
i. Participants currently receiving payments	$18,424,799	$18,226,489
ii. Active Participants	2,130,060	2,988,058
iii. Deferred Vested Participants	130,663	139,843
iv. Total Vested Benefis	20,685,522	21,354,390
b. Actuarial Present Value of Non-Vested Benefits	2,189,269	2,086,418
c. Total Actuarial Present Value of Accumulated Plan Benefits: (aiv) + (b)	22,874,791	23,440,808
2. Net Assets (Market Value) available for benefits	15,176,281	13,357,004
3. Funded Ratio		
a. Vested Benefits: (2) / (1aiv)	73.4%	62.5%
b. Accumulated Benefits: (2) / (1c)	66.3%	57.0%

The Actuarial Present Value of Accumulated Plan Benefits is developed using the Unit Credit actuarial cost method which develops an accrued liability based on the benefit accrued as of the valuation date. The benefit accrued for the year is the retirement benefit based on pay and service accrued as of the valuation date.

Development of Actuarially Determined Contribution

	April 1, 2023
1. Present Value of Future Benefits	
a. Active Participants	$12,550,513
b. Terminated Participants	139,843
c. Retired Participants	18,226,489
d. Total	30,916,845
2. Actuarial Value of Assets	14,479,416
3. Present Value of Future Employee Contributions	2,526,992
4. Present Value of Future Normal Costs: (1d) - (2) - (3), no less than 0	13,910,437
5. Present Value of Future Earnings	28,063,521
6. Normal Cost Rate: (4) / (5)	49.5677%
7. Eligible Payroll	
a. Under Normal Retirement Age	2,732,711
b. Attained Normal Retirement Age	0
c. Total	2,732,711
8. Normal Cost: (6) x (7a)	1,354,542
9. Normal Cost as of the end of the year: (8) x 1.0675	1,445,974
10. Assessed Valuation provided by the City	
a. 2023 Preliminary Assessment Roll	367,243,314
b. 2022 Assessment Roll	282,108,502
11. Actuarially Determined Tax rate per $100 of Assessed Valuation	
a. Using 2023 Preliminary Assessment Roll	0.394
b. Using 2022 Assessment Roll	0.513

Actuarial Methods

Following are brief descriptions of the actuarial cost and asset valuation methods used in the valuation.

Actuarial Cost Method

Aggregate Cost Method:

The normal cost rate as a percentage of covered payroll is equal to (a) divided by (b) where

(a) is the actuarial present value of future benefits on the valuation date, minus the actuarial value of assets on the valuation date, minus the present value of future employee contributions on the valuation date, and

(b) is the present value of future salaries on the valuation date.

The normal annual cost is the product of the normal cost rate times covered payroll on the valuation date.

Actuarial gains or (losses) will decrease (increase) the normal rate and be spread as a constant percent of payroll for the overall group.

Asset Valuation Method

An asset valuation method is used to help smooth short term fluctuations in market value.

The actuarial value of assets is equal to market value of assets minus:

4/5 of the gain/(loss) for the prior year
3/5 of the gain/(loss) for the second prior
2/5 of the gain/(loss) for the third prior
1/5 of the gain/(loss) for the fourth prior

The result is limited within a corridor between 80% and 120% of the market value

This method became effective with the April 1, 2014 valuation.

Actuarial Assumptions

Following are the primary actuarial assumptions used in performing the valuation.

Interest Rates
(effective 4/1/2021)
6.75% per annum, net of expenses

Annual Pay Increases
(effective 4/1/2014)
3.50% per year

Healthy Mortality
(effective 4/1/2022)
Pub-2010 Safety Headcount-Weighted Mortality Tables, male and female rates (.075% per year is assumed to be service related), projected generationally using Scale MP-2021

Disabled Mortality
(effective 4/1/2020)
Pub-2010 Safety Disabled Annuitant Headcount-Weighted Mortality Table, male and female rates

The Plan is not large enough to develop a credible mortality table bases exclusively on plan experience. We have relied on the above referenced published mortality table in which credible experience was analyzed. We believe the mortality assumption selected is reasonable.

Turnover
Rates at selected ages:

Age	Percentage Terminating in the Next Year
25	8.0%
30	5.5%
35	3.5%
40	1.4%
45	0.0%

We have reviewed the Plan's historical experience to develop this assumption and believe it to be reasonable

Rate of Disability
Rates at selected ages:

Age	Service Connected	Non-Service Connected
25	0.250%	0.000%
30	0.250%	0.150%
35	0.250%	0.225%
40	0.250%	0.300%
45	0.325%	0.425%
50	0.400%	0.550%
55	0.500%	1.000%
60	0.600%	1.500%
65	0.000%	0.000%

We have reviewed the Plan's historical experience to develop this assumption and believe it to be reasonable

Actuarial Assumptions

Retirement

25% in the year the participant is first eligible to retire under (a), if before (b), 1% per year between (a) and (b), and 100% upon eligibility for (b), where (a) and (b) are:

(a) Completion of 20 years of Credited Service (or 25 years of Credited Service date of participation is on or after December 1, 2022)
(b) The earliest of:
1. Attainment of age 55 and 30 years of Credited Service
2. Attainment of age 60 and 20 years of Credited Service
3. Attainment of age 62 and 18 years of Credited Service
4. Attainment of age 65 and 5 years of Credited Service

We have reviewed the Plan's historical experience to develop this assumption and believe it to be reasonable

Expenses

None assumed.

Marriage

For retired members, actual marital status and spouse birth date is used. For active members, 100% are assumed married with males assumed three years older than their spouses.

Increases to 415 Dollar Limit and 401(a)(17) Compensation Limit

3% annually.

Cost-of-Living Adjustment (effective 4/1/2014)

1.5% each April 1 to those eligible (60% of a 2.5% CPI assumption)

Summary of Plan Provisions

A summary of the current primary provisions of the Plan are described below. A complete description of the provisions can be found in the local statutes.

Effective Date

May 3, 1956. Most recent restatement adopted June 2023.

Eligibility

Immediately upon employment as a full-time, permanent, regular Police Officer with the City of Overland.

Credited Service

The number of calendar months of service, divided by twelve.

Average Monthly Salary

Greater of the average of the last 5 consecutive years and the last 10 consecutive years.

Accrued Benefit

<u>Participated in the Plan Before December 1, 2022</u>: 2.5% of Average Monthly Salary multiplied by the lesser of Credited Service and 20 years, plus 1.5% of Average Monthly Salary multiplied by the lesser of Credited Service in excess of 20 years and 10 years.

<u>Participated in the Plan on or After December 1, 2022</u>: 2.5% of Average Monthly Salary multiplied by the lesser of Credited Service and 20 years, plus 1.5% of Average Monthly Salary multiplied by the lesser of Credited Service in excess of 20 years, with a maximum 60% of Average Monthly Salary.

Normal Retirement Age

Earlier of:

1. <u>Participated in the Plan Before December 1, 2022</u>: 20 years of Credited Service
   <u>Participated in the Plan on or After December 1, 2022</u>: 25 years of Credited Service
2. 62 and 18 years of Credited Service
3. Full retirement as defined by the Social Security Administration and 5 years of Credited Service

Normal Retirement

A benefit equal to the Accrued Benefit.

Employees will also receive a return of contributions made through March 31, 2017 without interest.

Normal Form of Payment

Life annuity, with a post-retirement death benefit which is the same as the Service-Connected Death Benefit.

Service-Connected Disability Retirement

Eligibility occurs when an employee is totally and permanently disabled by injury sustained or incurred in the line of his/her duty, which shall require his/her retirement from the Police Department.

The benefit is a monthly benefit in the amount of the Accrued Benefit (or $50 per month if greater). Employees will also receive a return of contributions made through March 31, 2017 without interest.

Summary of Plan Provisions

Non-Service-Connected Disability Retirement

Eligibility occurs when an employee is totally and permanently disabled by injury sustained or incurred while not in the line of his/her duty.

The benefit is a lump sum in the amount of the employee's contributions to the Plan, with interest at an annual rate of 3%, compounded.

Service-Connected Pre-Retirement Death Benefit

A death benefit is payable to any employee whose death occurs, prior to retirement and within two years, as a direct result of an injury arising out of and/or received in the course of his/her employment.

The benefit is an annuity payable for life, or until remarriage, to the surviving spouse in the amount of 75% (50% if date of participation is on or after December 1, 2022) of the Accrued Benefit, but not less than $50 per month. In addition, the surviving spouse receives a lump sum in the amount of the employee's contributions made through March 31,2017, without interest.

Non-Service-Connected Pre-Retirement Death Benefit

A death benefit is payable to any employee whose death occurs, prior to retirement, but not as a direct result of an injury arising out of and/or received in the course of his/her employment.

If the death occurs prior to the completion of 20 years of Credited Service, the benefit is a lump sum in the amount of the employee's contributions to the Plan, with interest at an annual rate of 3%, compounded. If the death occurs after the completion of 20 years of Credited Service, the benefit is the same as the Service-Connected Pre-Retirement Death Benefit.

Summary of Plan Provisions

Vested Termination

Employees who terminate employment before age 60 with at least 15 years of Credited Service are eligible for a monthly benefit calculated in the same manner as the Normal Retirement Benefit commencing at age 60, multiplied by the applicable vesting percentage:

Full Years of Service	Percentage of Accrued Benefit
Less than 15 years	0%
15 years, but less than 16	50%
16 years, but less than 17	60%
17 years, but less than 18	70%
18 years, but less than 19	80%
19 years, but less than 20	90%
20 or more years	100%

Employees who terminate employment before completing 15 years of Credited Service are eligible for a return of their contributions, without interest.

Employees who terminate employment involuntarily due to force reduction before eligible for retirement benefits are eligible for a lump sum in the amount of the employee's contributions to the Plan, with interest at an annual rate of 3%, compounded.

Cost-of-Living Adjustments

Benefits for employees who retire or die on or after April 1, 1993 are subject to cost-of-living adjustments. The annual adjustment is 60% of the CPI for all St. Louis metropolitan area consumers, up to 3%. Benefits are not subject to increase until the April 1 following the calendar year in which they attain, or would have attained, age 60 (62 if date of participation is on or after December 1, 2022). For participants in the plan prior to April 1, 2017, the initial adjustment shall be the cumulative total of the adjustments which would have been made without the age 60 requirement.

Employee Contributions

Employees are required to contribute 7.5% of salary. Effective December 7, 2018, employees are required to contribute 9.4% of salary if the employee is ranked Sergeant or below. Effective November 20, 2020, employees are required to contribute 8.5% of salary if the employee is ranked Lieutenant or

Employer Contributions

Employer contributions come from the proceeds of a property tax established each year by the City Council, gifts, grants, bequest, 20% of rewards received by employees, and earnings from fireworks displays.

Distribution of Active Members by Age and by Years of Service
Number of Participants by Age-Service Groups

	Years of Service										
Attained Age	**Under 1**	**1 to 4**	**5 to 9**	**10 to 14**	**15 to 19**	**20 to 24**	**25 to 29**	**30 to 34**	**35 to 39**	**40 and up**	**Total**
Under 25	0	2	0	0	0	0	0	0	0	0	2
25 to 29	2	4	1	0	0	0	0	0	0	0	7
30 to 34	0	5	1	1	0	0	0	0	0	0	7
35 to 39	0	0	1	4	3	0	0	0	0	0	8
40 to 44	1	1	1	2	1	2	0	0	0	0	8
45 to 49	0	0	1	2	3	0	0	0	0	0	6
50 to 54	0	0	0	0	0	0	1	0	0	0	1
55 to 59	0	0	0	0	0	0	0	0	0	0	0
60 to 64	0	0	0	0	0	0	0	0	0	0	0
65 to 69	0	0	0	0	0	0	0	0	0	0	0
70 and up	0	0	0	0	0	0	0	0	0	0	0
Total	3	12	5	9	7	2	1	0	0	0	39

Average Age 37.3

Average Service 9.8

Inactive Participants - Summary by Age

Deferred Vested Participants

Age Group	No. of	Total Monthly Benefit Amount	Average Monthly Benefit Amount
Less than 40	0	N/A	N/A
40 - 44	0	0	0
45 - 49	1	1,958	1,958
50 - 54	0	0	0
55 - 59	0	0	0
60 and over	0	0	0
Total	1	1,958	1,958

Retired Participants

Age Group	No. of	Total Monthly Benefit Amount	Average Monthly Benefit Amount
Less than 55	7	$20,583	$2,940
55 - 59	3	8,758	2,919
60 - 64	2	4,830	2,415
65 - 69	8	26,474	3,309
70 - 74	11	35,870	3,261
75 - 79	7	21,496	3,071
80 - 84	3	10,550	3,517
85 - 89	0	0	0
90 and over	1	520	520
Total	42	129,081	3,073

Summary of Changes in Member Data

	Active Participants	Retired Participants	Terminated Vested Participants	Total
Count as of April 1, 2022	43	43	1	87
New Entrants	3	0	0	3
Rehired	0	0	0	0
Retired	0	0	0	0
Lump Sum Payouts	(7)	0	0	(7)
Died with Beneficiary	0	(1)	0	(1)
New Beneficiaries	0	0	0	0
Died without Beneficiary	0	0	0	0
Terminated with Vesting	0	0	0	0
Terminated without Vesting	0	0	1	1
Data Corrections	0	0	0	0
Total Changes	(4)	(1)	1	(4)
Count as of April 1, 2023	39	42	2*	83

*One participant only due a return of contributions.

Actuarial Standard of Practice 51 (ASOP 51)

The purpose of this appendix is to identify, assess, and provide illustrations of risks that are significant to the Plan, and in some cases to the Plan's participants.

The results of the actuarial valuation are based on one set of reasonable assumptions. However, it is almost certain that future experience will not exactly match the assumptions. As an example, investments may perform better or worse than assumed in any single year and over any longer time horizon. It is therefore important to consider the potential impacts of these potential differences when making decisions that may affect the future financial health of the Plan, or of the Plan's participants.

In addition, as plans mature they accumulate larger pools of assets and liabilities. This increases the potential risk to plan funding and the finances of those who are responsible for plan funding. As an example, it is more difficult for a plan sponsor to deal with the effects of a 10% investment loss on a plan with $1 Billion in assets and liabilities than if the same plan sponsor is responsible for a 10% investment loss on a plan with $1 Million in assets and liabilities. Since pension plans make long-term promises and rely on long-term funding, it is important to consider how mature the plan is today, and how mature it may become in the future.

Actuarial Standard of Practice No. 51 (ASOP 51) addresses these issues by providing actuaries with guidance for assessing and disclosing the risk associated with measuring pension liabilities and the determination of pension plan contributions. Specifically, it directs the actuary to:

- Identify risks that may be significant to the plan.
- Assess the risks identified as significant to the plan.
- Disclose plan maturity measures and historical information that are significant to understanding the plan's risks.

ASOP 51 states that if in the actuary's professional judgment, a more detailed assessment would be significantly beneficial in helping the individuals responsible for the plan to understand the risks identified by the actuary, then the actuary should recommend that such an assessment be performed.

This appendix uses the framework of ASOP 51 to communicate important information about: significant risks to the Plan, the Plan's maturity, and relevant historical Plan data.

Maturity Risk

- Definition: This is the potential for total plan liabilities to become more heavily weighted toward inactive liabilities over time.
- Identification: The Plan is subject to maturity risk because as Plan assets and liabilities continue to grow, the impact of any gains or losses on the assets or liabilities also becomes larger.
- Assessment: Currently assets are equal to 13 times last year's contributions indicating a one-year asset loss of 10% would be equal to 1.3 times last year's contributions.

Retirement Risk

- Definition: This is the potential for participants to retire and receive subsidized benefits more valuable than expected.
- Identification: This plan has valuable early retirement benefits. If participants retire at earlier ages than anticipated by the actuarial assumptions, it is expected that additional funding will be required.

Actuarial Standard of Practice 51 (ASOP 51)

Investment Risk

- Definition: The potential that investment returns will be different than expected.
- Identification: To the extent that actual investment returns differ from the assumed investment return, the plan's future assets, funding contributions and funded status may differ significantly from those presented in this valuation.
- Assessment: The plan's target allocation represents a balance of risk and return. Investing in lower-returning asset classes should reduce future investment returns and therefore increase future City contributions, but the lower risk levels would result in lower year-over-year volatility in the Actuarially Determined Contribution (ADC) and might provide more benefit security for plan members. Conversely, investing in higher-returning asset classes should increase future investment returns and therefore reduce future City contributions, but would also increase the volatility of those contributions and potentially reduce benefit security for plan members. If the plan were invested in a low-default-risk portfolio (e.g.,100% in the Bond Buyer GO 20-Bond Municipal Index*), it would impact the interest rate assumption and therefore the Present Value of Accumulated Plan Benefits, Funded Ratio, and ultimately the City's ADC; the volatility of the ADC would also change based on the risk level of the portfolio.

	Bond Buyer Index	Plan's Current Assumption
Interest Rate	3.50%	6.75%
Actuarial Present Value of Accumulated Plan Benefits on	$36.6 million	$23.4 million
Funded Ratio on April 1, 2023	36%	57%

* This would be considered a "low-default-risk obligation measure (LDROM)" using the language of ASOP 4.

** Calculated using the same actuarial assumptions and methods that were used for this valuation, except for the interest rate.

Interest Rate Risk

- Definition: The potential that interest rates will be different than expected.
- Identification: The pension liabilities reported herein have been calculated by computing the present value of expected future benefit payments using the interest rate(s) described in the report. If interest rate(s) in future valuations are different from those used in this valuation, future pension liabilities, funding
- Assessment: If the interest rate changes by 1%, the estimated percentage change in pension liability is approximately 13%.

Demographic Risks

- Definition: The potential that mortality or other demographic experience will be different than expected.
- Identification: The pension liabilities reported herein have been calculated by assuming that participants will follow patterns of demographic experience (e.g. mortality, withdrawal, disability, retirement, form of payment election, etc.) as described in the appendix. If actual demographic experience or future demographic assumptions are different from what is assumed to occur in this valuation, future pension liabilities, funding contributions and funded status may differ significantly from those presented in this