City of Ann Arbor Employees' Retirement System

GASB Statement Nos. 67 and 68 Accounting and Financial Reporting for Pensions

June 30, 2022

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November 11, 2022

Board of Trustees
City of Ann Arbor Employees' Retirement System
Ann Arbor, Michigan

Dear Board Members:

This report provides accounting and financial reporting information that is intended to comply with the Governmental Accounting Standards Board (GASB) Statement Nos. 67 and 68 for the City of Ann Arbor Employees' Retirement System. These calculations have been made on a basis that is consistent with our understanding of these Statements. This valuation updates the report originally delivered August 22, 2022 to incorporate information provided by the City related to Covered Payroll.

GASB Statement No. 67 is the accounting standard that applies to the stand-alone financial reports issued by retirement systems. GASB Statement No. 68 establishes accounting and financial reporting for state and local government employers who provide their employees (including former employees) pension benefits through a trust.

Our calculation of the liability associated with the benefits described in this report was performed for the purpose of providing reporting and disclosure information that satisfies the requirements of GASB Statement Nos. 67 and 68. The Net Pension Liability is not an appropriate measure for measuring the sufficiency of plan assets to cover the estimated cost of settling the employer's benefit obligation. The Net Pension Liability is not an appropriate measure for assessing the need for or amount of future employer contributions. A calculation of the plan's liability for purposes other than satisfying the requirements of GASB Statement Nos. 67 and 68 may produce significantly different results. This report may be provided to parties other than the City of Ann Arbor Employees' Retirement System only in its entirety and only with the permission of the City. GRS is not responsible for unauthorized use of this report.

This report is based upon information, furnished to us by the City, concerning retirement and ancillary benefits, active members, deferred vested members, retirees and beneficiaries, and financial data. This information was checked for internal consistency, but it was not audited.

This report complements the June 30, 2021 actuarial valuation report that was provided to the City and should be considered in conjunction with that report. Please see the actuarial valuation report as of June 30, 2021 for additional discussion of the nature of actuarial calculations and more information related to participant data and benefit provisions.

This report was prepared using our proprietary valuation model and related software which, in our professional judgment, has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

This report was prepared during the recent and still-developing COVID-19 pandemic, which is likely to influence demographic and economic experience, at least in the short term. Results in this report are developed based on available data without adjustment. We will continue to monitor these developments and their impact on the Retirement System. Actual experience will be reflected in each subsequent report, as experience emerges.

To the best of our knowledge, the information contained within this report is accurate and fairly represents the actuarial position of the City of Ann Arbor Employees' Retirement System. All calculations have been made in conformity with generally accepted actuarial principles and practices as well as with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

The signing actuaries are independent of the plan sponsor.

James D. Anderson, Richard C. Koch Jr. and Francois Pieterse are 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

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Auditor's Note – This information is intended to assist in preparation of the financial statements of the City of Ann Arbor Employees' Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

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SECTION A

EXECUTIVE SUMMARY

Executive Summary
as of June 30, 2022

Actuarial Valuation Date	June 30, 2021
Measurement Date of the Net Pension Liability	June 30, 2022
Employer's Fiscal Year Ending Date (Reporting Date)	June 30, 2022

Membership		
Number of[1]		
- Retirees and Beneficiaries		1,121
- Inactive, Nonretired Members		105
- Active Members		707
- Total		1,933
Covered Payroll[2]	$	62,187,947
Net Pension Liability		
Total Pension Liability	$	636,277,321
Plan Fiduciary Net Position		571,174,716
Net Pension Liability	$	65,102,605
Plan Fiduciary Net Position as a Percentage of Total Pension Liability		89.77 %
Net Pension Liability as a Percentage of Covered Payroll		104.69 %
Development of the Single Discount Rate		
Single Discount Rate		6.80 %
Long-Term Expected Rate of Investment Return		6.80 %
Long-Term Municipal Bond Rate [3]		3.69 %
Last year ending June 30 in the 2023 to 2122 projection period for which projected benefit payments are fully funded		2122
Total Pension Expense	$	6,809,030

Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$ 830,591	$ 6,491,442
Changes in assumptions	8,357,315	0
Net difference between projected and actual earnings on pension plan investments	64,573,124	60,737,714
Total	$ 73,761,030	$ 67,229,156

(1) *As of the actuarial valuation date. GRS does not have membership counts as of June 30, 2022. The City of Ann Arbor staff and auditors may decide that providing membership counts as of the valuation date is sufficient. Alternatively, the City may decide to update the membership counts to be as of the Plan's fiscal year end.*

(2) *Covered payroll was provided by the City of Ann Arbor and may or may not meet the GASB Statement Nos. 67 and 68*

(3) *Source: Fixed-income municpal bonds with 20 years to maturity that include only federally tax-exempt municipal bonds as reported in Fidelity Index's "20-Year Municipal GO AA Index" as of June 30, 2022. In describing this index, Fidelity notes that the municipal curves are constructed using option-adjusted analytics of a diverse population of over 10,000 tax exempt securities.*

Discussion

Accounting Standard

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67 establishes standards of financial reporting for separately issued financial reports and specifies the required approach for measuring the pension liability. Similarly, GASB Statement No. 68 establishes standards for state and local government employers (as well as non-employer contributing entities) to account for and disclose the net pension liability, pension expense, and other information associated with providing retirement benefits to their employees (and former employees) on their basic financial statements.

The following discussion provides a summary of the information that is required to be disclosed under these accounting standards. A number of these disclosure items are provided in this report. However, certain information, such as notes regarding accounting policies and investments, is not included in this report and the retirement system and/or plan sponsor will be responsible for preparing and disclosing that information to comply with these accounting standards.

Financial Statements

GASB Statement No. 68 requires state or local governments to recognize the net pension liability and the pension expense on their financial statements. The net pension liability is the difference between the total pension liability and the plan's fiduciary net position. In traditional actuarial terms, this is analogous to the accrued liability less the market value of assets (not the smoothed actuarial value of assets that is often encountered in actuarial valuations performed to determine the employer's contribution requirement).

Paragraph 57 of GASB Statement No. 68 states, "Contributions to the pension plan from the employer subsequent to the measurement date of the collective net pension liability and before the end of the employer's reporting period should be reported as a deferred outflow of resources related to pensions." The information contained in this report does not incorporate any contributions made to the City of Ann Arbor Employees' Retirement System subsequent to the measurement date of June 30, 2022.

The pension expense recognized each fiscal year is equal to the change in the net pension liability from the beginning of the year to the end of the year, adjusted for deferred recognition of the liability and investment experience.

Pension plans that prepare their own, stand-alone financial statements are required to present two financial statements – a statement of fiduciary net position and a statement of changes in fiduciary net position in accordance with GASB Statement No. 67. The *statement of fiduciary net position* presents the assets and liabilities of the pension plan at the end of the pension plan's reporting period. The *statement of changes in fiduciary net position* presents the additions, such as contributions and investment income, and deductions, such as benefit payments and expenses, and net increase or decrease in the fiduciary net position.

Notes to Financial Statements

GASB Statement No. 68 requires the notes of the employer's financial statements to disclose the total pension expense, the pension plan's liabilities and assets, and deferred outflows and inflows of resources related to pensions.

GASB Statement Nos. 67 and 68 require the notes of the financial statements for the employers and pension plans, to include certain additional information. The list of disclosure items should include:

- A description of benefits provided by the plan;
- The type of employees and number of members covered by the pension plan;
- A description of the plan's funding policy, which includes member and employer contribution requirements;
- The pension plan's investment policies;
- The pension plan's fiduciary net position, net pension liability, and the pension plan's fiduciary net position as a percentage of the total pension liability;
- The net pension liability using a discount rate that is 1% higher and 1% lower than used to calculate the total pension liability and net pension liability for financial reporting purposes;
- Significant assumptions and methods used to calculate the total pension liability;
- Inputs to the discount rates; and
- Certain information about mortality assumptions and the dates of experience studies.

Retirement systems that issue stand-alone financial statements are required to disclose additional information in accordance with GASB Statement No. 67. This information includes:

- The composition of the pension plan's Board and the authority under which benefit terms may be amended;
- A description of how fair value is determined;
- Information regarding certain reserves and investments, which include concentrations of investments greater than or equal to 5%, receivables, and insurance contracts excluded from plan assets; and
- Annual money-weighted rate of return.

Required Supplementary Information

GASB Statement No. 67 requires a 10-year fiscal history of:

- Sources of changes in the net pension liability;
- Information about the components of the net pension liability and related ratios, including the pension plan's fiduciary net position as a percentage of the total pension liability, and the net pension liability as a percent of covered-employee payroll; and
- A comparison of the actual employer contributions to the actuarially determined contributions based on the plan's funding policy.

General Implications of Contribution Allocation Procedure or Funding Policy on Future Expected Plan Contributions and Funded Status

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 6.80% on the actuarial value of assets), then the following outcomes are expected:

1. The employer normal cost as a percentage of pay is expected to remain level as a percentage of payroll.
2. The unfunded liability will decrease in dollar amount for 19 years.
3. The funded status of the plan will increase gradually towards a 100% funded ratio.

This funding policy results in the expectation that the plan's assets will be able to fully pay for promised benefits through at least 2122 and a GASB single discount rate of 6.80%. The projections for this project are strictly for the purpose of determining the GASB single discount rate and are different from a funding projection for the ongoing plan.

Timing of the Valuation

An actuarial valuation to determine the total pension liability is required to be performed at least every two years. The net pension liability and pension expense should be measured as of the pension plan's fiscal year end (measurement date) on a date that is within the employer's prior fiscal year. If the actuarial valuation used to determine the total pension liability is not calculated as of the measurement date, the total pension liability is required to be rolled forward from the actuarial valuation date to the measurement date.

The total pension liability shown in this report is based on the actuarial valuation performed as of June 30, 2021 and a measurement date of June 30, 2022. The total pension liability was "rolled-forward" from June 30, 2021 to June 30, 2022 using generally accepted actuarial principles.

Single Discount Rate

Projected benefit payments are required to be discounted to their actuarial present values using a Single Discount Rate that reflects: (1) a long-term expected rate of return on pension plan investments (to the extent that the plan's fiduciary net position is projected to be sufficient to pay benefits); and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.80%; the municipal bond rate is 3.69% (based on the daily rate closest to but not later than the measurement date of the Fidelity 20-Year Municipal GO AA Index); and the resulting Single Discount Rate is 6.80%.

SECTION B

FINANCIAL STATEMENTS

Auditor’s Note – This information is intended to assist in preparation of the financial statements of the City of Ann Arbor Employees' Retirement System. Financial statements are the responsibility of management, subject to the auditor’s review. Please let us know if the auditor recommends any changes.

Statement of Pension Expense Under GASB Statement No. 68
Fiscal Year Ended June 30, 2022

A. Expense

1. Service Cost	$	9,923,074
2. Interest on the Total Pension Liability		42,015,152
3. Current-Period Benefit Changes		0
4. Employee Contributions (made negative for addition here)		(3,222,809)
5. Projected Earnings on Plan Investments (made negative for addition here)		(42,393,783)
6. Pension Plan Administrative Expense		702,218
7. Other Changes in Plan Fiduciary Net Position		(78,468)
8. Recognition of Outflow (Inflow) of Resources due to Liabilities		2,099,650
9. Recognition of Outflow (Inflow) of Resources due to Assets		(2,236,004)
10. Total Pension Expense	**$**	**6,809,030**

Statement of Outflows and Inflows Arising from Current Reporting Period Fiscal Year Ended June 30, 2022

A. Outflows (Inflows) of Resources Due to Liabilities		
1. Difference between expected and actual experience of the Total Pension Liability (gains) or losses	$	(5,613,016)
2. Assumption Changes (gains) or losses	$	7,273,056
3. Recognition period for Liabilities: Average of the expected remaining service lives of all employees {in years}		3.6334
4. Outflow (Inflow) of Resources to be recognized in the current pension expense for the difference between expected and actual experience of the Total Pension Liability	$	(1,544,838)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense for assumption changes	$	2,001,722
6. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Liabilities	$	456,884
7. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for the difference between expected and actual experience of the Total Pension Liability	$	(4,068,178)
8. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses for assumption changes	$	5,271,334
9. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Liabilities	$	1,203,156
B. Outflows (Inflows) of Resources Due to Assets		
1. Net difference between projected and actual earnings on pension plan investments (gains) or losses	$	73,774,217
2. Recognition period for Assets {in years}		5.0000
3. Outflow (Inflow) of Resources to be recognized in the current pension expense due to Assets	$	14,754,843
4. Deferred Outflow (Inflow) of Resources to be recognized in future pension expenses due to Assets	$	59,019,374

Statement of Outflows and Inflows Arising from Current and Prior Reporting Periods Fiscal Year Ended June 30, 2022

A. Outflows and Inflows of Resources Due to Liabilities and Assets to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Due to Liabilities	$ 5,462,968	$ 3,363,318	$ 2,099,650
2. Due to Assets	18,009,901	20,245,905	(2,236,004)
3. Total	$ 23,472,869	$ 23,609,223	$ (136,354)

B. Outflows and Inflows of Resources by Source to be Recognized in Current Pension Expense

	Outflows of Resources	Inflows of Resources	Net Outflows of Resources
1. Differences between expected and actual experience	$ 1,463,599	$ 3,363,318	$ (1,899,719)
2. Assumption Changes	3,999,369	-	3,999,369
3. Net Difference between projected and actual earnings on pension plan investments	18,009,901	20,245,905	(2,236,004)
4. Total	$ 23,472,869	$ 23,609,223	$ (136,354)

C. Deferred Outflows and Deferred Inflows of Resources by Source to be Recognized in Future Pension Expenses

	Deferred Outflows of Resources	Deferred Inflows of Resources	Net Deferred Outflows of Resources
1. Differences between expected and actual experience	$ 830,591	$ 6,491,442	$ (5,660,851)
2. Assumption Changes	8,357,315	-	8,357,315
3. Net Difference between projected and actual earnings on pension plan investments	64,573,124	60,737,714	3,835,410
4. Total	$ 73,761,030	$ 67,229,156	$ 6,531,874

D. Deferred Outflows and Deferred Inflows of Resources by Year to be Recognized in Future Pension Expenses

Year Ending June 30	Net Deferred Outflows of Resources
2023	$ (572,074)
2024	(2,449,224)
2025	(5,201,673)
2026	14,754,845
2027	0
Thereafter	0
Total	$ 6,531,874

Recognition of Deferred Outflows and Inflows of Resources
Fiscal Year Ended June 30, 2022

Year Established	Initial Amount	Initial Recognition Period	Current Year Recognition	Remaining Recognition	Remaining Recognition Period
Deferred Outflow (Inflow) Due to Differences Between Expected and Actual Experience on Liabilities					
2018	$ 15,517,000	3.3200	$ 0	$ 0	0.0000
2019	(2,982,853)	3.5131	(435,655)	0	0.0000
2020	5,221,388	3.5675	1,463,599	830,591	0.5675
2021	(5,188,914)	3.7524	(1,382,825)	(2,423,264)	1.7524
2022	(5,613,016)	3.6334	(1,544,838)	(4,068,178)	2.6334
Total			**$ (1,899,719)**	**$ (5,660,851)**	
Deferred Outflow (Inflow) Due to Assumption Changes					
2018	$ 0	3.3200	$ 0	$ 0	0.0000
2019	0	3.5131	0	0	0.0000
2020	1,248,573	3.5675	349,985	198,618	0.5675
2021	6,182,687	3.7524	1,647,662	2,887,363	1.7524
2022	7,273,056	3.6334	2,001,722	5,271,334	2.6334
Total			**$ 3,999,369**	**$ 8,357,315**	
Deferred Outflow (Inflow) Due to Differences Between Projected and Actual Earnings on Plan Investments					
2018	$ 427,000	5.0000	$ 87,000	$ 0	0.0000
2019	3,911,835	5.0000	782,367	782,367	1.0000
2020	11,928,456	5.0000	2,385,691	4,771,383	2.0000
2021	(101,229,524)	5.0000	(20,245,905)	(60,737,714)	3.0000
2022	73,774,217	5.0000	14,754,843	59,019,374	4.0000
Total			**$ (2,236,004)**	**$ 3,835,410**	

Recognition of Deferred Outflows and Inflows of Resources

According to Paragraph 33 of GASB Statement No. 68, *differences between expected and actual experience* and *changes in assumptions* are recognized in pension expense using a systematic and rational method over a closed period equal to the average of the expected remaining service lives of all employees that are provided with pensions through the pension plan (active employees and inactive employees) determined as of the beginning of the measurement period.

At the beginning of the current measurement period, the expected remaining service lives of all active employees in the plan was approximately 7,023 years. Additionally, the total plan membership (active employees and inactive employees) was 1,933. As a result, the average of the expected remaining service lives for purposes of recognizing the applicable deferred outflows and inflows of resources established in the current measurement period is 3.6334 years.

Additionally, *differences between projected and actual earnings on pension plan investments* should be recognized in pension expense using a systematic and rational method over a closed five-year period. For this purpose, the deferred outflows and inflows of resources are recognized in the pension expense as a level dollar amount over the closed period identified above.

Statement of Fiduciary Net Position
as of June 30, 2022

Cash and Deposits	$	0
Receivables		
Accounts Receivable - Sale of Investments	$	0
Accrued Interest and Other Dividends		273,091
Contributions		0
Accounts Receivable - Other		5,781,746
Total Receivables	$	6,054,837
Investments		
Fixed Income	$	96,881,171
Domestic Equities		251,559,721
International Equities		119,551,673
Infrastructure		16,754,904
Real Estate		68,961,983
Other		16,240,005
Total Investments	$	569,949,457
Total Assets	$	576,004,294
Liabilities		
Payables		
Accounts Payable - Purchase of Investments	$	0
Accrued Expenses		1,055,630
Accounts Payable - Other		3,773,948
Total Liabilities	$	4,829,578
Net Position Restricted for Pensions	$	571,174,716

Statement of Changes in Fiduciary Net Position
for Year Ended June 30, 2022

Additions		
Contributions		
Employer	$	16,255,245
Employee		3,222,809
Other		0
Total Contributions	$	19,478,054
Investment Income		
Net Appreciation in Fair Value of Investments	$	(38,078,348)
Interest and Dividends		7,204,690
Less Investment Expense		(506,776)
Net Investment Income	$	(31,380,434)
Other(1)	$	78,468
Total Additions	$	(11,823,912)
Deductions		
Benefit Payments, including Refunds of Employee Contributions	$	42,549,302
Pension Plan Administrative Expense		702,218
Other		0
Total Deductions	$	43,251,520
Net Increase in Net Position	$	(55,075,432)
Net Position Restricted for Pensions		
Beginning of Year	$	626,250,148
End of Year	$	571,174,716

(1) *Other includes $78,468 attributable to adjustments made as of the beginning of the fiscal year.*

SECTION C

REQUIRED SUPPLEMENTARY INFORMATION

Auditor’s Note – This information is intended to assist in preparation of the financial statements of the City of Ann Arbor Employees' Retirement System. Financial statements are the responsibility of management, subject to the auditor’s review. Please let us know if the auditor recommends any changes.

Schedule of Changes in Net Pension Liability and Related Ratios Current Period Fiscal Year Ended June 30, 2022

A. Total Pension Liability		
1. Service Cost	$	9,923,074
2. Interest on the Total Pension Liability		42,015,152
3. Changes of benefit terms		0
4. Difference between expected and actual experience of the Total Pension Liability		(5,613,016)
5. Changes of assumptions		7,273,056
6. Benefit payments, including refunds of employee contributions		(42,549,302)
7. Net change in Total Pension Liability	$	11,048,964
8. Total Pension Liability – Beginning		625,228,357
9. Total Pension Liability – Ending	**$**	**636,277,321**
B. Plan Fiduciary Net Position		
1. Contributions – Employer	$	16,255,245
2. Contributions – Employee		3,222,809
3. Net investment income		(31,380,434)
4. Benefit payments, including refunds of employee contributions		(42,549,302)
5. Pension plan administrative expense		(702,218)
6. Other[2]		78,468
7. Net change in Plan Fiduciary Net Position	$	(55,075,432)
8. Plan Fiduciary Net Position – Beginning		626,250,148
9. Plan Fiduciary Net Position – Ending	**$**	**571,174,716**
C. Net Pension Liability	**$**	**65,102,605**
D. Plan Fiduciary Net Position as a percentage of the total pension liability		**89.77%**
E. Covered-Employee payroll[1]	**$**	**62,187,947**
F. Net pension liability as a percentage of Covered-Employee payroll		**104.69%**

(1) *Covered payroll was provided by the City of Ann Arbor and may or may not meet the GASB Statement Nos. 67 and 68 definition of Covered Payroll.*

(2) *Other includes $78,468 attributable to adjustments made as of the beginning of the fiscal year.*

Schedules of Required Supplementary Information
Schedule of Changes in Net Pension Liability and Related Ratios Multiyear

Fiscal year ending June 30,	2022	2021	2020	2019[2]	2018	2017	2016	2015	2014	2013
Total Pension Liability										
Service Cost	$ 9,923,074	$ 10,172,596	$ 9,922,176	$ 9,783,377	$ 9,403,000	$ 8,869,000	$ 8,729,000			
Interest on the Total Pension Liability	42,015,152	41,832,292	40,637,790	40,055,937	38,552,000	37,755,000	36,746,000			
Benefit Changes	0	0	0	0	0	0	0			
Difference between expected and actual experience	(5,613,016)	(5,188,914)	5,221,388	(2,982,853)	15,517,000	3,488,000	(3,826,000)			
Assumption Changes	7,273,056	6,182,687	1,248,573	0	0	0	0			
Benefit Payments	(42,549,302)	(40,576,348)	(39,605,298)	(37,622,046)	(36,715,000)	(35,436,000)	(33,960,000)			
Refunds	0	0	0	0	0	0	0			
Net Change in Total Pension Liability	11,048,964	12,422,313	17,424,629	9,234,415	26,757,000	14,676,000	7,689,000			
Total Pension Liability - Beginning	625,228,357	612,806,044	595,381,415	586,147,000	559,390,000	544,714,000	537,025,000			
Total Pension Liability - Ending (a)	$ 636,277,321	$ 625,228,357	$ 612,806,044	$ 595,381,415	$ 586,147,000	$ 559,390,000	$ 544,714,000			
Plan Fiduciary Net Position										
Employer Contributions	$ 16,255,245	$ 15,284,295	$ 14,124,165	$ 13,621,926	$ 13,446,000	$ 13,253,000	$ 13,352,000			
Employee Contributions	3,222,809	3,194,016	3,164,729	3,264,590	3,185,000	3,325,000	3,139,000			
Pension Plan Net Investment Income	(31,380,434)	136,319,258	23,143,999	30,599,351	33,235,000	54,243,000	2,439,000			
Benefit Payments	(42,549,302)	(40,576,348)	(39,605,298)	(37,622,046)	(36,715,000)	(35,436,000)	(33,960,000)			
Refunds	0	0	0	0	0	0	0			
Pension Plan Administrative Expense	(702,218)	(604,004)	(689,228)	(671,194)	(694,000)	(747,000)	(724,000)			
Other[3]	78,468	(43,329)	(360,337)	(29,397)	0	0	0			
Net Change in Plan Fiduciary Net Position	(55,075,432)	113,573,888	(221,970)	9,163,230	12,457,000	34,638,000	(15,754,000)			
Plan Fiduciary Net Position - Beginning	626,250,148	512,676,260	512,898,230	503,735,000	491,278,000	456,620,000	472,374,000			
Plan Fiduciary Net Position - Ending (b)	$ 571,174,716	$ 626,250,148	$ 512,676,260	$ 512,898,230	$ 503,735,000	$ 491,258,000	$ 456,620,000			
Net Pension Liability - Ending (a) - (b)	65,102,605	(1,021,791)	100,129,784	82,483,185	82,412,000	68,132,000	88,094,000			
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	89.77 %	100.16 %	83.66 %	86.15 %	85.94 %	87.82 %	83.83 %			
Covered-Employee Payroll[1]	$ 62,187,947	$ 60,232,543	$ 57,970,915	$ 57,077,636	$ 55,459,000	$ 53,583,000	$ 50,057,000			
Net Pension Liability as a Percentage of Covered-Employee Payroll	104.69 %	(1.70)%	172.72 %	144.51 %	148.60 %	127.15 %	175.99 %			

Notes to Schedule:

[1] *Covered payroll was provided by the City of Ann Arbor and may or may not meet the GASB Statement Nos. 67 and 68 definition of Covered Payroll.*

[2] *Results for 2018 and prior years were calculated by the City's prior actuaries. The 2019 entry for "Difference between expected and actual experience" includes changes in liabilities due to actuarial gain/loss and change in actuarial provider.*

[3] *For 2020, 2021 and 2022, Other includes $360,337, $43,329 and $78,468 attributable to adjustments made as of the beginning of the fiscal year.*

Schedules of Required Supplementary Information
Schedule of the Net Pension Liability Multiyear

FY Ending June 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll[1]	Net Pension Liability as a % of Covered Payroll
2013						
2014						
2015						
2016	$544,714,000	$ 456,620,000	$ 88,094,000	83.83 %	$ 50,057,000	175.99 %
2017	559,390,000	491,258,000	68,132,000	87.82 %	53,583,000	127.15 %
2018	586,147,000	503,735,000	82,412,000	85.94 %	55,459,000	148.60 %
2019[2]	595,381,415	512,898,230	82,483,185	86.15 %	57,077,636	144.51 %
2020	612,806,044	512,676,260	100,129,784	83.66 %	57,970,915	172.72 %
2021	625,228,357	626,250,148	(1,021,791)	100.16 %	60,232,543	(1.70)%
2022	636,277,321	571,174,716	65,102,605	89.77 %	62,187,947	104.69 %

[1] *Covered payroll was provided by the City of Ann Arbor and may or may not meet the GASB Statement Nos. 67 and 68 definition of Covered Payroll.*

[2] *Results for 2018 and prior years were calculated by the City's prior actuaries.*

Schedule of Contributions Multiyear

FY Ending June 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll[1]	Actual Contribution as a % of Covered Payroll
2013					
2014	$ 11,217,000	$ 11,227,290	$ (10,290)	$ 47,956,745	23.41 %
2015	12,327,000	13,091,474	(764,474)	49,638,000	26.37 %
2016	12,233,000	13,352,412	(1,119,412)	46,887,000	28.48 %
2017	11,348,853	13,253,118	(1,904,265)	51,059,000	25.96 %
2018	11,757,000	13,446,000	(1,689,000)	55,459,000	24.24 %
2019[2]	13,464,778	13,621,926	(157,148)	57,077,636	23.87 %
2020	14,092,966	14,124,165	(31,199)	57,970,915	24.36 %
2021	15,251,454	15,284,295	(32,841)	60,232,543	25.38 %
2022	16,125,556	16,255,245	(129,689)	62,187,947	26.14 %

[1] *Covered payroll was provided by the City of Ann Arbor and may or may not meet the GASB Statement Nos. 67 and 68 definition of Covered Payroll.*

[2] *Results for 2018 and prior years were calculated by the City's prior actuaries.*

Notes to Schedule of Contributions

Notes	Actuarially determined contribution amounts are calculated as of June 30 each year, which is 1 year prior to the beginning of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates for the Fiscal Year Ending June 30, 2022*:

Actuarial Cost Method	Entry-Age Normal
Amortization Method	Level Dollar, Closed
Remaining Amortization Period	21 years closed until 15 years at which a 15-year open period is used
Asset Valuation Method	Five-Year smoothed market
Inflation	2.5%; No explicit price inflation assumption is used in this valuation.
Salary Increases	General: 4.0% - 7.5% Police: 5.3% - 11.0% Fire: 5.4% - 10.8%
Investment Rate of Return	6.90%, net of investment expenses
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition
Mortality	RP-2014 Healthy Employees and Annuitants, Adjusted back to 2006, Generational Under Projection Scale MP-2017

Other Information:

Notes

* *Based on valuation assumptions used in the June 30, 2020 actuarial valuation.*

Schedule of Investment Returns Multiyear

FY Ending June 30,	Annual Return[1]
2013	12.96 %
2014	14.01 %
2015	4.35 %
2016	0.50 %
2017	11.93 %
2018	7.02 %
2019	6.06 %
2020	4.45 %
2021	26.74 %
2022	(5.19)%

[1] Annual money-weighted rate of return, net of investment expenses.

SECTION D

NOTES TO FINANCIAL STATEMENTS

Auditor's Note – This information is intended to assist in preparation of the financial statements of the City of Ann Arbor Employees' Retirement System. Financial statements are the responsibility of management, subject to the auditor's review. Please let us know if the auditor recommends any changes.

Long-Term Expected Return on Plan Assets

The assumed rate of investment return was adopted by the plan's trustees after considering input from the plan's investment consultants and actuaries. Additional information about the assumed rate of investment return is included in the June 30, 2021 valuation report.

We have confirmed the current expected rate of return assumption to be appropriate.
For each major asset class that is included in the pension plan's target asset allocation as of June 30, 2022, these best estimates of geometric real rates of return are summarized in the following table:

Asset Allocation

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return[1]
Domestic Equity	36.00%	5.80%
Developed Foreign Equity	14.00%	6.80%
Emerging Markets Equity	7.00%	7.10%
Private Equity	7.00%	8.70%
Investment Grade Bonds	10.00%	1.80%
Private Debt	7.00%	6.40%
Real Estate	9.00%	5.70%
Natural Resources	3.00%	6.90%
Infrastructure (Core Private)	7.00%	5.80%
Total	100.00%	

[1] *Real rate of return is based on investment manager inflation assumption of 2.1%.*

The figures in the above table were supplied by the City of Ann Arbor Employees' Retirement Systems' investment manager(s). Gabriel, Roeder, Smith & Company does not provide investment advice.

Single Discount Rate

A Single Discount Rate of 6.80% was used to measure the total pension liability. This Single Discount Rate was based on the expected rate of return on pension plan investments of 6.80%. The projection of cash flows used to determine this Single Discount Rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the Single Discount Rate, the following presents the plan's net pension liability, calculated using a Single Discount Rate of 6.80%, as well as what the plan's net pension liability would be if it were calculated using a Single Discount Rate that is one percent lower or one percent higher:

Sensitivity of Net Pension Liability to the Single Discount Rate (SDR) Assumption

	1% Decrease 5.80%	Current SDR Assumption 6.80%	1% Increase 7.80%
Total Pension Liability	$ 705,701,586	$ 636,277,321	$ 577,814,645
Plan Fiduciary Net Position	571,174,716	571,174,716	571,174,716
Net Pension Liability/(Asset)	$ 134,526,870	$ 65,102,605	$ 6,639,929

Summary of Population Statistics[1]

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	1,121
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	105
Active Plan Members	707
Total Plan Members	1,933

(1) *As of the Actuarial Valuation Date, GRS does not have membership counts as of June 30, 2022. The City of Ann Arbor staff and auditors may decide that providing membership counts as of the valuation date is sufficient. Alternatively, the City may decide to update the membership counts to be as of the Plan's fiscal year end.*

SECTION E

ACTUARIAL COST METHODS AND ACTUARIAL ASSUMPTIONS

Actuarial Cost Methods

Normal Cost. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an individual entry-age actuarial cost method having the following characteristics:

(i) The annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and

(ii) Each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial Assumptions Used for the Valuation

The actuary calculates the contribution requirements and benefit values by applying actuarial assumptions to the benefit provisions and census data furnished, using the actuarial cost methods described on the previous page.

The principal areas of financial risk which require assumptions about future experiences are:

- Long-term rates of investment return to be generated by system assets;
- Patterns of pay increases to members;
- Rates of mortality among members, retirees and beneficiaries;
- Rates of separation (withdrawal) from active membership;
- Rates of disability among active members; and
- The age patterns of actual retirement.

In a valuation, the actuary calculates the monetary effect of each assumption for as long as each covered person survives - - - a period of time which can be as long as a century.

Actual experience of the Fund will not coincide exactly with assumed experience, regardless of the quality of the assumptions, or the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time to time it is appropriate to modify one or more of the assumptions to reflect experience trends (but not random year-to-year fluctuations). Actuarial assumptions were last revised for the June 30, 2018 valuation, based on an experience study performed by the City's prior actuary. Subsequently, the Board adopted an investment return assumption of 6.8% for this valuation.

Investment Return (net of investment expenses):

Investment Return	6.80%
Wage Inflation	3.50%
Price Inflation	2.50%
Spread Between Investment Return and Wage Inflation	3.30%

The investment return assumption is used to equate the value of payments due at different points in time and was first used for the June 30, 2021 valuation.

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

	% Increase in Salary at Sample Ages						
Sample	Merit and Seniority			Base	Increase Next Year		
Ages	General	Police	Fire	(Economic)	General	Police	Fire
20	4.00%	7.50%	7.29%	3.50%	7.50%	11.00%	10.79%
25	3.58%	6.60%	6.52%	3.50%	7.08%	10.10%	10.02%
30	2.82%	4.74%	4.86%	3.50%	6.32%	8.24%	8.36%
35	2.14%	3.36%	3.44%	3.50%	5.64%	6.86%	6.94%
40	1.84%	2.70%	2.70%	3.50%	5.34%	6.20%	6.20%
45	1.47%	2.38%	2.38%	3.50%	4.97%	5.88%	5.88%
50	0.98%	2.18%	2.18%	3.50%	4.48%	5.68%	5.68%
55	0.68%	2.04%	2.04%	3.50%	4.18%	5.54%	5.54%
60	0.50%	1.80%	1.90%	3.50%	4.00%	5.30%	5.40%

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

		% of Active Members Separating within Next Year			
Sample	Years of	General			
Ages	Service	Males	Females	Police	Fire
	1	6.00%	16.00%	6.00%	4.50%
	2	4.80%	13.00%	6.00%	4.00%
	3	4.00%	11.00%	4.00%	3.60%
	4	3.20%	8.00%	3.00%	3.60%
	5	2.50%	6.00%	2.50%	3.60%
25	6 & Over	3.20%	4.50%	2.40%	1.40%
30		3.20%	4.50%	2.40%	1.10%
35		3.25%	3.50%	1.75%	0.90%
40		3.25%	3.50%	0.74%	1.00%
45		3.25%	3.50%	0.48%	0.90%
50		3.25%	3.50%	0.48%	0.50%
55		3.25%	3.50%	0.48%	0.50%
60		3.25%	3.50%	0.48%	0.50%
65		3.25%	3.50%	0.48%	0.50%

The mortality tables used are as follows:

- **Healthy Pre-Retirement:** The RP-2014 Employee Generational Mortality Tables, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2017.

- **Healthy Post-Retirement:** The RP-2014 Healthy Annuitant Generational Mortality Tables, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2017.

- **Disability Retirement:** The RP-2014 Disabled Mortality Table, extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale, resulting in a base year of 2006 with future mortality improvements assumed each year using scale MP-2017.

Sample Attained Ages	Healthy Pre-Retirement Future Life Expectancy (Years)*		Healthy Post-Retirement Future Life Expectancy (Years)*		Disabled Retirement Future Life Expectancy (Years)*	
	Men	Women	Men	Women	Men	Women
55	31.34	35.56	29.83	32.22	21.47	25.19
60	26.41	30.54	25.27	27.45	18.40	21.63
65	21.75	25.64	20.93	22.90	15.50	18.19
70	17.45	20.87	16.85	18.58	12.74	14.81
75	13.48	16.29	13.08	14.53	10.11	11.64
80	9.90	11.97	9.71	10.89	7.71	8.88

** Based on retirements in 2021. Retirements in future years will reflect improvements in life expectancy.*

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Retirement	General		Police		Fire		Retirement		
Ages	Normal	Early	Normal	Early	Normal	Early	Service	Police	Fire
50	25%	10%		10%		10%	25	50%	25%
51	25%	10%		10%		10%	26	50%	25%
52	25%	10%		10%		10%	27	50%	25%
53	25%	10%		10%		10%	28	50%	25%
54	25%	10%		10%		10%	29	50%	25%
55	25%	10%	50%		25%		30	50%	25%
56	25%	10%	50%		25%		31	50%	25%
57	25%	10%	50%		25%		32	50%	25%
58	25%	10%	50%		25%		33	50%	25%
59	25%	10%	50%		25%		34	50%	25%
60	30%		100%		100%		35	100%	100%
61	30%								
62	30%								
63	30%								
64	30%								
65	60%								
66	40%								
67	40%								
68	40%								
69	40%								
70	100%								

Rates of disability among active members.

Sample	% Becoming Disabled within Next Year		
Ages	General	Police	Fire
20	0.06%	0.08%	0.02%
25	0.06%	0.08%	0.02%
30	0.06%	0.08%	0.02%
35	0.06%	0.08%	0.02%
40	0.11%	0.14%	0.03%
45	0.24%	0.32%	0.08%
50	0.42%	0.56%	0.14%
55	0.65%	0.86%	0.22%
60	0.86%	1.14%	0.29%
65	0.99%	1.32%	0.33%

For General members, 75% of the disabilities are assumed to be non-duty and 25% of the disabilities are assumed to be duty related. For Police/Fire members, 50% of the disabilities are assumed to be non-duty and 50% of the disabilities are assumed to be duty related.

Miscellaneous and Technical Assumptions

Benefit Service:	Exact Fractional service is used to determine the amount of benefit payable.
Decrement Operation:	Disability and mortality decrements do not operate during the first five years of service. Disability also does not operate during normal retirement eligibility.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed dollar amount shown in this report.
Liability Adjustments:	None.
Minimum Benefit Adjustments:	Benefit amounts for members impacted by the minimum benefit provision pursuant to Section 1:574(1) of Chapter 18, Employees Retirement System of the City of Ann Arbor Code of Ordinances were assumed to increase 2.0% per year.
Normal Form of Benefit:	A straight life benefit is the normal form of benefit.
Pay Adjustments:	For any active members who were on a leave of absence during the year, the prior year valuation pay was used.
Pay Increase Timing:	Middle of (Fiscal) year.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year.

SECTION F

CALCULATION OF THE SINGLE DISCOUNT RATE

Calculation of the Single Discount Rate

GASB Statement No. 67 includes a specific requirement for the discount rate that is used for the purpose of the measurement of the Total Pension Liability. This rate considers the ability of the fund to meet benefit obligations in the future. To make this determination, employer contributions, employee contributions, benefit payments, expenses and investment returns are projected into the future. The Plan Net Position (assets) in future years can then be determined and compared to its obligation to make benefit payments in those years. As long as assets are projected to be on hand in a future year, the assumed valuation discount rate is used. In years where assets are not projected to be sufficient to meet benefit payments, the use of a municipal bond rate is required, as described in the following paragraph.

The Single Discount Rate (SDR) is equivalent to applying these two rates to the benefits that are projected to be paid during the different time periods. The SDR reflects: (1) the long-term expected rate of return on pension plan investments (during the period in which the fiduciary net position is projected to be sufficient to pay benefits); and (2) tax-exempt municipal bond rate based on an index of 20-year general obligation bonds with an average AA credit rating as of the measurement date (to the extent that the contributions for use with the long-term expected rate of return are not met).

For the purpose of this valuation, the expected rate of return on pension plan investments is 6.80%; the municipal bond rate is 3.69%; and the resulting Single Discount Rate is 6.80%.

We have assumed the funding policy for the Plan is to contribute the greater of the actuarial determined contribution and the prior year increased by 2%. This funding policy results in the expectation that the plan's assets will be able to fully pay for promised benefits through at least 2122 and a GASB single discount rate of 6.80%.

The City of Ann Arbor Employees' Retirement System is funded by Employer and Member Contributions in accordance with the funding policy adopted by the Retirement Board, based on actuarially determined contributions (ADC), which require contributions be sufficient to pay the Normal Costs of active plan members, Plan expenses, and amortize the Unfunded Actuarial Accrued Liability over a declining period. Effective with the 2017 valuation, the Board approved a change to a level dollar amortization that decreases by one year in each year until a 15-year open amortization period is obtained.

Additionally, Section 1.3 of the City of Ann Arbor General Pension Policy allows for more than the Minimum Required policy as follows:

"The City of Ann Arbor will strive to achieve 100% funding of the City of Ann Arbor Employees' Retirement Plan. To the extent that 100% funding has been achieved, the City will continue to fund at a minimum the Normal Cost as defined by an outside actuary. To the extent that 100% funding had not been achieved, the City shall budget each fiscal year the higher of the ADC or the existing level of funding in the current budget year adjusted annually for the change in general fund budgeted revenues. In some years this may result in an excess contribution to the Pension Fund, which will serve to pay down the unfunded actuarial accrued liability and reduce future city cost increases."

SECTION G

SUMMARY OF BENEFITS

City of Ann Arbor Employees' Retirement System
Brief Summary of Benefit Provisions Evaluated
June 30, 2022

Regular Retirement (no reduction factor for age):

Union	5 Year Vesting 3 Year / 36 Mo FAC[1]	10 Year Vesting 5 Year / 60 Mo FAC[2]	Eligibility	Annual Amount
Non-Union	Hired before July 1, 2011	Hired on/after July 1, 2011	Age 50 with 25 years of service or Age 60 and vested	Hired before 1/1/2017: 2.5% of FAC times total years of service Hired after 1/1/2017: 1.25% of FAC times total years of service
American Federation of State, County, and Municipal Employees, AFL CIO (AFSCME)	Hired before August 29, 2011	Hired on/after August 29, 2011	Age 50 with 25 years of service or Age 60 and vested	Hired before 1/1/2017: 2.5% of FAC times total years of service Hired after 1/1/2017: 1.25% of FAC times total years of service
Ann Arbor Police Officers Association (AAPOA)	Hired before January 1, 2012	Hired on/after January 1, 2012	25 years of service or Age 55 and vested	2.75% of FAC times total years of service
International Association of Fire Fighters (IAFF)	Hired before July 1, 2012	Hired on/after July 1, 2012	25 years of service or Age 55 and vested	2.75% of FAC times total years of service
Teamsters Fire Assistant Chief	Hired before January 1, 2016	Hired on/after January 1, 2016	25 years of service or Age 55 and vested	Hired before 1/1/2017: 2.75% of FAC times total years of service Hired after 1/1/2017: 1.375% of FAC times total years of service
Teamsters Civilian Supervisiors	Hired before July 2, 2012	Hired on/after July 2, 2012	Age 50 with 25 years of service or Age 60 and vested	Hired before 1/1/2017: 2.5% of FAC times total years of service Hired after 1/1/2017: 1.25% of FAC times total years of service
Teamsters Police Professional Assistants	Hired before July 2, 2012	Hired on/after July 2, 2012	Age 50 with 25 years of service or Age 60 and vested	Hired before 1/1/2018: 2.5% of FAC times total years of service Hired after 1/1/2018: 1.25% of FAC times total years of service
Teamsters Police Deputy Chiefs	Hired before July 2, 2012	Hired on/after July 2, 2012	25 years of service or Age 55 and vested	Hired before 6/5/2017: 2.75% of FAC times total years of service Hired after 6/5/2017: 1.375% of FAC times total years of service
Police Service Specialists	Hired before July 1, 2013	Hired on/after July 1, 2013	Age 50 with 25 years of service or Age 60 and vested	Hired before 1/1/2018: 2.5% of FAC times total years of service Hired after 1/1/2018: 1.25% of FAC times total years of service
Command Officers Association of Michigan (COAM)	Hired before July 1, 2013	Hired on/after July 1, 2013	25 years of service or Age 55 and vested	2.75% of FAC times total years of service

(1) *Highest 3 consecutive calendar years out of last 10 or the last 36 months for members with 5 year vesting.*

(2) *Highest 5 consecutive calendar years out of last 10 or the last 60 months for members with 10 year vesting.*

Annuity Withdrawal - Upon regular retirement, a member may elect to withdraw his or her accumulated contributions. If this lump sum election is made, the retirement allowance is reduced by the actuarial equivalent of the amount withdrawn.

City of Ann Arbor Employees' Retirement System
Brief Summary of Benefit Provisions Evaluated
June 30, 2022

Early Retirement (reduction factor for age):

Eligibility - *All Members:* Age 50 with 20 or more years of service.

Benefit - Computed as a regular retirement but the pension portion of the allowance is reduced by 0.33% for each month by which retirement precedes normal retirement eligibility.

Deferred Retirement (vested benefit):

Eligibility - Must be vested. Refer to table on page 28.

Annual Amount - Computed as regular retirement but based upon service and final average compensation at time of termination. Benefit begins at age 60. A member may elect to receive all or a portion of his/her accumulated contributions at termination if the member's age plus service total at least 50 and receive a lesser benefit at age 60.

Duty Disability Retirement:

Eligibility - No age or service requirement.

Annual Amount - *Police/Fire:* Computed as a regular retirement. Minimum benefit is 25% of FAC. Upon termination of worker's compensation, additional service credit is granted for period in receipt of worker's compensation and benefit is recomputed.

All Others: Computed as a regular retirement. Minimum to age 60 is 18% of FAC. Minimum after age 60 is the sum of a) 12% of the portion of FAC not in excess of Social Security base plus b) 18% of FAC in excess of Social Security base. Upon termination of worker's compensation, additional service credit is granted for period in receipt of worker's compensation and benefit is recomputed.

Non-Duty Disability Retirement:

Eligibility - Must be vested. Refer to table on page 28.

Annual Amount - *Police/Fire:* Computed as a regular retirement. Minimum benefit is 25% of FAC.

All Others: Computed as a regular retirement. Minimum to age 60 is 18% of FAC. Minimum after age 60 is the sum of a) 12% of the portion of FAC not in excess of Social Security base plus b) 18% of FAC in excess of Social Security base.

Duty Death Before Retirement:

Eligibility - No age or service requirements.

Annual Amount - Computed as regular retirement but actuarially reduced in accordance with a 100% joint and survivor election. If the member had less than 25 years of service at time of death, a minimum of 25 years of service will be used to compute the benefits. Worker's compensation payments made to the member's beneficiary will offset the benefits paid by the Retirement System. Upon termination of worker's compensation payments, the amount paid to the beneficiary will be the greater of the annual worker's compensation payment and the computed 100% joint and survivor retirement benefit.

Non-Duty Death Before Retirement:

Eligibility - Must be vested. Refer to table on page 28.

Annual Amount - Computed as regular retirement but actuarially reduced in accordance with a 100% joint and survivor election. If there is no named beneficiary, a lump sum will be payable to the estate.

Post-Retirement Increases:

Subject to Ordinance provisions, adjustments may be made every July 1 to retirees and beneficiaries on the rolls at least 12 months. Adjustments are funded by financial gains and are not guaranteed.

Member Contributions:

AFSCME, Non-Union and Teamsters hired on/after 1/1/2017, Assistant Fire Chiefs hired on/after 7/1/2017, Police Deputy Chiefs hired on/after 6/5/2017, Police Service Specialist and Police Professional Assistants hired on/after 01/01/2018: 3.0% of annual compensation.

Fire hired prior to 7/1/2012: 6.0% of annual compensation until 1/1/2022.
Fire hired on/after 7/1/2012: 6.5% of annual compensation.

All Others: 6.0% of annual compensation.

SECTION H

GLOSSARY OF TERMS

Glossary of Terms

Actuarial Accrued Liability (AAL)	The AAL is the difference between the actuarial present value of all benefits and the actuarial value of future normal costs. The definition comes from the fundamental equation of funding which states that the present value of all benefits is the sum of the Actuarial Accrued Liability and the present value of future normal costs. The AAL may also be referred to as "accrued liability" or "actuarial liability."
Actuarial Assumptions	These assumptions are estimates of future experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and compensation increases. Actuarial assumptions are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (compensation increases, payroll growth, inflation and investment return) consist of an underlying real rate of return plus an assumption for a long-term average rate of inflation.
Accrued Service	Service credited under the system which was rendered before the date of the actuarial valuation.
Actuarial Equivalent	A single amount or series of amounts of equal actuarial value to another single amount or series of amounts, computed on the basis of appropriate actuarial assumptions.
Actuarial Cost Method	A mathematical budgeting procedure for allocating the dollar amount of the actuarial present value of the pension trust benefits between future normal cost and actuarial accrued liability. The actuarial cost method may also be referred to as the actuarial funding method.
Actuarial Gain (Loss)	The difference in liabilities between actual experience and expected experience during the period between two actuarial valuations is the gain (loss) on the accrued liabilities.
Actuarial Present Value (APV)	The amount of funds currently required to provide a payment or series of payments in the future. The present value is determined by discounting future payments at predetermined rates of interest and probabilities of payment.
Actuarial Valuation	The actuarial valuation report determines, as of the actuarial valuation date, the service cost, total pension liability, and related actuarial present value of projected benefit payments for pensions.
Actuarial Valuation Date	The date as of which an actuarial valuation is performed.
Actuarially Determined Contribution (ADC) or Annual Required Contribution (ARC)	A calculated contribution into a defined benefit pension plan for the reporting period, most often determined based on the funding policy of the plan. Typically, the Actuarially Determined Contribution has a normal cost payment and an amortization payment.

Glossary of Terms

Amortization Payment	The amortization payment is the periodic payment required to pay off an interest-discounted amount with payments of interest and principal.
Amortization Method	The method used to determine the periodic amortization payment may be a level dollar amount, or a level percent of pay amount. The period will typically be expressed in years, and the method will either be "open" (meaning, reset each year) or "closed" (the number of years remaining will decline each year).
Cost-of-Living Adjustments	Postemployment benefit changes intended to adjust benefit payments for the effects of inflation.
Cost-Sharing Multiple-Employer Defined Benefit Pension Plan (cost-sharing pension plan)	A multiple-employer defined benefit pension plan in which the pension obligations to the employees of more than one employer are pooled and pension plan assets can be used to pay the benefits of the employees of any employer that provides pensions through the pension plan.
Covered-Employee Payroll	The payroll of employees that are provided with pensions through the pension plan.
Deferred Retirement Option Program (DROP)	A program that permits a plan member to elect a calculation of benefit payments based on service credits and salary, as applicable, as of the DROP entry date. The plan member continues to provide service to the employer and is paid for the service by the employer after the DROP entry date; however, the pensions that would have been paid to the plan member are credited to an individual member account within the defined benefit pension plan until the end of the DROP period. Other variations for DROP exist and will be more fully detailed in the plan provision section of the valuation report.
Deferred Inflows and Outflows	The deferred inflows and outflows of pension resources are amounts used under GASB Statement No. 68 in developing the annual pension expense. Deferred inflows and outflows arise with differences between expected and actual experiences; changes of assumptions. The portion of these amounts not included in pension expense should be included in the deferred inflows or outflows of resources.
Discount Rate	For GASB purposes, the discount rate is the single rate of return that results in the present value of all projected benefit payments to be equal to the sum of the funded and unfunded projected benefit payments, specifically: 1. The benefit payments to be made while the pension plans' fiduciary net position is projected to be greater than the benefit payments that are projected to be made in the period; and 2. The present value of the benefit payments not in (1) above, discounted using the municipal bond rate.

Glossary of Terms

Entry Age Actuarial Cost Method (EAN)	The EAN is a cost method for allocating the costs of the plan between the normal cost and the accrued liability. The actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis (either level dollar or level percent of pay) over the earnings or service of the individual between entry age and assumed exit age(s). The portion of the actuarial present value allocated to a valuation year is the normal cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future normal costs is the actuarial accrued liability. The sum of the accrued liability plus the present value of all future normal costs is the present value of all benefits.
GASB	The Governmental Accounting Standards Board is an organization that exists in order to promulgate accounting standards for governmental entities.
Fiduciary Net Position	The fiduciary net position is the market value of the assets of the trust dedicated to the defined benefit provisions.
Long-Term Expected Rate of Return	The long-term rate of return is the expected return to be earned over the entire trust portfolio based on the asset allocation of the portfolio.
Money-Weighted Rate of Return	The money-weighted rate of return is a method of calculating the returns that adjusts for the changing amounts actually invested. For purposes of GASB Statement No. 67, money-weighted rate of return is calculated as the internal rate of return on pension plan investments, net of pension plan investment expense.
Multiple-Employer Defined Benefit Pension Plan	A multiple-employer plan is a defined benefit pension plan that is used to provide pensions to the employees of more than one employer.
Municipal Bond Rate	The Municipal Bond Rate is the discount rate to be used for those benefit payments that occur after the assets of the trust have been depleted.
Net Pension Liability (NPL)	The NPL is the liability of employers and non-employer contributing entities to plan members for benefits provided through a defined benefit pension plan.
Non-Employer Contributing Entities	Non-employer contributing entities are entities that make contributions to a pension plan that is used to provide pensions to the employees of other entities. For purposes of the GASB accounting statements, plan members are not considered non-employer contributing entities.
Normal Cost	The portion of the actuarial present value allocated to a valuation year is called the normal cost. For purposes of application to the requirements of this Statement, the term normal cost is the equivalent of service cost.

Glossary of Terms

Other Postemployment Benefits (OPEB)	All postemployment benefits other than retirement income (such as death benefits, life insurance, disability, and long-term care) that are provided separately from a pension plan, as well as postemployment health care benefits regardless of the manner in which they are provided. Other postemployment benefits do not include termination benefits.
Real Rate of Return	The real rate of return is the rate of return on an investment after adjustment to eliminate inflation.
Service Cost	The service cost is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year.
Total Pension Expense	The total pension expense is the sum of the following items that are recognized at the end of the employer's fiscal year: 1. Service Cost 2. Interest on the Total Pension Liability 3. Current-Period Benefit Changes 4. Employee Contributions (made negative for addition here) 5. Projected Earnings on Plan Investments (made negative for addition here) 6. Pension Plan Administrative Expense 7. Other Changes in Plan Fiduciary Net Position 8. Recognition of Outflow (Inflow) of Resources due to Liabilities 9. Recognition of Outflow (Inflow) of Resources due to Assets
Total Pension Liability (TPL)	The TPL is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service.
Unfunded Actuarial Accrued Liability (UAAL)	The UAAL is the difference between actuarial accrued liability and valuation assets.
Valuation Assets	The valuation assets are the assets used in determining the unfunded liability of the plan. For purposes of GASB Statement Nos. 67 and 68, the valuation assets are equal to the market value of assets.

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November 11, 2022

Ms. Wendy Orcutt
Executive Director
City of Ann Arbor Employees' Retirement System
532 S. Maple Road
Ann Arbor, Michigan 48103

Dear Ms. Orcutt:

Please find enclosed 10 copies of the GASB Statement Nos. 67 and 68 Accounting and Financial Reporting for Pensions report of the City of Ann Arbor Employees' Retirement System.

Sincerely,
Gabriel, Roeder, Smith & Company

Richard C. Koch Jr.

Richard C. Koch Jr., ASA, EA, MAAA

RK:sc
Enclosures