



Municipal Employees' Retirement System of Michigan

Annual Actuarial Valuation Report
December 31, 2023 - Manistee Co (5101)





Spring 2024

Manistee Co

In care of:
Municipal Employees' Retirement System of Michigan
1134 Municipal Way
Lansing, Michigan 48917

This report presents the results of the Annual Actuarial Valuation, prepared for Manistee Co (5101) as of December 31, 2023. The report includes the determination of liabilities and contribution rates resulting from the participation in the Municipal Employees' Retirement System of Michigan ("MERS"). This report contains the minimum actuarially determined contribution requirement, in alignment with the MERS Plan Document, Actuarial Policy, the Michigan Constitution, and governing statutes. Manistee Co is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees.

The purposes of this valuation are to:

- Measure funding progress as of December 31, 2023,
- Establish contribution requirements for the fiscal year beginning October 1, 2025,
- Provide information regarding the identification and assessment of risk,
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) statements, and
- Provide information to assist the local unit of government with State reporting requirements.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through December 31, 2023. The valuation was based upon information furnished by MERS concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by MERS.

The Municipal Employees' Retirement Act, PA 427 of 1984 and the MERS' Plan Document Article VI Sec. 71 (1)(d), provides the MERS Board with the authority to set actuarial assumptions and methods after consultation with the actuary. As the fiduciary of the plan, the MERS Retirement Board sets certain assumptions for funding and GASB purposes. These assumptions are reviewed regularly through a comprehensive study, most recently in the fall of 2021. The MERS Retirement Board adopted a Dedicated Gains Policy at the February 17, 2022 Board meeting. The Dedicated Gains Policy automatically reduces the assumed rate of investment return in conjunction with recognizing excess investment gains to mitigate the impact on employer contributions the first year. The policy was effective with the December 31, 2021 annual actuarial valuation.

The Michigan Department of Treasury provides required assumptions to be used for purposes of Public Act 202 reporting. These assumptions are for reporting purposes only and do not impact required contributions. Please refer to the State Reporting page found at the end of this report for information for this filing.

For a full list of all the assumptions used, please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at:

<https://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2023AnnualActuarialValuation-Appendix.pdf>

The actuarial assumptions used for this valuation, including the assumed rate of investment return, are reasonable for purposes of the measurement. The combined effect of the assumptions is expected to have no significant bias (i.e., not significantly optimistic or pessimistic).

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to the Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*. Beginning with the December 31, 2023 annual actuarial valuation, the revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDRM). The LDRM calculation is provided in aggregate, along with aggregate employer results, in a separate report titled "Summary Report of the 78th Annual Actuarial Valuations," and will be available on the MERS website during the fall of 2024.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, the information contained in this report is accurate and fairly presents the actuarial position of Manistee Co as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Rebecca L. Stouffer, Mark Buis, Kurt Dosson, and Shana M. Neeson are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor. GRS maintains independent consulting agreements with certain local units of government for services unrelated to the actuarial consulting services provided in this report.



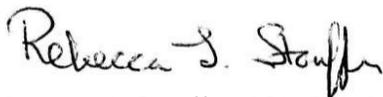
The Retirement Board of the Municipal Employees' Retirement System of Michigan confirms that the System provides for payment of the required employer contribution as described in Section 20m of Act No. 314 of 1965 (MCL 38.1140m).

This information is purely actuarial in nature. It is not intended to serve as a substitute for legal, accounting, or investment advice.

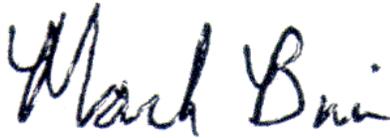
This report was prepared at the request of the MERS Retirement Board and may be provided only in its entirety by the municipality to other interested parties (MERS customarily provides the full report on request to associated third parties such as the auditor for the municipality). GRS is not responsible for the consequences of any unauthorized use. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

If you have reason to believe that the plan provisions are incorrectly described, that important plan provisions relevant to this valuation are not described, that conditions have changed since the calculations were made, that the information provided in this report is inaccurate or is in anyway incomplete, or if you need further information in order to make an informed decision on the subject matter in this report, please contact your Regional Manager at 1.800.767.MERS (6377).

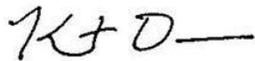
Sincerely,
Gabriel, Roeder, Smith & Company



Rebecca L. Stouffer, ASA, FCA, MAAA



Mark Buis, FSA, FCA, EA, MAAA



Kurt Dosson, ASA, FCA, MAAA



Shana M. Neeson, ASA, FCA, MAAA



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Executive Summary

Funded Ratio

The funded ratio of a plan is the percentage of the dollar value of the actuarial accrued liability that is covered by the actuarial value of assets. While the funded ratio may be a useful plan measurement, understanding a plan's funding trend may be more important than a particular point in time. Refer to Table 7 to find a history of this information.

	12/31/2023	12/31/2022
Funded Ratio*	69%	70%

* Reflects assets from Surplus divisions, if any.

Throughout this report are references to valuation results generated prior to the 2018 valuation date. Results prior to 2018 were received directly from the prior actuary or extracted from the previous valuation system by MERS's technology service provider.

Required Employer Contributions

Your required employer contributions are shown in the following table. Employee contributions, if any, are in addition to the employer contributions.

Effective with the December 31, 2021 valuation, the MERS Retirement Board adopted a Dedicated Gains Policy which allows for recognition of asset gains in excess of a set threshold in combination with lowering the assumed rate of investment return. Effective with the 2020 and 2019 valuations respectively, the MERS Retirement Board adopted updated demographic and economic assumptions. **The combined impact of the prior 2020 and 2019 demographic and economic assumption changes is fully reflected in the 2023 annual actuarial valuation, evidenced with the Phase-in and No Phase-in contribution requirements being equal.** There is no phase-in of dedicated gains.

By default, MERS will invoice you based on the amount in the “No Phase-in” columns. This amount will be considered the minimum required contribution unless you request to be billed the “Phase-in” rates. If you wish to be billed using the phased-in rates, please contact MERS, at which point the alternate minimum required contribution will be the amount in the “Phase-in” columns.

	Percentage of Payroll				Monthly \$ Based on Projected Payroll			
	Phase-in	No Phase-in	Phase-in	No Phase-in	Phase-in	No Phase-in	Phase-in	No Phase-in
	12/31/2023	12/31/2023	12/31/2022	12/31/2022	12/31/2023	12/31/2023	12/31/2022	12/31/2022
Valuation Date:	October 1, 2025	October 1, 2025	October 1, 2024	October 1, 2024	October 1, 2025	October 1, 2025	October 1, 2024	October 1, 2024
Fiscal Year Beginning:	October 1, 2025	October 1, 2025	October 1, 2024	October 1, 2024	October 1, 2025	October 1, 2025	October 1, 2024	October 1, 2024
Division								
01 - General	-	-	-	-	\$ 0	\$ 0	\$ 0	\$ 0
02 - Sheriff/POAM	-	-	-	-	20,177	20,177	18,873	19,964
04 - MCF	-	-	-	-	78,770	78,770	64,984	69,331
10 - 911 Employees	16.87%	16.87%	13.45%	14.17%	8,032	8,032	6,749	7,109
13 - GEA & TPOAM	-	-	-	-	12,992	12,992	10,388	10,974
14 - Crt EEs, Exec EEs & Elctd	-	-	-	-	70,138	70,138	63,423	65,876
20 - Sheriff/Adm	-	-	-	-	14,325	14,325	12,550	12,954
HA - AFSCME hired aft 10/01/2011	8.35%	8.35%	8.04%	8.15%	5,944	5,944	6,028	6,113
HB - Sheriff POAM (POLC) af 10/1/1	7.45%	7.45%	6.77%	6.80%	8,766	8,766	7,536	7,567
HC - Executive after 10/1/2012	8.74%	8.74%	8.52%	8.60%	9,279	9,279	9,530	9,616
HE - Court EEs hired af 11/1/2012	8.92%	8.92%	8.51%	8.69%	8,370	8,370	7,650	7,809
HF - Sheriff Admin after 1/1/2013	0.00%	0.00%	4.68%	4.68%	0	0	252	252
Total Municipality -								
Estimated Monthly Contribution					\$ 236,793	\$ 236,793	\$ 207,963	\$ 217,565
Total Municipality -								
Estimated Annual Contribution					\$ 2,841,516	\$ 2,841,516	\$ 2,495,556	\$ 2,610,780

Employee contribution rates:

Valuation Date:	Employee Contribution Rate	
	12/31/2023	12/31/2022
Division		
01 - General	0.00%	0.00%
02 - Sheriff/POAM	14.88%	12.28%
04 - MCF	4.85%	4.85%
10 - 911 Employees	2.52%	2.52%
13 - GEA & TPOAM	18.00%	18.00%
14 - Crt EEs, Exec EEs & Elctd	3.28%	3.28%
20 - Sheriff/Adm	2.88%	2.88%
HA - AFSCME hired aft 10/01/2011	0.00%	0.00%
HB - Sheriff POAM (POLC) af 10/1/1	0.00%	0.00%
HC - Executive after 10/1/2012	0.00%	0.00%
HE - Court EEs hired af 11/1/2012	0.00%	0.00%
HF - Sheriff Admin after 1/1/2013	0.00%	0.00%

The employer may contribute more than the minimum required contributions, as these additional contributions will earn investment income and may result in lower future contribution requirements.



Employers making contributions in excess of the minimum requirements may elect to apply the excess contribution immediately to a particular division, or segregate the excess into one or more “Surplus” divisions. An election in the first case would immediately reduce any unfunded accrued liability and lower the amortization payments throughout the remaining amortization period. An election to set up one or more Surplus divisions would not immediately lower future contributions, however the assets from the Surplus division(s) could be transferred to an unfunded division in the future to reduce the unfunded liability in future years, or to be used to pay all or a portion of the minimum required contribution in a future year. For purposes of this report, the assets in any Surplus division have been included in the municipality’s total assets, unfunded accrued liability, and funded status; however, these assets are not used in calculating the minimum required contribution.

MERS strongly encourages employers to contribute more than the minimum contribution shown above. With the implemented dedicated gains policy, market gains and losses will continue to be smoothed over five years; however, since excess returns are used to lower the investment assumption, there will be fewer gains to smooth in down markets. Having additional funds in Surplus divisions will assist plans with navigating any market volatility.

Assuming that experience of the plan meets actuarial assumptions:

- To accelerate to a 100% funding ratio in 10 years, estimated monthly employer contributions for the fiscal year beginning in 2025 for the entire employer would be \$283,699, instead of \$236,793.

The required employer contribution rates, or dollars if the division is closed, determined in this report are reasonable under Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions, based on:

- The use of reasonable actuarial assumptions and cost methods,
- The use of reasonable amortization and asset valuation methods; and
- Application of the MERS funding policy which will accumulate sufficient assets to make benefit payments when due, assuming all assumptions will be realized, and the required employer contributions are made when due.

How and Why Do These Numbers Change?

In a defined benefit plan, contributions vary from one annual actuarial valuation to the next as a result of the following:

- Changes in benefit provisions (see Table 2),
- Changes in actuarial assumptions and methods (see the Appendix); and
- Experience of the plan (investment experience and demographic experience); this is the difference between actual experience of the plan and the actuarial assumptions.

These impacts are reflected in various tables in the report. For more information, please contact your Regional Manager.

Comments on Investment Rate of Return Assumption

A defined benefit plan is funded by employer contributions, participant contributions, and investment earnings. Investment earnings have historically provided a significant portion of the funding. The larger the share of benefits being provided from investment returns, the smaller the required contributions, and vice versa. Determining the contributions required to prefund the promised retirement benefits requires an



assumption of what investment earnings are expected to add to the fund over a long period of time. This is called the **Investment Return Assumption**.

The MERS Investment Return Assumption is **6.93%** per year. This, along with all of our other actuarial assumptions, is reviewed at least every five years in an Experience Study that compares the assumptions used against actual experience and recommends adjustments if necessary. If your municipality would like to explore contributions at lower assumed investment return assumptions, please review the “What If” projection scenarios later in this report.

Assumption and Method Changes in 2023

Effective February 17, 2022, the MERS Retirement Board adopted a dedicated gains policy that automatically lowers the assumed rate of investment return by using excess asset gains to mitigate large increases in required contributions to the Plan. Full details of this dedicated gains policy are available in the Actuarial Policy found on the MERS [website](#). Some goals of the dedicated gains policy are to:

- Provide a systematic approach to lower the assumed rate of investment return between experience studies; and
- Use excess gains to cover both the increase in normal cost and any increase in UAL payment the first contribution year after application (i.e., minimize the first-year impact (i.e., increase) in employer contributions).

The dedicated gains policy was implemented with the December 31, 2021 annual actuarial valuation and was reflected in the computed employer contribution amounts beginning in fiscal year 2023.

Investment performance measured for the one-year period ending December 31, 2023 resulted in current year excess gains for use in lowering the assumed rate of investment return. As a result, the assumed rate of investment return was lowered from 7.00% to 6.93%. The December 31, 2023 valuation liabilities were developed using this new, lower assumption. Additionally, as a result of recognizing excess market gains, the valuation assets used to fund these liabilities are 1.4% higher than if there were no dedicated gains policy. The combined impact of these changes will minimize the first-year impact on employer contributions and may result in an increase or a decrease in employer contributions.

There were no other assumption or method changes in 2023.

Future Assumption and Method Changes

As the fiduciary of the plan, the MERS Retirement Board sets certain assumptions for funding and GASB purposes. These assumptions are reviewed periodically through a comprehensive study, called an Experience Study. The next Experience Study will commence during the fall of 2024.

Protecting MI Pension Grant Program

On July 1, 2022, Michigan lawmakers passed the State budget for the 2022-23 fiscal year. As a part of the budget, \$750 million was earmarked for underfunded municipal pension plans in counties, cities, townships, villages and road commissions across the State. Known as the **Protecting MI Pension Grant Program**, the legislation is designed to support municipal plans that are under 60% funded.

Funds received by municipalities were deposited into the MERS trust during August 2023 and are reflected in this valuation.



Comments on Asset Smoothing

To avoid dramatic spikes and dips in annual contribution requirements due to short-term fluctuations in asset markets, MERS applies a technique called **asset smoothing**. This spreads out each year's investment gains or losses over the prior year and the following four years. After initial application of asset smoothing, remaining excess market gains are used to buy down the assumed rate of investment return and increase the level of valuation assets, to the extent allowed by the dedicated gains policy. This smoothing method is used to determine your actuarial value of assets (valuation assets), which is then used to determine both your funded ratio and your required contributions. **The (smoothed) actuarial rate of return for 2023 was 5.54%, while the actual market rate of return was 10.94%**. The actuarial rate of return is below the assumed rate of return, which will put upward pressure on the employer contribution requirements determined in this valuation. To see historical details of the market rate of return compared to the smoothed actuarial rate of return, refer to this report's Appendix or view the "[How Smoothing Works](#)" video on the [Defined Benefit resource page](#) of the MERS website.

As of December 31, 2023, the actuarial value of assets is 110% of market value due to asset smoothing. This means that there are deferred investment losses, which will put upward pressure on contributions in the short term.

If the December 31, 2023 valuation results were based on market value instead of actuarial value:

- The funded percent of your entire municipality would be 63% (instead of 69%); and
- Your total employer contribution requirement for the fiscal year starting October 1, 2025 would be \$3,308,688 (instead of \$2,841,516).

Alternate Scenarios to Estimate the Potential Volatility of Results ("What If Scenarios")

The calculations in this report are based on assumptions about long-term economic and demographic behavior. These assumptions will never materialize in a given year, except by coincidence. Therefore, the results will vary from one year to the next. The volatility of the results depends upon the characteristics of the plan. For example:

- Open divisions that have substantial assets compared to their active employee payroll will have more volatile employer contribution rates due to investment return fluctuations.
- Open divisions that have substantial accrued liability compared to their active employee payroll will have more volatile employer contribution rates due to demographic experience fluctuations.
- Small divisions will have more volatile contribution patterns than larger divisions because statistical fluctuations are relatively larger among small populations.
- Shorter amortization periods result in more volatile contribution patterns.

Many assumptions are important in determining the required employer contributions. In the following table, we show the impact of varying the Investment Return assumption. Lower investment returns would generally result in higher required employer contributions, and vice versa. The three economic scenarios below provide a quantitative risk assessment for the impact of investment returns on the plan's projected financial condition for funding purposes.

The relative impact of the economic scenarios below will vary from year to year, as the participant demographics change. The impact of each scenario should be analyzed for a given year, not from year to year. The results in the table are based on the December 31, 2023 valuation and are for the municipality in total, not by division.



It is important to note that calculations in this report are mathematical estimates based upon assumptions regarding future events, which may or may not materialize. Actuarial calculations can and do vary from one valuation to the next, sometimes significantly depending on the group's size. Projections are not predictions. Future valuations will be based on actual future experience.

12/31/2023 Valuation Results	Lower Future Annual Returns	Lower Future Annual Returns	Valuation Assumptions
Investment Return Assumption	4.93%	5.93%	6.93%
Accrued Liability	\$ 88,242,519	\$ 78,353,817	\$ 70,172,980
Valuation Assets ¹	\$ 48,721,515	\$ 48,721,515	\$ 48,721,515
Unfunded Accrued Liability	\$ 39,521,004	\$ 29,632,302	\$ 21,451,465
Funded Ratio	55%	62%	69%
Monthly Normal Cost	\$ 100,610	\$ 75,214	\$ 56,218
Monthly Amortization Payment	\$ 276,283	\$ 215,568	\$ 158,669
Total Employer Contribution²	\$ 396,135	\$ 311,347	\$ 236,793

¹ The Valuation Assets include assets from Surplus divisions, if any.

² If assets exceed accrued liabilities for a division, the division may have an overfunding credit to reduce the division's employer contribution requirement. If the overfunding credit is larger than the normal cost, the division's full credit is included in the municipality's amortization payment above but the division's total contribution requirement is zero. This can cause the displayed normal cost and amortization payment to not add up to the displayed total employer contribution.

Projection Scenarios

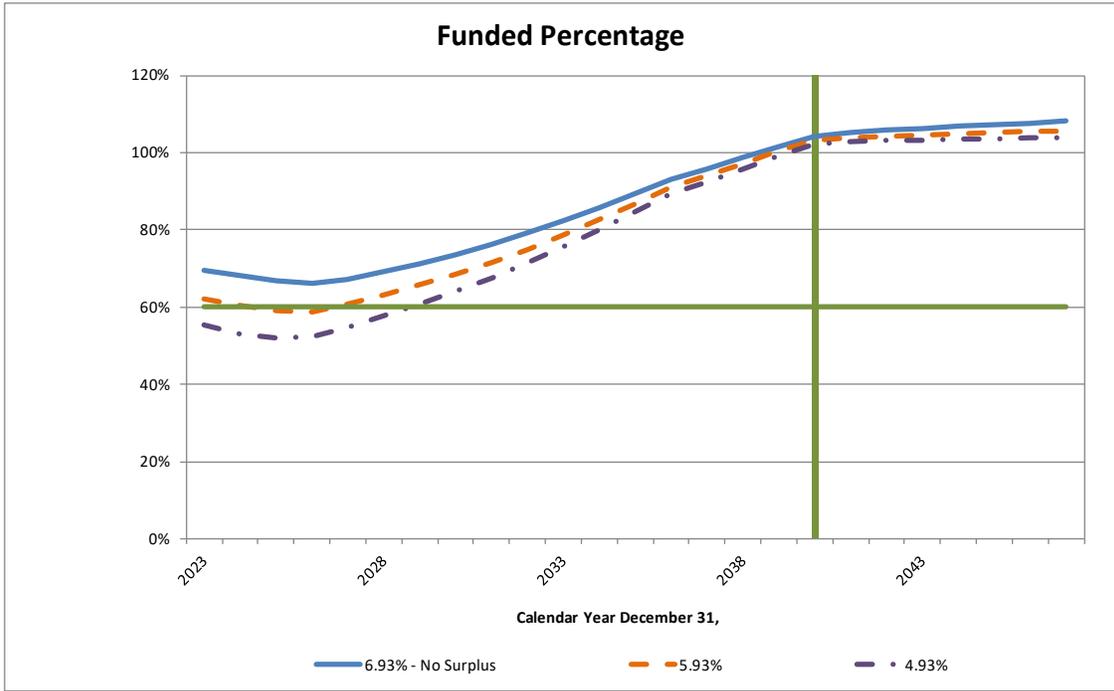
The next two pages show projections of the plan's funded ratio and computed employer contributions under the actuarial assumptions used in the valuation and alternate economic assumption scenarios. All three projections account for the past investment experience that will continue to affect the actuarial rate of return in the short term.

The 6.93% scenario provides an estimate of computed employer contributions based on current actuarial assumptions, and a projected 6.93% market return. The other two scenarios may be useful if the municipality chooses to budget more conservatively and make contributions in addition to the minimum requirements. The 5.93% and 4.93% projection scenarios provide an indication of the potential required employer contribution if these assumptions were met over the long term.

Valuation Year Ending 12/31	Fiscal Year Beginning 10/1	Actuarial Accrued Liability	Valuation Assets ²	Funded Percentage	Estimated Annual Employer Contribution
6.93%¹					
2023	2025	\$ 70,172,980	\$ 48,721,515	69%	\$ 2,841,516
2024	2026	\$ 71,100,000	\$ 48,300,000	68%	\$ 3,090,000
2025	2027	\$ 72,100,000	\$ 48,300,000	67%	\$ 3,340,000
2026	2028	\$ 73,000,000	\$ 48,300,000	66%	\$ 3,600,000
2027	2029	\$ 73,900,000	\$ 49,700,000	67%	\$ 3,730,000
2028	2030	\$ 74,700,000	\$ 51,600,000	69%	\$ 3,830,000
5.93%¹					
2023	2025	\$ 78,353,817	\$ 48,721,515	62%	\$ 3,736,164
2024	2026	\$ 79,300,000	\$ 47,900,000	60%	\$ 4,020,000
2025	2027	\$ 80,300,000	\$ 47,500,000	59%	\$ 4,290,000
2026	2028	\$ 81,300,000	\$ 47,800,000	59%	\$ 4,590,000
2027	2029	\$ 82,200,000	\$ 50,000,000	61%	\$ 4,710,000
2028	2030	\$ 83,000,000	\$ 52,400,000	63%	\$ 4,830,000
4.93%¹					
2023	2025	\$ 88,242,519	\$ 48,721,515	55%	\$ 4,753,620
2024	2026	\$ 89,200,000	\$ 47,400,000	53%	\$ 5,070,000
2025	2027	\$ 90,300,000	\$ 46,900,000	52%	\$ 5,380,000
2026	2028	\$ 91,300,000	\$ 47,700,000	52%	\$ 5,680,000
2027	2029	\$ 92,200,000	\$ 50,500,000	55%	\$ 5,820,000
2028	2030	\$ 93,000,000	\$ 53,600,000	58%	\$ 5,970,000

¹ Represents both the interest rate for discounting liabilities and the future investment return assumption on the Market Value of assets.

² Valuation Assets do not include assets from Surplus divisions, if any.



Notes:

The green indicator lines have been added at 60% funded and 17 years following the valuation date for PA 202 purposes.

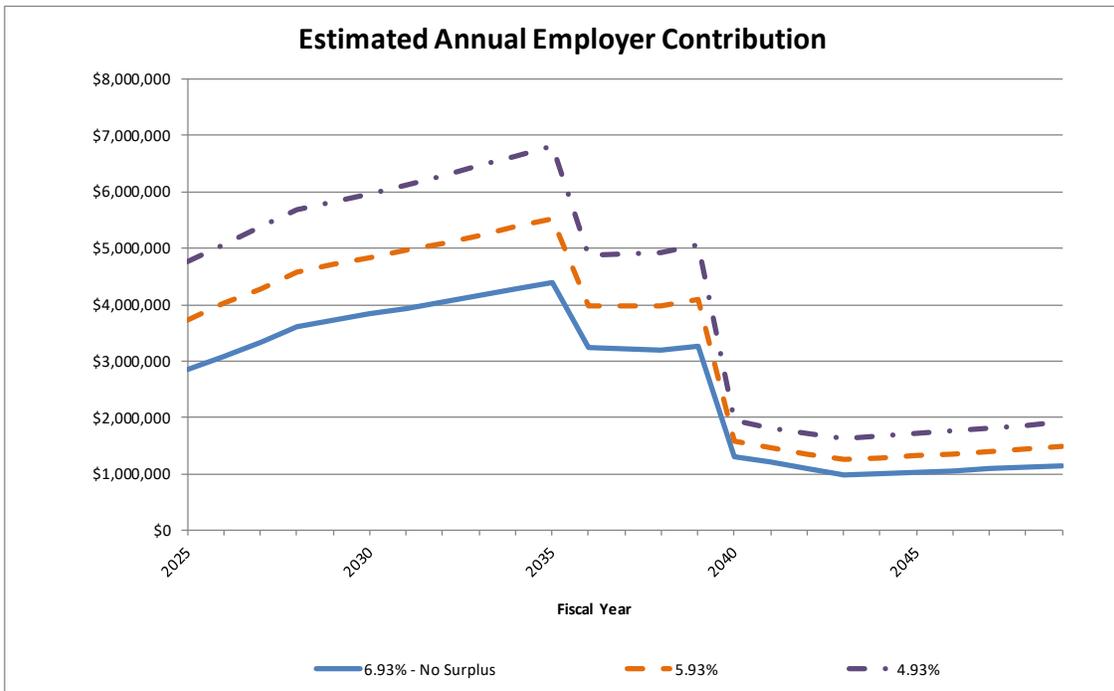


Table 1: Employer Contribution Details for the Fiscal Year Beginning October 1, 2025

Division	Total Normal Cost	Employee Contribution Rate	Employer Contributions ¹			Computed Employer Contribution With Phase-In	Blended ER Rate No Phase-In ⁵	Blended ER Rate With Phase-In ⁵	Employee Contribution Conversion Factor ²
			Employer Normal Cost ⁶	Payment of the Unfunded Accrued Liability ⁴	Computed Employer Contribution No Phase-In				
Percentage of Payroll									
01 - General	0.00%	0.00%	-	-	-	-			
02 - Sheriff/POAM	20.36%	14.88%	-	-	-	-	21.41%	21.41%	
04 - MCF	10.84%	4.85%	-	-	-	-			
10 - 911 Employees	11.39%	2.52%	8.87%	8.00%	16.87%	16.87%			0.92%
13 - GEA & TPOAM	17.25%	18.00%	-	-	-	-	23.82%	23.82%	
14 - Crt EEs, Exec EEs & Elctd	13.36%	3.28%	-	-	-	-	41.28%	41.28%	
20 - Sheriff/Adm	14.25%	2.88%	-	-	-	-			
HA - AFSCME hired aft 10/01/2011	8.35%	0.00%	8.35%	0.00%	8.35%	8.35%	23.82%	23.82%	
HB - Sheriff POAM (POLC) af 10/1/1	7.59%	0.00%	7.59%	-0.14%	7.45%	7.45%	21.41%	21.41%	
HC - Executive after 10/1/2012	8.74%	0.00%	8.74%	0.00%	8.74%	8.74%			
HE - Court EEs hired af 11/1/2012	7.71%	0.00%	7.71%	1.21%	8.92%	8.92%	41.28%	41.28%	
HF - Sheriff Admin after 1/1/2013	0.00%	0.00%	-	-	-	-			
Estimated Monthly Contribution³									
01 - General			\$ 0	\$ (21,841)	\$ 0	\$ 0			
02 - Sheriff/POAM			957	19,220	20,177	20,177			
04 - MCF			7,831	70,939	78,770	78,770			
10 - 911 Employees			4,224	3,808	8,032	8,032			
13 - GEA & TPOAM			(62)	13,054	12,992	12,992			
14 - Crt EEs, Exec EEs & Elctd			9,707	60,431	70,138	70,138			
20 - Sheriff/Adm			2,167	12,158	14,325	14,325			
HA - AFSCME hired aft 10/01/2011			5,944	0	5,944	5,944			
HB - Sheriff POAM (POLC) af 10/1/1			8,933	(167)	8,766	8,766			
HC - Executive after 10/1/2012			9,279	0	9,279	9,279			
HE - Court EEs hired af 11/1/2012			7,238	1,132	8,370	8,370			
HF - Sheriff Admin after 1/1/2013			0	(65)	0	0			
Total Municipality			\$ 56,218	\$ 158,669	\$ 236,793	\$ 236,793			
Estimated Annual Contribution³			\$ 674,616	\$ 1,904,028	\$ 2,841,516	\$ 2,841,516			

¹ The above employer contribution requirements are in addition to the employee contributions, if any.

² If employee contributions are increased/decreased by 1.00% of pay, the employer contribution requirement will decrease/increase by the Employee Contribution Conversion Factor. The conversion factor is usually under 1% because employee contributions may be refunded at termination of employment and not used to fund retirement pensions. Employer contributions will all be used to fund pensions.



- ³ For divisions that are open to new hires, estimated contributions are based on projected fiscal year payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts. For divisions that will have no new hires (i.e., closed divisions), invoices will be based on the above dollar amounts which are based on projected fiscal year payroll. See description of Open Divisions and Closed Divisions in the Appendix.
- ⁴ Note that if the overfunding credit is larger than the normal cost, the full credit is shown above but the total contribution requirement is zero. This will cause the displayed normal cost and unfunded accrued liability contributions not to add across.
- ⁵ For linked divisions, the employer will be invoiced the Computed Employer Contribution No Phase-in rate shown above for each linked division (a contribution rate for the open division; a contribution dollar for the closed-but-linked division), unless the employer elects to contribute the Blended Employer Contribution rate shown above, by contacting MERS at 800-767-MERS (6377).
- ⁶ For divisions with a negative employer normal cost, employee contributions cover the normal cost and a portion of the payment of any unfunded accrued liability.

Please see the Comments on Asset Smoothing in the Executive Summary of this report.



Table 2: Benefit Provisions

01 - General: Open Division

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	2.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

02 - Sheriff/POAM: Closed to new hires, linked to Division HB

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	50/25	50/25
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	14.88%	12.28%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

04 - MCF: Closed to new hires

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	2.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	30 & Out	30 & Out
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	4.85%	4.85%
DC Plan for New Hires:	4/1/2017	4/1/2017
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

10 - 911 Employees: Open Division

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	2.52%	2.52%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

13 - GEA & TPOAM: Closed to new hires, linked to Division HA

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	18.00%	18.00%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

14 - Crt EEs, Exec EEs & Elctd: Closed to new hires, linked to Division HE

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	55/20	55/20
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	3.28%	3.28%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

20 - Sheriff/Adm: Closed to new hires, linked to Division HF

	2023 Valuation	2022 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	8 years	8 years
Early Retirement (Unreduced):	50/25	50/25
Early Retirement (Reduced):	55/15	55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	2.88%	2.88%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)



HA - AFSCME hired aft 10/01/2011: Open Division, linked to Division 13

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.50% Multiplier (no max)	1.50% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

HB - Sheriff POAM (POLC) of 10/1/1: Open Division, linked to Division 02

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.50% Multiplier (no max)	1.50% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

HC - Executive after 10/1/2012: Open Division

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.50% Multiplier (no max)	1.50% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

HE - Court EEs hired af 11/1/2012: Open Division, linked to Division 14

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.50% Multiplier (no max)	1.50% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)



HF - Sheriff Admin after 1/1/2013: Open Division, linked to Division 20

	2023 Valuation	2022 Valuation
Benefit Multiplier:	1.50% Multiplier (no max)	1.50% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	6 years	6 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0.00%	0.00%
Act 88:	Yes (Adopted 12/8/1970)	Yes (Adopted 12/8/1970)

Table 3: Participant Summary

Division	2023 Valuation		2022 Valuation		2023 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
01 - General							
Active Employees	0	\$ 0	0	\$ 0	0.0	0.0	0.0
Vested Former Employees	1	797	1	797	57.8	1.9	11.8
Retirees and Beneficiaries	10	40,408	11	41,271	76.8		
Pending Refunds	0		0				
02 - Sheriff/POAM							
Active Employees	4	\$ 228,817	7	\$ 422,584	49.6	17.2	17.2
Vested Former Employees	5	85,129	4	36,845	46.5	10.9	20.3
Retirees and Beneficiaries	29	522,694	28	459,238	68.4		
Pending Refunds	5		5				
04 - MCF							
Active Employees	38	\$ 1,768,738	46	\$ 2,041,886	53.0	19.2	19.5
Vested Former Employees	46	268,507	44	253,952	51.4	9.0	12.0
Retirees and Beneficiaries	127	1,732,761	126	1,636,321	70.1		
Pending Refunds	151		151				
10 - 911 Employees							
Active Employees	11	\$ 526,774	12	\$ 554,934	41.9	9.3	10.6
Vested Former Employees	6	59,932	4	54,680	51.0	9.3	16.2
Retirees and Beneficiaries	7	149,410	7	149,410	63.6		
Pending Refunds	15		13				
13 - GEA & TPOAM							
Active Employees	4	\$ 130,056	6	\$ 186,962	52.9	19.1	19.1
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	26	386,663	24	357,593	71.4		
Pending Refunds	7		7				
14 - Crt EEs, Exec EEs & Elctd							
Active Employees	21	\$ 1,264,580	24	\$ 1,326,044	51.7	18.5	20.0
Vested Former Employees	8	85,738	10	142,082	53.4	9.7	13.8
Retirees and Beneficiaries	62	1,325,275	58	1,246,501	68.4		
Pending Refunds	4		6				
20 - Sheriff/Adm							
Active Employees	3	\$ 218,108	3	\$ 211,444	43.5	20.9	20.9
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	7	257,432	7	257,432	65.0		
Pending Refunds	0		0				

Table 3 (continued)

Division	2023 Valuation		2022 Valuation		2023 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
HA - AFSCME hired aft 10/01/2011							
Active Employees	23	\$ 749,417	24	\$ 765,785	43.3	3.8	3.8
Vested Former Employees	0	0	1	581	0.0	0.0	0.0
Retirees and Beneficiaries	1	2,110	1	2,110	71.1		
Pending Refunds	0		0				
HB - Sheriff POAM (POLC) af 10/1/1							
Active Employees	26	\$ 1,266,443	26	\$ 1,157,648	38.5	4.1	4.8
Vested Former Employees	8	15,428	9	16,478	40.9	2.8	10.6
Retirees and Beneficiaries	1	908	1	908	63.4		
Pending Refunds	0		0				
HC - Executive after 10/1/2012							
Active Employees	22	\$ 1,174,435	22	\$ 1,236,717	46.9	2.8	4.0
Vested Former Employees	7	35,992	4	18,853	44.2	5.0	12.0
Retirees and Beneficiaries	0	0	0	0	0.0		
Pending Refunds	0		0				
HE - Court EEs hired af 11/1/2012							
Active Employees	18	\$ 839,236	17	\$ 793,687	41.7	3.6	4.6
Vested Former Employees	4	9,822	3	8,921	48.2	4.1	8.3
Retirees and Beneficiaries	4	26,073	2	6,981	64.8		
Pending Refunds	0		0				
HF - Sheriff Admin after 1/1/2013							
Active Employees	0	\$ 0	1	\$ 52,358	0.0	0.0	0.0
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
Pending Refunds	0		0				
Total Municipality							
Active Employees	170	\$ 8,166,604	188	\$ 8,750,049	46.4	10.3	11.0
Vested Former Employees	85	561,345	80	533,189	49.6	8.0	12.6
Retirees and Beneficiaries	274	4,443,734	265	4,157,765	69.5		
Pending Refunds	<u>182</u>		<u>182</u>				
Total Participants	711		715				

¹ Annual payroll for active employees; annual deferred benefits payable for vested former employees; annual benefits being paid for retirees and beneficiaries.

² Descriptions can be found under Miscellaneous and Technical Assumptions in the Appendix.

Table 4: Reported Assets (Market Value)

Division	2023 Valuation		2022 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
01 - General	\$ 1,699,478	\$ 0	\$ 1,570,037	\$ 0
02 - Sheriff/POAM	4,822,561	691,193	4,257,481	741,492
04 - MCF	15,656,753	1,308,890	14,648,547	1,304,981
10 - 911 Employees	2,208,285	187,918	2,056,897	165,688
13 - GEA & TPOAM	2,197,920	201,033	2,101,762	263,262
14 - Crt EEs, Exec EEs & Elctd	10,180,142	770,114	9,538,360	824,028
20 - Sheriff/Adm	2,046,986	219,578	1,945,820	203,555
HA - AFSCME hired aft 10/01/2011	345,531	0	276,618	0
HB - Sheriff POAM (POLC) af 10/1/1	634,997	9	495,028	9
HC - Executive after 10/1/2012	567,325	0	415,662	0
HE - Court EEs hired af 11/1/2012	564,196	0	433,727	0
HF - Sheriff Admin after 1/1/2013	7,303	0	5,035	0
Municipality Total³	\$ 40,931,477	\$ 3,378,736	\$ 37,744,973	\$ 3,503,015
Combined Assets³	\$44,310,212		\$41,247,988	

¹ Reserve for Employer Contributions and Benefit Payments.

² Reserve for Employee Contributions.

³ Totals may not add due to rounding.

The December 31, 2023 valuation assets (actuarial value of assets) are equal to 1.099555 times the reported market value of assets (compared to 1.157665 as of December 31, 2022). Refer to the Appendix for a description of the valuation asset derivation and a detailed calculation of valuation assets.

Table 5: Flow of Valuation Assets

Year Ended 12/31	Employer Contributions		Employee Contributions	Investment Income (Valuation Assets)	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
	Required	Additional						
2013	\$ 1,277,307	\$ 0	\$ 309,257	\$ 1,925,047	\$ (1,979,373)	\$ (33,091)	\$ 36,130	\$ 33,041,455
2014	1,304,362	0	407,374	1,915,524	(2,197,586)	(37,483)	48,038	34,481,684
2015	1,352,930	0	381,789	1,718,738	(2,505,464)	(15,796)	0	35,413,881
2016	1,341,154	500,003	452,068	1,888,489	(2,653,542)	(17,468)	29,238	36,953,823
2017	1,432,569	1,520,347	442,134	2,330,111	(2,931,537)	(118,993)	0	39,628,454
2018	1,578,670	411,368	410,390	1,460,302	(3,151,109)	(18,639)	0	40,319,436
2019	1,635,531	9,801	372,659	1,879,151	(3,324,184)	(70,767)	0	40,821,627
2020	1,674,295	0	338,966	3,185,456	(3,667,714)	(26,719)	19,769	42,345,680
2021	1,942,066	0	289,338	7,111,766	(3,936,965)	(23,149)	0	47,728,736
2022	2,339,798	0	258,993	1,549,507	(4,091,206)	(34,475)	0	47,751,353
2023	2,514,417	0	235,336	2,338,459	(4,264,007)	(1,954)	147,911	48,721,515

Notes:

Transfers in and out are usually related to the transfer of participants between municipalities, and to employer and employee payments for service credit purchases (if any) that the governing body has approved.

The investment income column reflects the recognized investment income based on Valuation Assets. It does not reflect the market value investment return in any given year.

The Valuation Asset balance includes assets from Surplus divisions, if any.

Years where historical information is not available will be displayed with zero values.

**Table 6: Actuarial Accrued Liabilities and Valuation Assets
as of December 31, 2023**

Division	Actuarial Accrued Liability					Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
	Active Employees	Vested Former Employees	Retirees and Beneficiaries	Pending Refunds	Total			
01 - General	\$ 0	\$ 8,121	\$ 386,574	\$ 0	\$ 394,695	\$ 1,868,670	473.4%	\$ (1,473,975)
02 - Sheriff/POAM	1,142,588	844,315	6,720,401	13,368	8,720,672	6,062,676	69.5%	2,657,996
04 - MCF	6,605,848	1,926,861	17,865,347	124,945	26,523,001	18,654,658	70.3%	7,868,343
10 - 911 Employees	1,065,471	370,165	1,686,421	10,840	3,132,897	2,634,756	84.1%	498,141
13 - GEA & TPOAM	616,603	0	3,797,899	8,101	4,422,603	2,637,781	59.6%	1,784,822
14 - Crt EEs, Exec EEs & Elctd	5,605,996	695,069	14,059,623	11,494	20,372,182	12,040,408	59.1%	8,331,774
20 - Sheriff/Adm	1,146,355	0	3,022,997	0	4,169,352	2,492,212	59.8%	1,677,140
HA - AFSCME hired aft 10/01/2011	354,452	0	20,763	0	375,215	379,930	101.3%	(4,715)
HB - Sheriff POAM (POLC) af 10/1/1	611,958	61,816	10,512	0	684,286	698,225	102.0%	(13,939)
HC - Executive after 10/1/2012	422,945	185,661	0	0	608,606	623,805	102.5%	(15,199)
HE - Court EEs hired af 11/1/2012	373,329	83,790	312,352	0	769,471	620,364	80.6%	149,107
HF - Sheriff Admin after 1/1/2013	0	0	0	0	0	8,030	0.0%	(8,030)
Total	\$ 17,945,545	\$ 4,175,798	\$ 47,882,889	\$ 168,748	\$ 70,172,980	\$ 48,721,515	69.4%	\$ 21,451,465



The following results show the combined accrued liabilities and assets for each set of linked divisions. These results are already shown in the table on the prior page(s).

Table 6 (continued)

Division	Actuarial Accrued Liability					Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
	Active Employees	Vested Former Employees	Retirees and Beneficiaries	Pending Refunds	Total			
Linked Divisions HA, 13	\$ 971,055	\$ 0	\$ 3,818,662	\$ 8,101	\$ 4,797,818	\$ 3,017,711	62.9%	\$ 1,780,107
Linked Divisions HB, 02	1,754,546	906,131	6,730,913	13,368	9,404,958	6,760,901	71.9%	2,644,057
Linked Divisions HE, 14	5,979,325	778,859	14,371,975	11,494	21,141,653	12,660,772	59.9%	8,480,881
Linked Divisions HF, 20	1,146,355	0	3,022,997	0	4,169,352	2,500,242	60.0%	1,669,110

Please see the Comments on Asset Smoothing in the Executive Summary of this report.

The December 31, 2023 valuation assets (actuarial value of assets) are equal to 1.099555 times the reported market value of assets. Refer to the Appendix for a description of the valuation asset derivation and a detailed calculation of valuation assets.



Table 7: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2009	\$ 34,479,961	\$ 26,970,458	78%	\$ 7,509,503
2010	36,592,533	28,836,132	79%	7,756,401
2011	39,228,060	30,256,558	77%	8,971,502
2012	41,258,320	31,506,178	76%	9,752,142
2013	43,329,826	33,041,455	76%	10,288,371
2014	46,145,483	34,481,684	75%	11,663,799
2015	50,527,189	35,413,881	70%	15,113,308
2016	52,648,167	36,953,823	70%	15,694,344
2017	53,852,149	39,628,454	74%	14,223,695
2018	55,632,646	40,319,436	72%	15,313,210
2019	59,481,476	40,821,627	69%	18,659,849
2020	63,321,296	42,345,680	67%	20,975,616
2021	66,354,793	47,728,736	72%	18,626,057
2022	67,808,552	47,751,353	70%	20,057,199
2023	70,172,980	48,721,515	69%	21,451,465

Notes: Actuarial assumptions were revised for the 2009, 2010, 2011, 2012, 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The Valuation Assets include assets from Surplus divisions, if any.

Years where historical information is not available will be displayed with zero values.

Throughout this report are references to valuation results generated prior to the 2018 valuation date. Results prior to 2018 were received directly from the prior actuary or extracted from the previous valuation system by MERS's technology service provider.

Tables 8 and 9: Division-Based Comparative Schedules

Division 01 - General

Table 8-01: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 564,145	\$ 1,359,509	241%	\$ (795,364)
2014	507,088	1,430,025	282%	(922,937)
2015	502,337	1,440,539	287%	(938,202)
2016	498,842	1,456,894	292%	(958,052)
2017	454,497	1,492,154	328%	(1,037,657)
2018	447,353	1,495,422	334%	(1,048,069)
2019	443,004	1,515,338	342%	(1,072,334)
2020	450,012	1,583,502	352%	(1,133,490)
2021	422,945	1,804,209	427%	(1,381,264)
2022	402,514	1,817,577	452%	(1,415,063)
2023	394,695	1,868,670	473%	(1,473,975)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-01: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	0	\$ 0	\$ 0	0.00%
2014	0	0	\$ 0	0.00%
2015	0	0	\$ 0	0.00%
2016	0	0	\$ 0	0.00%
2017	0	0	\$ 0	0.00%
2018	0	0	\$ 0	0.00%
2019	0	0	\$ 0	0.00%
2020	0	0	\$ 0	0.00%
2021	0	0	\$ 0	0.00%
2022	0	0	\$ 0	0.00%
2023	0	0	\$ 0	0.00%

1 For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

2 For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.



Division 02 - Sheriff/POAM

Table 8-02: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 5,468,332	\$ 3,834,273	70%	\$ 1,634,059
2014	5,931,070	4,046,642	68%	1,884,428
2015	6,586,413	4,228,912	64%	2,357,501
2016	7,037,269	4,434,596	63%	2,602,673
2017	6,814,568	4,822,537	71%	1,992,031
2018	7,225,939	4,937,551	68%	2,288,388
2019	7,748,531	5,026,455	65%	2,722,076
2020	7,802,719	5,066,567	65%	2,736,152
2021	8,253,656	5,761,560	70%	2,492,096
2022	8,358,664	5,787,136	69%	2,571,528
2023	8,720,672	6,062,676	70%	2,657,996

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-02: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	22	\$ 1,093,007	\$ 14,572	7.84%
2014	20	1,026,719	\$ 14,709	9.57%
2015	20	1,041,121	\$ 16,695	12.28%
2016	19	1,017,465	\$ 18,431	12.28%
2017	13	684,175	\$ 13,473	12.28%
2018	12	662,563	\$ 16,095	12.28%
2019	11	636,503	\$ 20,035	12.28%
2020	10	562,251	\$ 20,575	12.28%
2021	7	413,301	\$ 18,458	12.28%
2022	7	422,584	\$ 19,964	12.28%
2023	4	228,817	\$ 20,177	14.88%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 04 - MCF

Table 8-04: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 16,420,741	\$ 13,104,416	80%	\$ 3,316,325
2014	17,578,284	13,599,449	77%	3,978,835
2015	19,249,440	13,964,801	73%	5,284,639
2016	20,478,886	15,051,580	74%	5,427,306
2017	21,176,376	15,457,170	73%	5,719,206
2018	21,792,343	15,970,748	73%	5,821,595
2019	23,177,885	16,140,401	70%	7,037,484
2020	24,920,958	16,645,785	67%	8,275,173
2021	25,615,303	18,615,862	73%	6,999,441
2022	25,777,315	18,468,841	72%	7,308,474
2023	26,523,001	18,654,658	70%	7,868,343

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-04: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	132	\$ 4,526,071	11.39%	2.07%
2014	128	4,762,440	10.88%	3.24%
2015	133	4,764,948	12.25%	4.22%
2016	132	4,658,970	12.17%	4.85%
2017	111	4,308,541	\$ 51,890	4.85%
2018	89	3,771,863	\$ 52,810	4.85%
2019	77	3,343,516	\$ 65,459	4.85%
2020	61	2,765,811	\$ 76,613	4.85%
2021	53	2,293,216	\$ 63,499	4.85%
2022	46	2,041,886	\$ 69,331	4.85%
2023	38	1,768,738	\$ 78,770	4.85%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 10 - 911 Employees

Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 1,294,055	\$ 1,308,870	101%	\$ (14,815)
2014	1,400,025	1,433,088	102%	(33,063)
2015	1,624,420	1,557,858	96%	66,562
2016	1,793,355	1,694,038	95%	99,317
2017	1,893,930	1,834,727	97%	59,203
2018	2,114,286	1,924,224	91%	190,062
2019	2,248,159	2,031,964	90%	216,195
2020	2,519,890	2,186,747	87%	333,143
2021	2,700,088	2,526,877	94%	173,211
2022	2,941,552	2,573,009	87%	368,543
2023	3,132,897	2,634,756	84%	498,141

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-10: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	11	\$ 460,819	6.97%	2.52%
2014	10	431,427	6.72%	2.52%
2015	12	511,836	8.33%	2.52%
2016	12	544,795	8.62%	2.52%
2017	11	455,744	8.20%	2.52%
2018	10	492,728	10.56%	2.52%
2019	9	467,126	11.55%	2.52%
2020	13	551,980	12.74%	2.52%
2021	13	591,695	10.67%	2.52%
2022	12	554,934	14.17%	2.52%
2023	11	526,774	16.87%	2.52%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 13 - GEA & TPOAM

Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 3,602,669	\$ 2,668,206	74%	\$ 934,463
2014	3,884,839	2,823,151	73%	1,061,688
2015	4,261,728	2,852,966	67%	1,408,762
2016	4,479,273	2,850,355	64%	1,628,918
2017	4,422,418	2,974,420	67%	1,447,998
2018	4,334,604	2,881,453	66%	1,453,151
2019	4,216,097	2,658,691	63%	1,557,406
2020	4,397,054	2,657,639	60%	1,739,415
2021	4,409,929	2,867,622	65%	1,542,307
2022	4,329,763	2,737,905	63%	1,591,858
2023	4,422,603	2,637,781	60%	1,784,822

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-13: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	26	\$ 767,554	\$ 8,413	4.71%
2014	25	756,257	\$ 9,354	4.71%
2015	21	633,618	\$ 10,768	5.99%
2016	17	556,935	\$ 11,928	5.99%
2017	14	433,489	\$ 9,777	7.87%
2018	12	387,391	\$ 8,750	15.00%
2019	8	259,655	\$ 9,839	18.00%
2020	8	263,924	\$ 11,546	18.00%
2021	6	186,163	\$ 10,106	18.00%
2022	6	186,962	\$ 10,974	18.00%
2023	4	130,056	\$ 12,992	18.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 14 - Crt EEs, Exec EEs & Elctd

Table 8-14: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 7,009,083	\$ 5,116,441	73%	\$ 1,892,642
2014	7,342,963	5,352,120	73%	1,990,843
2015	7,916,423	5,461,975	69%	2,454,448
2016	8,131,379	5,499,335	68%	2,632,044
2017	8,060,872	5,597,612	69%	2,463,260
2018	15,900,480	10,538,990	66%	5,361,490
2019	17,379,867	10,651,538	61%	6,728,329
2020	18,401,640	10,828,807	59%	7,572,833
2021	19,378,053	12,100,548	62%	7,277,505
2022	19,995,461	11,996,173	60%	7,999,288
2023	20,372,182	12,040,408	59%	8,331,774

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-14: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	32	\$ 1,423,975	\$ 18,681	3.28%
2014	25	1,160,842	\$ 18,142	3.28%
2015	22	940,869	\$ 20,985	3.28%
2016	16	709,590	\$ 20,482	3.28%
2017	14	600,580	\$ 18,977	3.28%
2018	31	1,512,283	\$ 45,135	3.28%
2019	30	1,490,650	\$ 55,147	3.28%
2020	29	1,473,627	\$ 61,669	3.28%
2021	27	1,444,935	\$ 59,394	3.28%
2022	24	1,326,044	\$ 65,876	3.28%
2023	21	1,264,580	\$ 70,138	3.28%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division 20 - Sheriff/Adm

Table 8-20: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 2,375,062	\$ 1,695,294	71%	\$ 679,768
2014	2,498,228	1,743,985	70%	754,243
2015	2,650,198	1,764,453	67%	885,745
2016	2,812,536	1,788,398	64%	1,024,138
2017	3,177,879	2,048,920	65%	1,128,959
2018	3,245,219	2,018,135	62%	1,227,084
2019	3,492,724	2,017,604	58%	1,475,120
2020	3,757,455	2,288,415	61%	1,469,040
2021	4,070,893	2,531,201	62%	1,539,692
2022	4,053,825	2,488,257	61%	1,565,568
2023	4,169,352	2,492,212	60%	1,677,140

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-20: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	4	\$ 235,773	\$ 4,702	2.88%
2014	3	187,431	\$ 5,042	2.88%
2015	3	189,048	\$ 6,100	2.88%
2016	2	123,445	\$ 6,688	2.88%
2017	4	252,043	\$ 8,282	2.88%
2018	4	258,041	\$ 9,075	2.88%
2019	3	184,940	\$ 10,825	2.88%
2020	3	185,616	\$ 11,403	2.88%
2021	3	221,128	\$ 12,436	2.88%
2022	3	211,444	\$ 12,954	2.88%
2023	3	218,108	\$ 14,325	2.88%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HA - AFSCME hired aft 10/01/2011

Table 8-HA: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 4,466	\$ 4,510	101%	\$ (44)
2014	13,473	8,618	64%	4,855
2015	20,165	19,966	99%	199
2016	40,714	37,723	93%	2,991
2017	59,787	61,351	103%	(1,564)
2018	86,478	90,133	104%	(3,655)
2019	102,450	130,488	127%	(28,038)
2020	165,153	182,030	110%	(16,877)
2021	234,081	255,258	109%	(21,177)
2022	329,450	320,231	97%	9,219
2023	375,215	379,930	101%	(4,715)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HA: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	4	\$ 69,578	9.02%	0.00%
2014	5	80,788	8.79%	0.00%
2015	8	160,598	8.23%	0.00%
2016	10	238,032	8.26%	0.00%
2017	12	272,339	7.03%	0.00%
2018	13	312,002	7.16%	0.00%
2019	21	483,717	6.82%	0.00%
2020	18	482,621	7.33%	0.00%
2021	21	585,223	7.72%	0.00%
2022	24	765,785	8.15%	0.00%
2023	23	749,417	8.35%	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HB - Sheriff POAM (POLC) af 10/1/1

Table 8-HB: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 8,802	\$ 9,020	103%	\$ (218)
2014	27,066	23,874	88%	3,192
2015	53,123	45,931	87%	7,192
2016	96,983	80,038	83%	16,945
2017	102,701	124,915	122%	(22,214)
2018	154,162	181,155	118%	(26,993)
2019	206,548	248,376	120%	(41,828)
2020	277,920	347,361	125%	(69,441)
2021	389,337	476,511	122%	(87,174)
2022	505,233	573,087	113%	(67,854)
2023	684,286	698,225	102%	(13,939)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HB: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	6	\$ 179,423	6.60%	0.00%
2014	8	252,324	6.61%	0.00%
2015	8	293,975	6.61%	0.00%
2016	13	463,571	6.59%	0.00%
2017	18	662,190	7.23%	0.00%
2018	20	766,305	6.98%	0.00%
2019	22	897,046	6.72%	0.00%
2020	22	960,815	6.65%	0.00%
2021	21	935,528	6.51%	0.00%
2022	26	1,157,648	6.80%	0.00%
2023	26	1,266,443	7.45%	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HC - Executive after 10/1/2012

Table 8-HC: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 4,925	\$ 4,605	94%	\$ 320
2014	18,074	12,556	70%	5,518
2015	35,437	22,984	65%	12,453
2016	58,863	38,002	65%	20,861
2017	85,173	60,584	71%	24,589
2018	122,751	92,982	76%	29,769
2019	208,012	164,248	79%	43,764
2020	269,854	245,650	91%	24,204
2021	392,363	364,507	93%	27,856
2022	505,513	481,198	95%	24,315
2023	608,606	623,805	102%	(15,199)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HC: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	3	\$ 77,372	6.97%	0.00%
2014	4	142,298	8.25%	0.00%
2015	4	149,735	8.01%	0.00%
2016	4	171,115	7.99%	0.00%
2017	4	212,254	7.49%	0.00%
2018	8	404,259	8.08%	0.00%
2019	15	856,179	7.93%	0.00%
2020	14	726,926	7.79%	0.00%
2021	18	991,313	8.43%	0.00%
2022	22	1,236,717	8.60%	0.00%
2023	22	1,174,435	8.74%	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HE - Court EEs hired af 11/1/2012

Table 8-HE: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 4,817	\$ 3,687	77%	\$ 1,130
2014	13,377	13,770	103%	(393)
2015	47,272	38,554	82%	8,718
2016	91,941	82,439	90%	9,502
2017	141,089	133,066	94%	8,023
2018	209,031	188,643	90%	20,388
2019	258,199	236,524	92%	21,675
2020	358,641	313,177	87%	45,464
2021	488,145	422,656	87%	65,489
2022	606,097	502,110	83%	103,987
2023	769,471	620,364	81%	149,107

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HE: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	2	\$ 74,441	7.34%	0.00%
2014	6	207,654	7.98%	0.00%
2015	8	366,760	8.12%	0.00%
2016	10	484,997	7.46%	0.00%
2017	13	586,320	7.55%	0.00%
2018	13	605,975	7.49%	0.00%
2019	13	631,339	7.42%	0.00%
2020	15	717,141	8.42%	0.00%
2021	16	753,731	8.63%	0.00%
2022	17	793,687	8.69%	0.00%
2023	18	839,236	8.92%	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Division HF - Sheriff Admin after 1/1/2013

Table 8-HF: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	\$ 0	\$ 0	0%	\$ 0
2014	0	0	0%	0
2015	0	0	0%	0
2016	0	0	0%	0
2017	0	0	0%	0
2018	0	0	0%	0
2019	0	0	0%	0
2020	0	0	0%	0
2021	0	1,925	0%	(1,925)
2022	3,165	5,829	184%	(2,664)
2023	0	8,030	0%	(8,030)

Notes: Actuarial assumptions were revised for the 2015, 2019, 2020, 2021 and 2023 actuarial valuations.

The percent funded does not reflect valuation assets from Surplus divisions, if any.

Table 9-HF: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2013	0	\$ 0	\$ 0	0.00%
2014	0	0	\$ 0	0.00%
2015	0	0	\$ 0	0.00%
2016	0	0	\$ 0	0.00%
2017	0	0	\$ 0	0.00%
2018	0	0	0.00%	0.00%
2019	0	0	0.00%	0.00%
2020	0	0	0.00%	0.00%
2021	1	44,275	4.75%	0.00%
2022	1	52,358	4.68%	0.00%
2023	0	0	0.00%	0.00%

¹ For open divisions, a percent of pay contribution is shown. For closed divisions, a monthly dollar contribution is shown.

² For each valuation year, the computed employer contribution is based on the employee rate. If the employee rate changes during the applicable fiscal year, the computed employer contribution will be adjusted.

Note: The contributions shown in Table 9 reflect the employer contribution requirement without phase-in. If applicable, the current phase-in contribution is shown in Table 1.

See the Benefit Provision History, later in this report, for past benefit provision changes.

Years where historical information is not available will be displayed with zero values.

Table 10: Division-Based Layered Amortization Schedule

Division 01 - General

Table 10-01: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ (938,202)	10	\$ (667,199)	7	\$ (109,956)
(Gain)/Loss	12/31/2016	52,943	10	25,921	3	9,276
(Gain)/Loss	12/31/2017	(38,384)	10	(23,705)	4	(6,480)
(Gain)/Loss	12/31/2018	(147,162)	10	(107,506)	5	(23,928)
(Gain)/Loss	12/31/2019	(189,813)	10	(156,448)	6	(29,544)
Assumption	12/31/2019	12,897	10	16,459	6	3,108
Experience	12/31/2020	(120,597)	10	(110,397)	7	(18,192)
Experience	12/31/2021	(307,831)	10	(304,854)	8	(44,748)
Experience	12/31/2022	(128,508)	10	(136,524)	9	(18,132)
Experience	12/31/2023	(171,733)	10	(193,098)	10	(23,496)
Total				\$ (1,657,351)		\$ (262,092)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 02 - Sheriff/POAM

Table 10-02: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 2,357,501	23	\$ 2,370,716	15	\$ 209,616
(Gain)/Loss	12/31/2016	203,355	22	223,923	15	19,800
(Gain)/Loss	12/31/2017	(663,621)	21	(725,868)	15	(64,176)
(Gain)/Loss	12/31/2018	313,933	20	341,829	15	30,228
(Gain)/Loss	12/31/2019	153,610	19	165,808	15	14,664
Assumption	12/31/2019	282,173	19	288,273	15	25,488
Experience	12/31/2020	(36,338)	18	(39,483)	15	(3,492)
Experience	12/31/2021	(273,852)	17	(298,629)	15	(26,400)
Experience	12/31/2022	128,754	16	142,383	15	12,588
Experience	12/31/2023	123,979	15	139,403	15	12,324
Total				\$ 2,608,355		\$ 230,640

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Table 10-04: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 5,284,639	23	\$ 5,663,393	11	\$ 637,416
(Gain)/Loss	12/31/2016	(690,714)	22	(698,087)	11	(78,576)
Amendment	12/31/2016	(28,629)	22	(28,934)	11	(3,252)
(Gain)/Loss	12/31/2017	193,774	19	194,539	11	21,900
(Gain)/Loss	12/31/2018	37,992	17	38,159	11	4,296
(Gain)/Loss	12/31/2019	476,974	15	479,275	11	53,940
Assumption	12/31/2019	699,599	15	663,845	11	74,712
Experience	12/31/2020	1,183,771	14	1,214,476	11	136,692
Experience	12/31/2021	(1,392,123)	13	(1,457,173)	11	(164,004)
Experience	12/31/2022	524,269	12	567,144	11	63,828
Experience	12/31/2023	824,301	11	926,851	11	104,316
Total				\$ 7,563,488		\$ 851,268

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 10 - 911 Employees

Table 10-10: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 66,562	23	\$ 79,384	15	\$ 7,020
(Gain)/Loss	12/31/2016	25,040	22	27,580	15	2,436
(Gain)/Loss	12/31/2017	(49,368)	21	(53,980)	15	(4,776)
(Gain)/Loss	12/31/2018	132,371	20	144,115	15	12,744
(Gain)/Loss	12/31/2019	(53,292)	19	(57,538)	15	(5,088)
Assumption	12/31/2019	71,263	19	75,945	15	6,720
Experience	12/31/2020	107,875	18	117,195	15	10,368
Experience	12/31/2021	(170,134)	17	(185,531)	15	(16,404)
Experience	12/31/2022	203,839	16	225,411	15	19,932
Experience	12/31/2023	128,196	15	144,145	15	12,744
Total				\$ 516,726		\$ 45,696

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 13 - GEA & TPOAM

Table 10-13: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 1,408,762	23	\$ 1,435,873	15	\$ 126,960
(Gain)/Loss	12/31/2016	179,396	22	197,546	15	17,472
(Gain)/Loss	12/31/2017	(216,493)	21	(236,791)	15	(20,940)
Amendment	12/31/2017	(4,427)	21	(4,812)	15	(420)
(Gain)/Loss	12/31/2018	7,588	20	8,267	15	732
Amendment	12/31/2018	(9,528)	20	(10,368)	15	(912)
(Gain)/Loss	12/31/2019	(13,029)	19	(14,059)	15	(1,248)
Assumption	12/31/2019	123,810	19	124,122	15	10,980
Amendment	12/31/2019	(2,916)	19	(3,143)	15	(276)
Experience	12/31/2020	174,058	18	189,108	15	16,716
Experience	12/31/2021	(221,092)	17	(241,098)	15	(21,324)
Experience	12/31/2022	71,700	16	79,285	15	7,008
Experience	12/31/2023	220,222	15	247,620	15	21,900
Total				\$ 1,771,550		\$ 156,648

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division 14 - Crt EEs, Exec EEs & Elctd

Table 10-14: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 2,454,448	23	\$ 2,491,104	15	\$ 220,260
(Gain)/Loss	12/31/2016	107,697	22	118,596	15	10,488
(Gain)/Loss	12/31/2017	(212,857)	21	(232,821)	15	(20,592)
(Gain)/Loss	12/31/2018	785,470	20	855,276	15	75,624
Merger	12/31/2018			2,286,892	15	202,200
(Gain)/Loss	12/31/2019	607,015	19	655,274	15	57,936
Assumption	12/31/2019	536,960	19	537,470	15	47,520
Experience	12/31/2020	592,220	18	643,426	15	56,892
Experience	12/31/2021	(427,475)	17	(466,142)	15	(41,220)
Experience	12/31/2022	791,586	16	875,370	15	77,400
Experience	12/31/2023	388,887	15	437,268	15	38,664
Total				\$ 8,201,713		\$ 725,172

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Table 10-20: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 885,745	23	\$ 903,833	15	\$ 79,920
(Gain)/Loss	12/31/2016	110,882	22	122,089	15	10,800
(Gain)/Loss	12/31/2017	80,741	21	88,314	15	7,812
(Gain)/Loss	12/31/2018	76,649	20	83,466	15	7,380
(Gain)/Loss	12/31/2019	111,119	19	119,938	15	10,608
Assumption	12/31/2019	120,035	19	120,520	15	10,656
Experience	12/31/2020	(27,578)	18	(29,966)	15	(2,652)
Experience	12/31/2021	55,456	17	60,466	15	5,352
Experience	12/31/2022	38,697	16	42,786	15	3,780
Experience	12/31/2023	123,118	15	138,435	15	12,240
Total				\$ 1,649,881		\$ 145,896

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HA - AFSCME hired aft 10/01/2011

Table 10-HA: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Experience	12/31/2023	\$ (4,357)	15	\$ (4,899)	15	\$ (432)
Total				\$ (4,899)		\$ (432)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HB - Sheriff POAM (POLC) af 10/1/1

Table 10-HB: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
(Gain)/Loss	12/31/2017	\$ (23,700)	15	\$ (21,870)	9	\$ (2,904)
(Gain)/Loss	12/31/2018	(2,349)	15	(2,278)	10	(276)
(Gain)/Loss	12/31/2019	(14,683)	15	(14,740)	11	(1,656)
Assumption	12/31/2019	2,200	15	2,483	11	276
Experience	12/31/2020	(27,110)	15	(28,318)	12	(2,976)
Experience	12/31/2021	(15,435)	15	(16,540)	13	(1,632)
Experience	12/31/2022	20,403	15	22,465	14	2,088
Experience	12/31/2023	51,022	15	57,370	15	5,076
Total				\$ (1,428)		\$ (2,004)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HC - Executive after 10/1/2012

Table 10-HC: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Experience	12/31/2023	\$ (18,635)	15	\$ (20,953)	15	\$ (1,848)
Total				\$ (20,953)		\$ (1,848)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HE - Court EEs hired af 11/1/2012

Table 10-HE: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Initial	12/31/2015	\$ 8,718	23	\$ 12,091	15	\$ 1,068
(Gain)/Loss	12/31/2016	(4,569)	22	(5,018)	15	(444)
(Gain)/Loss	12/31/2017	498	21	529	15	48
(Gain)/Loss	12/31/2018	12,533	20	13,652	15	1,212
(Gain)/Loss	12/31/2019	(5,323)	19	(5,744)	15	(504)
Assumption	12/31/2019	5,521	19	5,851	15	516
Experience	12/31/2020	23,038	18	25,020	15	2,208
Experience	12/31/2021	18,128	17	19,768	15	1,752
Experience	12/31/2022	36,234	16	40,068	15	3,540
Experience	12/31/2023	42,156	15	47,401	15	4,188
Total				\$ 153,618		\$ 13,584

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

Division HF - Sheriff Admin after 1/1/2013

Table 10-HF: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance ¹	Original Amortization Period ²	Amounts for Fiscal Year Beginning 10/1/2025		
				Outstanding UAL Balance ³	Remaining Amortization Period ²	Annual Amortization Payment
Experience	12/31/2021	\$ (1,925)	15	\$ (2,057)	13	\$ (204)
Experience	12/31/2022	(605)	15	(667)	14	(60)
Experience	12/31/2023	(5,224)	15	(5,874)	15	(516)
Total				\$ (8,598)		\$ (780)

¹ For each type of UAL (layer), this is the original balance as of the date the layer was established.

² According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see Appendix on MERS website).

³ This is the remaining balance as of the valuation date, projected to the beginning of the fiscal year shown above.

The unfunded accrued liability (UAL) as of December 31, 2023 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2023 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

Note: The original balance and original amortization periods prior to 12/31/2018 were received from the prior actuary.

GASB Statement No. 68 Information

The following information has been prepared to provide some of the information necessary to complete GASB Statement No. 68 disclosures. GASB Statement No. 68 is effective for fiscal years beginning after June 15, 2014. Additional resources, including an Implementation Guide, are available at <http://www.mersofmich.com/>.

Actuarial Valuation Date:		12/31/2023
Measurement Date of the Total Pension Liability (TPL):		12/31/2023
At 12/31/2023, the following employees were covered by the benefit terms:		
Inactive employees or beneficiaries currently receiving benefits:		274
Inactive employees entitled to but not yet receiving benefits (including refunds):		267
Active employees:		<u>170</u>
		711
Total Pension Liability as of 12/31/2022 measurement date:	\$	66,042,115
Total Pension Liability as of 12/31/2023 measurement date:	\$	68,350,235
Service Cost for the year ending on the 12/31/2023 measurement date:	\$	787,350
Change in the Total Pension Liability due to:		
- Benefit changes ¹ :	\$	(3,173)
- Differences between expected and actual experience ² :	\$	632,075
- Changes in assumptions ² :	\$	495,875
Average expected remaining service lives of all employees (active and inactive):		2

¹ A change in liability due to benefit changes is immediately recognized when calculating pension expense for the year.

² Changes in liability due to differences between actual and expected experience, and changes in assumptions, are recognized in pension expense over the average remaining service lives of all employees.

Covered employee payroll (Needed for Required Supplementary Information):	\$	8,166,604
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Note: Covered employee payroll may differ from the GASB Statement No. 68 definition.

Sensitivity of the Net Pension Liability to changes in the discount rate:

	1% Decrease (6.18%)	Current Discount Rate (7.18%)	1% Increase (8.18%)
Change in Net Pension Liability as of 12/31/2023:	\$ 7,814,128	\$ 0	\$ (6,544,890)

Note: The current discount rate shown for GASB Statement No. 68 purposes is higher than the MERS assumed rate of return. This is because for GASB Statement No. 68 purposes, the discount rate must be gross of administrative expenses, whereas for funding purposes it is net of administrative expenses.



Benefit Provision History

The following benefit provision history is provided by MERS. Any corrections to this history or discrepancies between this information and information displayed elsewhere in the valuation report should be reported to MERS. All provisions are listed by date of adoption.

01 - General

1/1/2021	Voter-Elected Officials - Included
1/1/2021	FMLA - Service Granted
1/1/2021	Appointed Officials - Included
1/1/2021	Contract Employees - Included
1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 40 hours
1/1/2021	Custom Wages
12/1/2016	Service Credit Purchase Estimates - Yes
3/21/2013	Fiscal Month - October
7/1/1996	2.00% Multiplier
9/1/1992	Temporary 6 Year Vesting (09/01/1992 - 11/03/1992)
1/1/1992	8 Year Vesting
4/15/1986	Day of work defined as 4 Hours a Day for All employees.
1/1/1984	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1970	1.20% Multiplier on FAC < \$4,200 and 1.70% Multiplier on FAC > \$4,200
12/1/1964	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1964	10 Year Vesting
12/1/1964	1.00% Multiplier on FAC < \$4,200 and 1.50% Multiplier on FAC > \$4,200
12/1/1964	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

02 - Sheriff/POAM

10/1/2023	Participant Contribution Rate 14.88%
1/1/2021	FMLA - Service Granted
1/1/2021	Public Safety Employees - Yes
1/1/2021	Other Leave - Service Granted
1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 40 hours
1/1/2021	Custom Wages
12/1/2016	Service Credit Purchase Estimates - Yes
10/1/2015	Participant Contribution Rate 12.28%
1/1/2014	Member Contribution Rate 9.57%
3/21/2013	Fiscal Month - October
1/1/2013	Member Contribution Rate 7.84%
1/1/2012	Member Contribution Rate 7.54%
1/1/2011	Member Contribution Rate 7.72%
1/1/2010	Member Contribution Rate 7.91%
1/1/2009	Member Contribution Rate 5.91%
1/1/2008	Member Contribution Rate 4.77%
1/1/2007	E2 2.5% COLA for future retirees (07/01/2006)



02 - Sheriff/POAM

7/1/2006	Member Contribution Rate 4.82%
7/1/2001	Member Contribution Rate 1.33%
10/1/1999	Member Contribution Rate 1.24%
7/1/1999	Member Contribution Rate 0.00%
10/1/1998	2.50% Multiplier (Capped at 80% of FAC)
10/1/1998	Member Contribution Rate 2.88%
1/1/1997	Temporary 2.50% Multiplier (Capped at 80% of FAC) (01/01/1997 - 04/03/1997)
1/1/1995	8 Year Vesting
1/1/1995	2.00% Multiplier
1/1/1990	Blanket Resolution (All Service)
1/1/1988	2.00% until SS age, then 1.20% on FAC < \$4,200 and 1.70% on FAC > \$4,200
1/1/1988	Benefit F50 (With 25 Years of Service)
4/15/1986	Day of work defined as 4 Hours a Day for All employees.
1/1/1984	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1970	1.20% Multiplier on FAC < \$4,200 and 1.70% Multiplier on FAC > \$4,200
12/1/1964	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1964	10 Year Vesting
12/1/1964	1.00% Multiplier on FAC < \$4,200 and 1.50% Multiplier on FAC > \$4,200
12/1/1964	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

04 - MCF

1/1/2021	Part Time Employees - Included
1/1/2021	Service Credit Qualification - 80 hours
1/1/2021	Custom Wages
12/1/2020	Non-Accelerated Amortization
4/1/2017	DC Adoption Date 04-01-2017
4/1/2017	Accelerated to 15-year Amortization
12/1/2016	Service Credit Purchase Estimates - Yes
10/1/2016	Participant Contribution Rate 4.85%
10/1/2015	Participant Contribution Rate 4.22%
1/1/2014	Member Contribution Rate 3.24%
1/1/2014	Fiscal Month - October
1/1/2013	Member Contribution Rate 2.29%
1/1/2012	Member Contribution Rate 2.07%
6/1/2011	Member Contribution Rate 1.79%
4/1/2006	Member Contribution Rate 1.09%
2/1/2006	2.00% Multiplier
1/1/2001	30 Years & Out
1/1/2001	6 Year Vesting
1/1/2001	1.70% Multiplier
4/1/1986	Member Contribution Rate 0.00%
12/8/1970	Covered by Act 88
12/1/1970	1.20% Multiplier on FAC < \$4,200 and 1.70% Multiplier on FAC > \$4,200
12/1/1964	Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1964	10 Year Vesting
12/1/1964	1.00% Multiplier on FAC < \$4,200 and 1.50% Multiplier on FAC > \$4,200



04 - MCF

12/1/1964 Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%
Normal Retirement Age (DB) - 60
Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

10 - 911 Employees

1/1/2021 FMLA - Service Granted
1/1/2021 Public Safety Employees - Yes
1/1/2021 Other Leave - Service Granted
1/1/2021 Workers Compensation - Service Granted
1/1/2021 Service Credit Qualification - 40 hours
1/1/2021 Custom Wages
12/1/2016 Service Credit Purchase Estimates - Yes
3/21/2013 Fiscal Month - October
7/1/2000 2.50% Multiplier (Capped at 80% of FAC)
7/1/2000 Member Contribution Rate 2.52%
9/1/1997 2.00% Multiplier
1/1/1992 8 Year Vesting
4/15/1986 Day of work defined as 4 Hours a Day for All employees.
1/1/1984 Member Contribution Rate 0.00%
12/8/1970 Covered by Act 88
12/1/1964 Benefit FAC-5 (5 Year Final Average Compensation)
12/1/1964 10 Year Vesting
12/1/1964 1.20% Multiplier on FAC < \$4,200 and 1.70% Multiplier on FAC > \$4,200
Normal Retirement Age (DB) - 60
Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

13 - GEA & TPOAM

1/1/2021 FMLA - Service Granted
1/1/2021 Other Leave - Service Granted
1/1/2021 Workers Compensation - Service Granted
1/1/2021 Service Credit Qualification - 40 hours
1/1/2021 Custom Wages
10/1/2019 Participant Contribution Rate 18%
10/1/2018 Participant Contribution Rate 15%
10/1/2017 Participant Contribution Rate 12.31%
12/1/2016 Service Credit Purchase Estimates - Yes
10/1/2016 Participant Contribution Rate 7.87%
10/1/2015 Participant Contribution Rate 5.99%
3/21/2013 Fiscal Month - October
1/1/2012 Member Contribution Rate 4.71%
7/1/1999 Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1999 8 Year Vesting
7/1/1999 2.50% Multiplier (Capped at 80% of FAC)
7/1/1999 Benefit F55 (With 20 Years of Service)
7/1/1999 Member Contribution Rate 3.56%
12/8/1970 Covered by Act 88
Normal Retirement Age (DB) - 60
Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years



14 - Crt EEs, Exec EEs & Elctd

1/1/2021	Voter-Elected Officials - Included
1/1/2021	FMLA - Service Granted
1/1/2021	Appointed Officials - Included
1/1/2021	Contract Employees - Included
1/1/2021	Other Leave - Service Granted
1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 40 hours
1/1/2021	Custom Wages
12/1/2016	Service Credit Purchase Estimates - Yes
3/21/2013	Fiscal Month - October
7/1/2000	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/2000	8 Year Vesting
7/1/2000	2.50% Multiplier (Capped at 80% of FAC)
7/1/2000	Benefit F55 (With 20 Years of Service)
7/1/2000	Member Contribution Rate 3.28%
12/8/1970	Covered by Act 88
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

20 - Sheriff/Adm

1/1/2021	Voter-Elected Officials - Included
1/1/2021	FMLA - Service Granted
1/1/2021	Appointed Officials - Included
1/1/2021	Public Safety Employees - Yes
1/1/2021	Other Leave - Service Granted
1/1/2021	Workers Compensation - Service Granted
1/1/2021	Service Credit Qualification - 40 hours
1/1/2021	Custom Wages
12/1/2016	Service Credit Purchase Estimates - Yes
3/21/2013	Fiscal Month - October
1/1/1999	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1999	8 Year Vesting
1/1/1999	2.50% Multiplier (Capped at 80% of FAC)
1/1/1999	Benefit F50 (With 25 Years of Service)
1/1/1999	Member Contribution Rate 2.88%
12/8/1970	Covered by Act 88
	Normal Retirement Age (DB) - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

HA - AFSCME hired aft 10/01/2011

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Custom Wages
1/1/2021	FMLA - Service Granted
1/1/2021	Service Credit Qualification - 40 hours
3/21/2013	Fiscal Month - October
10/1/2011	Benefit FAC-3 (3 Year Final Average Compensation)
10/1/2011	6 Year Vesting
10/1/2011	1.50% Multiplier
12/8/1970	Covered by ACT 88



HA - AFSCME hired aft 10/01/2011

Normal Retirement Age (DB) - 60
No Early Reduced Conditions

HB - Sheriff POAM (POLC) af 10/1/1

1/1/2021 Workers Compensation - Service Granted
1/1/2021 Custom Wages
1/1/2021 FMLA - Service Granted
1/1/2021 Public Safety Employees - Yes
1/1/2021 Service Credit Qualification - 40 hours
3/21/2013 Fiscal Month - October
10/1/2012 Day of work defined as 4 Hours a Day for All employees.
10/1/2012 Benefit FAC-3 (3 Year Final Average Compensation)
10/1/2012 6 Year Vesting
10/1/2012 1.50% Multiplier
10/1/2012 Benefit F55 (With 25 Years of Service)
12/8/1970 Covered by ACT 88
Normal Retirement Age (DB) - 60
No Early Reduced Conditions

HC - Executive after 10/1/2012

1/1/2021 Workers Compensation - Service Granted
1/1/2021 Custom Wages
1/1/2021 Appointed Officials - Included
1/1/2021 Contract Employees - Included
1/1/2021 FMLA - Service Granted
1/1/2021 Other Leave - Service Granted
1/1/2021 Service Credit Qualification - 40 hours
3/21/2013 Fiscal Month - October
10/1/2012 Benefit FAC-3 (3 Year Final Average Compensation)
10/1/2012 6 Year Vesting
10/1/2012 1.50% Multiplier
12/8/1970 Covered by ACT 88
Normal Retirement Age (DB) - 60
No Early Reduced Conditions

HE - Court EEs hired af 11/1/2012

1/1/2021 Workers Compensation - Service Granted
1/1/2021 Custom Wages
1/1/2021 Appointed Officials - Included
1/1/2021 Voter-Elected Officials - Included
1/1/2021 FMLA - Service Granted
1/1/2021 Other Leave - Service Granted
1/1/2021 Service Credit Qualification - 40 hours
3/21/2013 Fiscal Month - October
11/1/2012 Benefit FAC-3 (3 Year Final Average Compensation)
11/1/2012 6 Year Vesting
11/1/2012 1.50% Multiplier
12/8/1970 Covered by ACT 88
Normal Retirement Age (DB) - 60



HE - Court EEs hired af 11/1/2012

No Early Reduced Conditions

HF - Sheriff Admin after 1/1/2013

1/1/2021	Workers Compensation - Service Granted
1/1/2021	Custom Wages
1/1/2021	Appointed Officials - Included
1/1/2021	Voter-Elected Officials - Included
1/1/2021	FMLA - Service Granted
1/1/2021	Other Leave - Service Granted
1/1/2021	Public Safety Employees - Yes
1/1/2021	Service Credit Qualification - 40 hours
3/21/2013	Fiscal Month - October
1/1/2013	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/2013	6 Year Vesting
1/1/2013	1.50% Multiplier
12/8/1970	Covered by ACT 88
	Normal Retirement Age (DB) - 60
	No Early Reduced Conditions

Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

Details on MERS plan provisions, actuarial assumptions, and actuarial methodology can be found in the Appendix. Some actuarial assumptions are specific to this municipality and its divisions. These are listed below.

Increase in Final Average Compensation

Division	FAC Increase Assumption
All Divisions	1.00%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Not Linked Divisions: The default funding policy for closed not linked divisions, including open divisions with zero active members, is to follow a non-accelerated amortization, where each closed period decreases by one year each year until the period is exhausted. In select instances, closed not linked division(s) may follow an accelerated amortization policy.

Risk Commentary

Determination of the accrued liability, the employer contribution, and the funded ratio requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability, the actuarially determined contribution and the funded ratio that result from the differences between actual experience and the actuarial assumptions.

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 due to changing conditions; 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. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

- **Investment Risk** – actual investment returns may differ from the expected returns;
- **Asset/Liability Mismatch** – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
- **Salary and Payroll Risk** – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
- **Longevity Risk** – members may live longer or shorter than expected and receive pensions for a period of time other than assumed; and
- **Other Demographic Risks** – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

December 31,	Ratio of:				
	Market Value of Assets to Total Payroll	Actuarial Accrued Liability to Payroll	Actives to Retirees and Beneficiaries	Market Value of Assets to Benefit Payments	Net Cash Flow to Market Value of Assets (BOY)
2018	4.0	6.1	1.0	11.6	-2.0%
2019	4.4	6.4	0.9	11.9	-3.7%
2020	5.0	7.3	0.8	11.8	-4.1%
2021	5.6	7.8	0.7	12.1	-4.0%
2022	4.7	7.7	0.7	10.0	-3.2%
2023	5.4	8.6	0.6	10.4	-3.3%

Ratio of Market Value of Assets to Total Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of actives to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Market Value of Assets to Benefit Payments

The MERS' Actuarial Policy requires a total minimum contribution equal to the excess (if any) of three times the expected annual benefit payments over the projected market value of assets as of the participating municipality or court's Fiscal Year for which the contribution applies. The ratio of market value of assets to benefit payments as of the valuation date provides an indication of whether the division is at risk for triggering the minimum contribution rule in the near term. If the division triggers this minimum contribution rule, the required employer contributions could increase dramatically relative to previous valuations.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.



State Reporting

The following information has been prepared to provide some of the information necessary to complete the Public Act 202 pension reporting requirements for the State of Michigan’s Local Government Retirement System Annual Report (Form No. 5572). Additional resources are available at www.mersofmich.com and on the State [website](#).

Form 5572		
Line Reference	Description	Result
10	Membership as of December 31, 2023	
11	Indicate number of active members	170
12	Indicate number of inactive members (excluding pending refunds)	85
13	Indicate number of retirees and beneficiaries	274
14	Investment Performance for Calendar Year Ending December 31, 2023¹	
15	Enter actual rate of return - prior 1-year period	11.60%
16	Enter actual rate of return - prior 5-year period	8.07%
17	Enter actual rate of return - prior 10-year period	6.49%
18	Actuarial Assumptions	
19	Actuarial assumed rate of investment return ²	6.93%
20	Amortization method utilized for funding the system's unfunded actuarial accrued liability, if any	Level Percent
21	Amortization period utilized for funding the system's unfunded actuarial accrued liability, if any ³	15
22	Is each division within the system closed to new employees? ⁴	No
23	Uniform Assumptions	
24	Enter retirement pension system's actuarial value of assets using uniform assumptions	\$46,169,205
25	Enter retirement pension system's actuarial accrued liabilities using uniform assumptions ⁵	\$70,397,295
27	Actuarially Determined Contribution (ADC) using uniform assumptions, Fiscal Year Ending September 30, 2024	\$3,026,748

1. The Municipal Employees’ Retirement System’s investment performance has been provided to GRS from MERS Investment Staff and is included here for reporting purposes. The investment performance figures reported are net of investment expenses on a rolling calendar year basis for the previous 1-, 5-, and 10-year periods as required under PA 530.
2. Net of administrative and investment expenses.
3. Populated with the longest amortization period remaining in the amortization schedule, across all divisions in the plan. This is when each division and the plan in total is expected to reach 100% funded if all assumptions are met.
4. If all divisions within the employer are closed, “yes.” If at least one division is open (including shadow divisions), “no.”
5. Line 25 actuarial accrued liability is determined under PA 202 uniform assumptions which differ from the valuation assumptions. In particular, the assumed rate of return for PA 202 purposes is 6.90%.

