



MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2016
BATTLE CREEK, CITY OF (1302)



Spring, 2017

Battle Creek, City of

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 as of December 31, 2016. The report includes the determination of liabilities and contribution rates resulting from the participation of Battle Creek, City of (1302) in the Municipal Employees' Retirement System of Michigan ("MERS"). MERS is a nonprofit organization, independent from the State, that has provided retirement plans for municipal employees for 70 years. Battle Creek, City of is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees under the Michigan Constitution and the MERS Plan Document.

The purpose of the December 31, 2016 annual actuarial valuation is to:

- Measure funding progress
- Establish contribution requirements for the fiscal year beginning July 1, 2018
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) statements

This valuation report should not be relied upon for any other purpose. Reliance on information contained in this report by anyone for anything other than the intended purpose could be misleading.

The valuation uses financial data, plan provision data, and participant data as of December 31, 2016 furnished by MERS. In accordance with Actuarial Standards of Practice No. 23, the data was checked for internal and year to year consistency as well as general reasonableness, but was not otherwise audited. CBIZ Retirement Plan Services does not assume responsibility for the accuracy or completeness of the data used in this valuation.

The actuarial assumptions and methods are adopted by the MERS Retirement Board, and are reviewed every five years in an Experience Study. The most recent study was completed in 2015. Please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at:
www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2016AnnualActuarialValuation-Appendix.pdf.



The actuarial assumptions used for this valuation produce results that we believe are reasonable.

To the best of our knowledge, this report is complete and accurate, was prepared in conformity with generally recognized actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and is in compliance with Act No. 220 of the Public Acts of 1996, as amended, and the MERS Plan Document as revised. All of the undersigned are members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. 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 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). CBIZ Retirement Plan Services is not responsible for the consequences of any unauthorized use.

You should notify MERS if you disagree with anything contained in the report or are aware of any information that would affect the results of the report that have not been communicated to us. 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,

Cathy Nagy, MAAA, FSA
Jim Koss, MAAA, ASA
Curtis Powell, MAAA, EA

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Executive Summary

Actuarial Assumptions and Methods Adopted with the December 31, 2015 Valuations

The actuarial assumptions and methods are adopted by the MERS Retirement Board, and are reviewed every five years in an Experience Study. The Experience Study is a comprehensive, detailed analysis that reviews MERS' funding policy and compares actual experience with the current actuarial assumptions; the study recommends adjustments as necessary. The most recent study was completed in 2015 and changes to the assumptions and methods based on the 2015 Experience Study were first reflected in the December 31, 2015 valuations. The impact of these changes is being phased-in over a 5 year period. The phase-in allows the employer to spread the impact of the new assumptions over 5 fiscal years. This report continues to provide contributions both with and without the phase-in adjustments.

The assumptions and methods are described in the [Appendix](#) on the MERS website.

As part of the recent Experience Study, the following changes are first reflected in the December 31, 2016 annual valuation:

- The asset smoothing was changed from 10 to 5 years. The gain (loss) recognized each year will be 20% of the current year's gain (loss) plus 20% of the gain (loss) from each of the 4 preceding years. The cumulative difference between the market value and valuation assets as of December 31, 2015 will be recognized over 4 years.
- Annual changes in Unfunded Accrued Liability (UAL) will be amortized over fixed periods, creating "layers" of UAL. This will require removing and creating "layers" of UAL on an annual basis.
 - o Once the amortization period drops below 15 years (10 years for closed divisions), any future liability and asset gains or losses will be spread over a 15-year fixed period for open divisions and a 10-year fixed period for closed divisions — creating "layers" of UAL on an annual basis.
 - o This transparent method allows tracking of what changed your UAL, and sets a fixed period in time in which that UAL change will be fully funded.

MERS created a dedicated resource page on their website for additional information on these topics (<http://www.mersofmich.com/Employer/Work-Scenarios/Unfunded-Liability>).

Funded Ratio and Required Employer Contributions

The MERS Defined Benefit Plan is an agent multiple-employer plan, meaning that assets are pooled for investment purposes but separate accounts are maintained for each individual employer. Each municipality is responsible for their own plan liabilities; MERS does not borrow from one municipality's account to pay for another.

The funded ratio of a plan is the percentage of the dollar value of the accrued benefits that is covered by the actuarial value of assets.

Your Funded Ratio:

	12/31/2016	12/31/2015
Funded Ratio	61%	62%

Michigan Law requires that pension plans be pre-funded, meaning money is set aside now to pay for future benefits. Pension plans are usually funded by employer and employee contributions, and investment income.

How quickly a plan attains the 100% funding goal depends on many factors such as:

- The current funded ratio
- The future experience of the plan
- The amortization period

It is more important to look at the trend in the funded ratio over a period of time than at a particular point in time.

Your Required Employer Contributions:

Your computed employer contributions are shown in the following table. Employee contributions, if any, are in addition to the computed employer contributions. Changes to the assumptions and methods based on the 2015 Experience Study were first reflected in the December 31, 2015 valuations. The impact of these changes is being phased-in over a 5 year period. The phase-in allows the employer to spread the impact of the new assumptions over 5 fiscal years. This valuation reflects the second year of the phase-in.

Your minimum required contribution is the amount in the “Phase-in” columns. By default, MERS will invoice you the phased-in contribution amount, but strongly encourages you to contribute more than the minimum required contribution. If for 2017 your municipality is making employer contributions based on rates without the phase-in applied, contact MERS to ensure this rate is used again for 2018 and not the defaulted phase-in rates.

	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
Valuation Date:	12/31/2016	12/31/2016	12/31/2015	12/31/2015	12/31/2016	12/31/2016	12/31/2015	12/31/2015
Fiscal Year Beginning:	July 1, 2018	July 1, 2018	July 1, 2017	July 1, 2017	July 1, 2018	July 1, 2018	July 1, 2017	July 1, 2017
Division								
01 - Gnrl NonUn.	32.28%	34.68%	32.07%	35.64%	\$ 129,232	\$ 138,856	\$ 115,437	\$ 128,269
10 - General AFSCME	-	-	-	-	77,192	86,243	69,708	81,776
11 - Gnl Transit	-	-	-	-	18,634	20,305	18,015	20,243
12 - Gnrl BCSA	-	-	-	-	73,279	78,955	65,178	72,746
13 - Gnl Housing	-	-	-	-	10,572	11,874	10,808	12,544
14 - SEIU Local	-	-	-	-	60,918	68,730	65,527	75,943
15 - City Mngr.	152.10%	152.10%	375.83%	375.83%	36,297	36,297	86,182	86,182
16 - Cntrl Disp.	-	-	-	-	17	482	375	995
17 - Corr.Offrcs	0.00%	0.00%	0.00%	0.00%	0	0	0	0
18 - General AFSCME after 1	5.12%	5.36%	4.95%	5.29%	13,143	13,749	11,741	12,549
19 - Gen. SEIU hired after	4.55%	4.64%	4.87%	5.01%	8,792	8,966	8,350	8,582
20 - Gen. BCSA hired after	5.31%	5.45%	5.22%	5.44%	2,660	2,732	2,228	2,324
HA - GNL Trans hired after	6.18%	6.37%	6.65%	6.93%	4,456	4,594	4,449	4,633
Municipality Total					\$ 435,192	\$ 471,783	\$ 457,998	\$ 506,786

Employee contribution rates reflected in the valuations are shown below:

Valuation Date:	Employee Contribution Rate	
	12/31/2016	12/31/2015
Division		
01 - Gnrl NonUn.	3.00%	3.00%
10 - General AFSCME	2.75%	2.50%
11 - Gnl Transit	2.50%	2.50%
12 - Gnrl BCSA	5.16%	4.16%

Valuation Date:	Employee Contribution Rate	
	12/31/2016	12/31/2015
Division		
13 - Gnl Housing	1.50%	1.50%
14 - SEIU Local	3.00%	2.50%
15 - City Mngr.	0.00%	0.00%
16 - Cntrl Disp.	7.20%	7.20%
17 - Corr.Offrcs	3.12%	3.12%
18 - General AFSCME after 1	2.50%	2.50%
19 - Gen. SEIU hired after	3.00%	2.50%
20 - Gen. BCSA hired after	2.50%	2.50%
HA - GNL Trans hired after	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. **MERS strongly encourages employers to contribute more than the minimum contribution shown above.**

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 entire employer would be \$ 723,371, instead of \$ 471,783.
- To accelerate to a 100% funding ratio in 20 years, estimated monthly employer contributions for the entire employer would be \$ 484,493, instead of \$ 471,783.

If you are interested in making additional contributions, please contact MERS and they can assist you with evaluating your options.

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](#))
- Experience of the plan (investment experience and demographic experience); this is the difference between actual experience of the plan and the actuarial assumptions. For example:
 - o Lower actual investment returns would result in higher required employer contributions, and vice-versa.
 - o Smaller than assumed pay increases would lower required employer contributions.
 - o Reductions in the number of active employees would lower required contribution dollars, but would usually increase the contribution rate expressed as a percentage of (the now lower) payroll.

- o Retirements at earlier ages than assumed would usually increase required employer contributions.
- o More non-vested terminations of employment than assumed would decrease required contributions.
- o More disabilities or survivor (death) benefits than assumed would increase required contributions.
- o Longer lifetimes after retirement than assumed would increase required employer contributions.

Actuarial valuations do not affect the ultimate cost of the plan; the benefit payments (current and future) determine the cost of the plan. Actuarial valuations only affect the timing of the contributions into the plan. Because assumptions are for the long term, plan experience will not match the actuarial assumptions in any given year (except by coincidence). Each annual actuarial valuation will adjust the required employer contributions up or down based on the prior year's actual experience.

Comments on Asset Smoothing

The actuarial value of assets, used to determine both your funded ratio and your required employer contribution, is based on a smoothed value of assets (10-year smoothing prior to 2016; 5-year smoothing beginning in 2016). A smoothing method reduces the volatility of the valuation results, which affects your required employer contribution and funded ratio. The smoothed actuarial rate of return for 2016 was 5.14%.

As of December 31, 2016 the actuarial value of assets is 108% of market value. This means that meeting the actuarial assumption in the next few years will require average annual market returns that exceed the 7.75% investment return assumption.

If the December 31, 2016 valuation results were based on market value on that date instead of smoothed funding value: i) the funded percent of your entire municipality would be 56% (instead of 61%); and ii) your total employer contribution requirement for the fiscal year starting July 1, 2018 would be \$ 6,140,664 (instead of \$ 5,661,396).

The asset smoothing method is a powerful tool for reducing the volatility of your required employer contributions. **However, if the current 8% difference between the smoothed value and the market value of assets is not made up, the result would be gradual increases in your employer contribution requirement over the next few years (to around the levels described above).**

Risk Characteristics of Defined Benefit Plans

It is important to understand that Defined Benefit retirement plans, the plan sponsor, and the plan participants are exposed to certain risks. While risks cannot be eliminated entirely, they can be managed through various strategies. Below are a few examples of risk (this is not an all-inclusive list):

- Economic - investment return, wage inflation, etc.
- Demographic - longevity, disability, retirement, etc.
- Plan Sponsor and Employees - contribution volatility, attract/retain employees, etc.

The MERS Retirement Board adopts certain assumptions and methods to manage the economic and demographic risks, and the contribution volatility risks. For example, the investment risk is the largest economic risk and is managed by having a balanced portfolio and a clearly defined investment strategy. Demographic risks are managed by preparing special studies called experience studies on a regular basis to determine if the assumptions used are reasonable compared to the experience. Risk may be managed through a plan design that provides benefits that are sustainable in the long run. An Experience Study is completed every five years to review the assumptions and methods. The next Experience Study will be completed in 2020.

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.

The analysis in this section is intended to review the potential volatility of the actuarial valuation results. 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.

Many assumptions are important in determining the required employer contributions. In the table below, we show the impact of varying one actuarial assumption: the future annual rate of investment return. Lower investment returns would result in higher required employer contributions, and vice-versa.

The relative impact of each investment return scenario 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, 2016 valuation, and are for the municipality in total, not by division. These results do not reflect a 5-year phase in of the impact of the new actuarial assumptions.

	Assumed Future Annual Smoothed Rate of Investment Return			
	Lower Future Annual Returns		Valuation Assumption	Higher Returns
	5.75%	6.75%	7.75%	8.75%
12/31/2016 Valuation Results				
Accrued Liability	\$ 176,870,523	\$ 159,415,498	\$ 144,605,126	\$ 131,947,612
Valuation Assets	\$ 87,519,819	\$ 87,519,819	\$ 87,519,819	\$ 87,519,819
Unfunded Accrued Liability	\$ 89,350,704	\$ 71,895,679	\$ 57,085,307	\$ 44,427,793
Funded Ratio	50%	55%	61%	66%
Monthly Normal Cost	\$ 234,084	\$ 178,814	\$ 135,780	\$ 102,092
Monthly Amortization Payment	\$ 449,213	\$ 393,412	\$ 333,421	\$ 279,821
Total Employer Contribution¹	\$ 683,390	\$ 573,594	\$ 471,783	\$ 381,913

¹ If assets exceed accrued liabilities for a division, the division's amortization payment is negative and is used 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 assumed long-term investment return scenarios. All four projections take into account the past investment losses that will continue to affect the smoothed rate of return in the short term. Under the 7.75% scenarios, two sets of projections are shown:

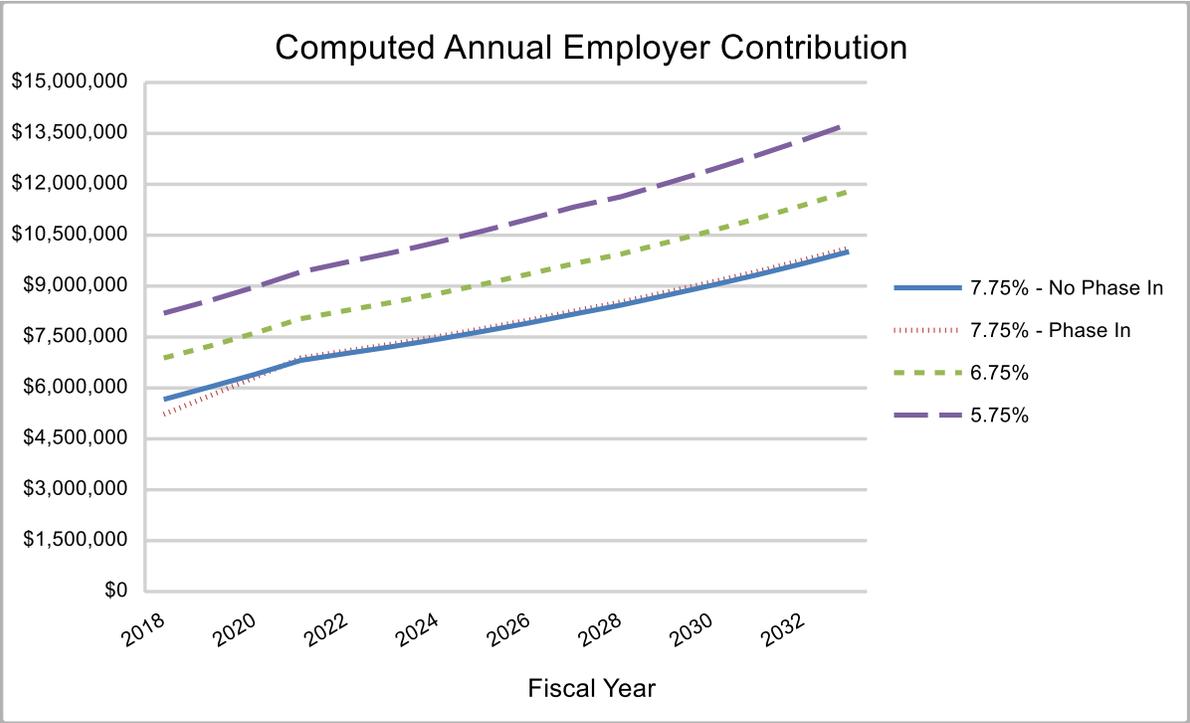
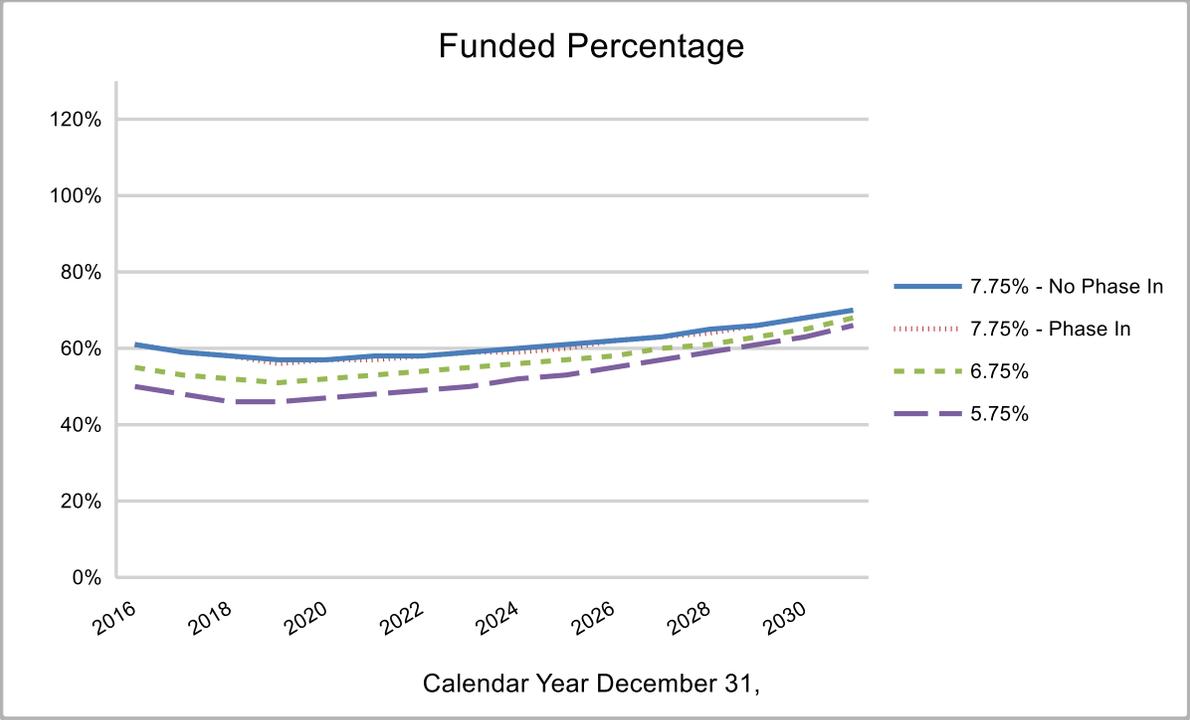
- Based on the phase-in over 5 fiscal years (beginning in 2017) of the increased contribution requirements associated with the new actuarial assumptions. This projects your minimum required contribution.
- Based on no phase-in of the increased contribution requirements.

The 7.75% scenarios provide an estimate of computed employer contributions based on current actuarial assumptions, and a projected 7.75% 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 6.75% and 5.75% projections provide an indication of the potential required employer contribution if MERS were to realize investment returns of 6.75% and 5.75% over the long-term.

The projections are shown both in tabular and graphical form in total for the employer. The tables show projections for six years. The graphs show projections for fifteen years.

Please note that one or more of your divisions trigger the 3 times benefit payout minimum contribution requirement during the projection period (see table following the projections and the graphs). This contribution requirement was designed so that a plan does not run out of money. This means that if assets in the plan are not enough to pay 3 years of benefit payouts, a minimum contribution is required to raise the level of the assets to be equal to at least 3 years of benefit payments. For a full description of this contribution requirement see the [Appendix](#) on the MERS website.

Valuation Year Ending 12/31	Fiscal Year Beginning 7/1	Actuarial Accrued Liability	Valuation Assets	Funded Percentage	Computed Annual Employer Contribution
7.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
WITH 5-YEAR PHASE-IN					
2016	2018	\$ 144,605,126	\$ 87,519,819	61%	\$ 5,222,304
2017	2019	147,400,000	87,100,000	59%	5,770,000
2018	2020	150,100,000	86,800,000	58%	6,310,000
2019	2021	152,700,000	85,900,000	56%	6,880,000
2020	2022	155,100,000	87,700,000	57%	7,090,000
2021	2023	157,400,000	89,800,000	57%	7,290,000
NO 5-YEAR PHASE-IN					
2016	2018	\$ 144,605,126	\$ 87,519,819	61%	\$ 5,661,396
2017	2019	147,400,000	87,100,000	59%	6,030,000
2018	2020	150,100,000	87,000,000	58%	6,400,000
2019	2021	152,700,000	86,500,000	57%	6,810,000
2020	2022	155,100,000	88,500,000	57%	7,020,000
2021	2023	157,400,000	90,700,000	58%	7,220,000
6.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
NO 5-YEAR PHASE-IN					
2016	2018	\$ 159,415,498	\$ 87,519,819	55%	\$ 6,883,128
2017	2019	162,300,000	86,300,000	53%	7,230,000
2018	2020	165,200,000	85,900,000	52%	7,620,000
2019	2021	167,800,000	85,900,000	51%	8,040,000
2020	2022	170,300,000	88,200,000	52%	8,280,000
2021	2023	172,600,000	90,800,000	53%	8,520,000
5.75% Assumed Interest Discount Rate and Future Annual Market Rate of Return					
NO 5-YEAR PHASE-IN					
2016	2018	\$ 176,870,523	\$ 87,519,819	50%	\$ 8,200,680
2017	2019	179,900,000	85,400,000	48%	8,570,000
2018	2020	182,900,000	84,900,000	46%	8,980,000
2019	2021	185,600,000	85,400,000	46%	9,420,000
2020	2022	188,200,000	88,300,000	47%	9,700,000
2021	2023	190,600,000	91,400,000	48%	9,990,000



Valuation Year Ending 12/31	Fiscal Year Beginning 7/1	7.75% Phase-In	7.75% No Phase-In	6.75% No Phase-In	5.75% No Phase-In
2016	2018	15	15	15	15
2017	2019	15	15	15	15
2018	2020	15	15	15	15
2019	2021	15	15	15	15
2020	2022	15	15	15	15
2021	2023	15	15	15	15

This table shows in any given year which division(s) are impacted by the 3 times benefit payout minimum required contribution. If “No” appears in the table, it means none of the divisions are impacted.

Employer Contribution Details For the Fiscal Year Beginning July 1, 2018

Table 1

Division	Employer Contributions ¹			Computed Employer Contribut. With Phase-In	Blended ER Rate No Phase-In ⁵	Blended ER Rate With Phase-In ⁵	Employee Contribut. Rate	Employee Contribut. Conversion Factor ²
	Normal Cost	Payment of the Unfunded Accrued Liability ⁴	Computed Employer Contribut. No Phase-In					
Percentage of Payroll								
01 - Gnrl NonUn.	10.40%	24.28%	34.68%	32.28%			3.00%	0.89%
10 - General AFSCME	-	-	-	-	20.95%	18.93%	2.75%	
11 - Gnl Transit	-	-	-	-	21.13%	19.60%	2.50%	
12 - Gnrl BCSA	-	-	-	-	53.32%	49.57%	5.16%	
13 - Gnl Housing	-	-	-	-			1.50%	
14 - SEIU Local	-	-	-	-	21.60%	19.38%	3.00%	
15 - City Mngr.	16.76%	135.34%	152.10%	152.10%			0.00%	0.92%
16 - Cntrl Disp.	-	-	-	-			7.20%	
17 - Corr.Offrcs	7.69%	-47.53%	0.00%	0.00%			3.12%	0.90%
18 - General AFSCME aft	5.41%	-0.05%	5.36%	5.12%	20.95%	18.93%	2.50%	0.88%
19 - Gen. SEIU hired af	4.58%	0.06%	4.64%	4.55%	21.60%	19.38%	3.00%	0.90%
20 - Gen. BCSA hired af	5.34%	0.11%	5.45%	5.31%	53.32%	49.57%	2.50%	0.85%
HA - GNL Trans hired af	6.51%	-0.14%	6.37%	6.18%	21.13%	19.60%	0.00%	0.93%
Estimated Monthly Contribution³								
01 - Gnrl NonUn.	\$ 41,645	\$ 97,211	\$ 138,856	\$ 129,232				
10 - General AFSCME	22,130	64,113	86,243	77,192				
11 - Gnl Transit	4,935	15,370	20,305	18,634				
12 - Gnrl BCSA	8,691	70,264	78,955	73,279				
13 - Gnl Housing	6,803	5,071	11,874	10,572				
14 - SEIU Local	16,976	51,754	68,730	60,918				
15 - City Mngr.	4,000	32,297	36,297	36,297				
16 - Cntrl Disp.	0	482	482	17				
17 - Corr.Offrcs	498	(3,080)	0	0				
18 - General AFSCME aft	13,874	(125)	13,749	13,143				

Table 1 (continued)

Division	Employer Contributions ¹			Computed Employer Contribut. With Phase-In	Blended ER Rate No Phase-In ⁵	Blended ER Rate With Phase-In ⁵	Employee Contribut. Rate	Employee Contribut. Conversion Factor ²
	Normal Cost	Payment of the Unfunded Accrued Liability ⁴	Computed Employer Contribut. No Phase-In					
19 - Gen. SEIU hired af	8,859	107	8,966	8,792				
20 - Gen. BCSA hired af	2,676	56	2,732	2,660				
HA - GNL Trans hired af	4,693	(99)	4,594	4,456				
Total Municipality	\$ 135,780	\$ 333,421	\$ 471,783	\$ 435,192				
Estimated Annual Contribution³	\$ 1,629,360	\$ 4,001,052	\$ 5,661,396	\$ 5,222,304				

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 (ie 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 If projected assets exceed projected liabilities as of the beginning of the July 1, 2018 fiscal year, the negative unfunded accrued liability is treated as overfunding credit and is used to reduce the contribution. This amortization is used to reduce the employer contribution rate. 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 to not add across.

⁵ For linked divisions, the employer will be invoiced the Computed Employer Contribution with 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 800-767-2308.

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

Benefit Provisions

Table 2

01 - Gnrl NonUn.: Open Division

	2016 Valuation	2015 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	3%	3%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

10 - General AFSCME: Closed to new hires, linked to Division 18

	2016 Valuation	2015 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	2.75%	2.50%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

11 - Gnl Transit: Closed to new hires, linked to Division HA

	2016 Valuation	2015 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	2.50%	2.50%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

Table 2 (continued)

12 - Gnrl BCSA: Closed to new hires, linked to Division 20

	2016 Valuation	2015 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	5.16%	4.16%
RS50% Percentage:	50%	50%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

13 - Gnrl Housing: Closed to new hires

	2016 Valuation	2015 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	1.50%	1.50%
DC Plan for New Hires:	12/1/2013	12/1/2013
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

14 - SEIU Local: Closed to new hires, linked to Division 19

	2016 Valuation	2015 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	3%	2.50%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

Table 2 (continued)

15 - City Mngr.: Open Division

	2016 Valuation	2015 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	50/25 55/15	50/25 55/15
Early Retirement (Reduced):	-	-
Final Average Compensation:	3 years	3 years
Employee Contributions:	0%	0%
RS50% Percentage:	50%	50%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

16 - Cntrl Disp.: Closed to new hires

	2016 Valuation	2015 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	7.20%	7.20%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

17 - Corr.Offrcs: Open Division

	2016 Valuation	2015 Valuation
Benefit Multiplier:	2.25% Multiplier (80% max)	2.25% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	3.12%	3.12%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

Table 2 (continued)

18 - General AFSCME after 12/1/10: Open Division, linked to Division 10

	2016 Valuation	2015 Valuation
Benefit Multiplier:	1.50% Multiplier (no max)	1.50% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	2.50%	2.50%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

19 - Gen. SEIU hired after 7/1/2011: Open Division, linked to Division 14

	2016 Valuation	2015 Valuation
Benefit Multiplier:	1.50% Multiplier (no max)	1.50% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	5 years	5 years
Employee Contributions:	3%	2.50%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

20 - Gen. BCSA hired after 1/1/2012: Open Division, linked to Division 12

	2016 Valuation	2015 Valuation
Benefit Multiplier:	1.50% Multiplier (no max)	1.50% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	-	-
Early Retirement (Reduced):	50/25 55/15	50/25 55/15
Final Average Compensation:	3 years	3 years
Employee Contributions:	2.50%	2.50%
Act 88:	Yes (Adopted 7/10/1973)	Yes (Adopted 7/10/1973)

HA - GNL Trans hired after 3/1/10: Open Division, linked to Division 11

	2016 Valuation	2015 Valuation
Benefit Multiplier:	Hybrid Plan - 1.25% Multiplier	Hybrid Plan - 1.25% Multiplier
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%	0%
Act 88:	Yes (Adopted 7/10/1983)	Yes (Adopted 7/10/1983)

Participant Summary

Table 3

Division	2016 Valuation		2015 Valuation		2016 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
01 - Gnrl NonUn.							
Active Employees	60	\$ 4,381,947	56	\$ 3,938,414	46.5	11.4	12.6
Vested Former Employees	15	311,505	12	226,679	50.8	11.5	14.5
Retirees and Beneficiaries	90	2,349,302	91	2,329,404	74.5		
10 - General AFSCME							
Active Employees	59	\$ 2,871,821	64	\$ 3,048,947	50.8	17.9	18.2
Vested Former Employees	5	67,288	7	106,033	46.7	11.6	15.0
Retirees and Beneficiaries	135	2,552,502	128	2,393,905	67.7		
11 - Gnrl Transit							
Active Employees	14	\$ 654,579	19	\$ 818,690	55.3	15.5	15.5
Vested Former Employees	1	19,700	0	0	56.0	17.0	17.0
Retirees and Beneficiaries	32	556,914	30	502,167	65.9		
12 - Gnrl BCSA							
Active Employees	22	\$ 1,464,338	21	\$ 1,369,555	52.6	21.0	21.0
Vested Former Employees	4	66,404	3	38,206	52.9	13.1	17.2
Retirees and Beneficiaries	36	1,385,748	35	1,340,707	67.0		
13 - Gnrl Housing							
Active Employees	10	\$ 613,062	11	\$ 671,847	53.0	15.4	15.4
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	7	251,846	7	246,987	71.8		
14 - SEIU Local							
Active Employees	47	\$ 2,255,302	60	\$ 2,876,019	52.6	16.3	16.7
Vested Former Employees	10	109,678	11	145,142	49.4	11.6	14.1
Retirees and Beneficiaries	89	2,046,571	83	1,871,060	67.8		
15 - City Mngr.							
Active Employees	2	\$ 261,147	2	\$ 250,936	51.7	5.0	6.9
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	9	522,213	9	522,213	64.6		
16 - Cntrl Disp.							
Active Employees	0	\$ 0	0	\$ 0	0.0	0.0	0.0
Vested Former Employees	4	40,566	5	53,928	52.8	9.4	13.8
Retirees and Beneficiaries	4	103,657	4	101,531	68.4		
17 - Corr.Offrcs							
Active Employees	1	\$ 70,915	1	\$ 55,018	29.7	1.5	1.5
Vested Former Employees	4	35,257	4	35,257	46.8	7.4	15.5
Retirees and Beneficiaries	1	28,471	1	28,471	61.3		

Table 3 (continued)

Division	2016 Valuation		2015 Valuation		2016 Valuation		
	Number	Annual Payroll ¹	Number	Annual Payroll ¹	Average Age	Average Benefit Service ²	Average Eligibility Service ²
18 - General AFSCME after							
Active Employees	56	\$ 2,351,415	49	\$ 2,110,015	42.1	2.6	4.5
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
19 - Gen. SEIU hired afte							
Active Employees	43	\$ 1,680,900	35	\$ 1,339,053	39.3	2.9	4.2
Vested Former Employees	1	1,738	1	1,738	42.1	2.4	7.1
Retirees and Beneficiaries	0	0	0	0	0.0		
20 - Gen. BCSA hired afte							
Active Employees	3	\$ 212,173	3	\$ 204,667	49.1	4.4	4.4
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
HA - GNL Trans hired afte							
Active Employees	15	\$ 635,176	14	\$ 566,021	41.1	2.7	2.8
Vested Former Employees	1	663	1	663	26.6	1.7	3.5
Retirees and Beneficiaries	0	0	0	0	0.0		
Total Municipality							
Active Employees	332	\$ 17,452,775	335	\$ 17,249,182	47.2	11.1	11.9
Vested Former Employees	45	652,799	44	607,646	49.4	10.8	14.4
Retirees and Beneficiaries	403	9,797,224	388	9,336,445	69.0		
Total Participants	780		767				

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

² Description can be found under Miscellaneous and Technical Assumptions in the [Appendix](#).

Reported Assets (Market Value)

Table 4

Division	2016 Valuation		2015 Valuation	
	Employer and Retiree ¹	Employee ²	Employer and Retiree ¹	Employee ²
01 - Gnrl NonUn.	\$ 15,331,155	\$ 1,304,344	\$ 14,426,277	\$ 1,056,248
10 - General AFSCME	22,459,796	1,216,668	21,637,927	1,331,894
11 - Gnrl Transit	4,801,285	247,592	4,563,557	273,173
12 - Gnrl BCSA	8,487,751	854,344	7,927,888	768,440
13 - Gnrl Housing	4,131,394	112,260	3,859,156	106,498
14 - SEIU Local	17,375,500	964,943	16,738,386	1,214,008
15 - City Mngr.	580,673	7,472	697,751	7,409
16 - Cntrl Disp.	1,349,340	14,473	1,307,562	14,351
17 - Corr.Offrcs	684,503	33,605	639,166	31,128
18 - General AFSCME after 12/1/10	424,856	198,011	316,865	151,850
19 - Gen. SEIU hired after 7/1/2011	281,538	146,032	173,189	108,198
20 - Gen. BCSA hired after 1/1/2012	52,659	20,292	36,178	14,862
HA - GNL Trans hired after 3/1/10	174,945	0	118,175	0
Municipality Total	\$ 76,135,395	\$ 5,120,036	\$ 72,442,077	\$ 5,078,059
Combined Reserves	\$ 81,255,431		\$ 77,520,136	

¹ Reserve for Employer Contributions and Benefit Payments

² Reserve for Employee Contributions

The December 31, 2016 valuation assets are equal to 1.077095 times the reported market value of assets (compared to 1.135382 as of December 31, 2015). The derivation of valuation assets is described, and detailed calculations of valuation assets are shown, in the [Appendix](#).

Flow of Valuation Assets

Table 5

Year Ended 12/31	Employer Contributions		Employee Contributions	Investment Income	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
	Required	Additional						
2006	\$ 2,763,281		\$ 535,345	\$ 5,917,344	\$ (4,212,790)	\$ (28,067)	\$ 0	\$ 78,530,625
2007	2,931,754		541,549	6,363,231	(4,584,252)	(97,397)	0	83,685,510
2008	2,968,152		551,782	3,716,560	(5,114,794)	(48,257)	0	85,758,953
2009	2,959,132		552,800	3,637,611	(5,698,007)	(39,591)	0	87,170,898
2010	2,868,331		453,617	4,281,248	(6,516,632)	(59,121)	49,333	88,247,674
2011	4,106,953	\$ 0	420,760	3,474,621	(7,369,893)	(49,719)	(2,802,205)	86,028,191
2012	3,425,331	133,259	396,893	3,504,637	(8,079,082)	(11,672)	26,998	85,424,555
2013	3,646,578	1,904,258	398,173	5,034,108	(8,415,175)	(38,371)	1	87,954,127
2014	3,776,984	0	419,888	4,832,408	(8,762,592)	(13,880)	198,983	88,405,918
2015	4,004,442	99,850	443,676	4,113,925	(9,048,762)	(56,391)	52,309	88,014,967
2016	4,353,308	16,169	487,265	4,189,261	(9,572,000)	(8,787)	39,636	87,519,819

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.

Additional employer contributions, if any, are shown separately starting in 2011. Prior to 2011, additional contributions are combined with the required employer contributions.

In the actuarial valuation additional employer contributions are combined with required contributions and used to reduce computed future required employer contributions.

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

Actuarial Accrued Liabilities and Valuation Assets As of December 31, 2016

Table 6

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - Gnrl NonUn.				
Active Employees	\$ 10,987,200	\$ 1,047,594	9.5%	\$ 9,939,606
Vested Former Employees	1,887,147	211,756	11.2%	1,675,391
Retirees And Beneficiaries	21,766,287	16,629,383	76.4%	5,136,904
Pending Refunds	<u>29,280</u>	<u>29,280</u>	100.0%	<u>0</u>
Total	\$ 34,669,914	\$ 17,918,013	51.7%	\$ 16,751,901
10 - General AFSCME				
Active Employees	\$ 11,301,703	\$ 1,127,627	10.0%	\$ 10,174,076
Vested Former Employees	289,268	61,347	21.2%	227,921
Retirees And Beneficiaries	24,849,012	24,285,133	97.7%	563,879
Pending Refunds	<u>27,694</u>	<u>27,694</u>	100.0%	<u>0</u>
Total	\$ 36,467,677	\$ 25,501,801	69.9%	\$ 10,965,876
11 - Gnrl Transit				
Active Employees	\$ 2,302,858	\$ 209,052	9.1%	\$ 2,093,806
Vested Former Employees	155,198	17,767	11.4%	137,431
Retirees And Beneficiaries	5,596,023	5,190,917	92.8%	405,106
Pending Refunds	<u>20,384</u>	<u>20,384</u>	100.0%	<u>0</u>
Total	\$ 8,074,463	\$ 5,438,120	67.3%	\$ 2,636,343
12 - Gnrl BCSA				
Active Employees	\$ 7,514,210	\$ 800,298	10.7%	\$ 6,713,912
Vested Former Employees	464,332	52,952	11.4%	411,380
Retirees And Beneficiaries	14,153,226	9,209,074	65.1%	4,944,152
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	\$ 22,131,768	\$ 10,062,324	45.5%	\$ 12,069,444
13 - Gnrl Housing				
Active Employees	\$ 2,719,090	\$ 1,964,646	72.3%	\$ 754,444
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	2,605,216	2,605,216	100.0%	0
Pending Refunds	<u>957</u>	<u>957</u>	100.0%	<u>0</u>
Total	\$ 5,325,263	\$ 4,570,819	85.8%	\$ 754,444
14 - SEIU Local				
Active Employees	\$ 8,074,714	\$ 821,654	10.2%	\$ 7,253,060
Vested Former Employees	596,052	106,494	17.9%	489,558
Retirees And Beneficiaries	20,025,877	18,789,581	93.8%	1,236,296
Pending Refunds	<u>36,670</u>	<u>36,670</u>	100.0%	<u>0</u>
Total	\$ 28,733,313	\$ 19,754,399	68.8%	\$ 8,978,914

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
15 - City Mngr.				
Active Employees	\$ 272,122	\$ 7,472	2.7%	\$ 264,650
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	5,496,700	626,016	11.4%	4,870,684
Pending Refunds	0	0	0.0%	0
Total	\$ 5,768,822	\$ 633,488	11.0%	\$ 5,135,334
16 - Cntrl Disp.				
Active Employees	\$ 0	\$ 0	0.0%	\$ 0
Vested Former Employees	352,608	286,446	81.2%	66,162
Retirees And Beneficiaries	1,178,945	1,178,945	100.0%	0
Pending Refunds	3,565	3,565	100.0%	0
Total	\$ 1,535,118	\$ 1,468,956	95.7%	\$ 66,162
17 - Corr.Offrcs				
Active Employees	\$ 17,170	\$ 287,767	1,676.0%	\$ (270,597)
Vested Former Employees	141,488	141,488	100.0%	0
Retirees And Beneficiaries	340,901	340,901	100.0%	0
Pending Refunds	3,315	3,315	100.0%	0
Total	\$ 502,874	\$ 773,471	153.8%	\$ (270,597)
18 - General AFSCME after 12/1/10				
Active Employees	\$ 609,420	\$ 628,831	103.2%	\$ (19,411)
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	42,056	42,056	100.0%	0
Total	\$ 651,476	\$ 670,887	103.0%	\$ (19,411)
19 - Gen. SEIU hired after 7/1/2011				
Active Employees	\$ 472,327	\$ 452,130	95.7%	\$ 20,197
Vested Former Employees	4,731	4,731	100.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	3,673	3,673	100.0%	0
Total	\$ 480,731	\$ 460,534	95.8%	\$ 20,197
20 - Gen. BCSA hired after 1/1/2012				
Active Employees	\$ 87,530	\$ 78,575	89.8%	\$ 8,955
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	0	0	0.0%	0
Total	\$ 87,530	\$ 78,575	89.8%	\$ 8,955
HA - GNL Trans hired after 3/1/10				
Active Employees	\$ 175,611	\$ 187,866	107.0%	\$ (12,255)
Vested Former Employees	566	566	100.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	0	0	0.0%	0
Total	\$ 176,177	\$ 188,432	107.0%	\$ (12,255)

Table 6 (continued)

Division	Actuarial Accrued Liability	Valuation Assets ¹	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
Total Municipality				
Active Employees	\$ 44,533,955	\$ 7,613,512	17.1%	\$ 36,920,443
Vested Former Employees	3,891,390	883,547	22.7%	3,007,843
Retirees and Beneficiaries	96,012,187	78,855,166	82.1%	17,157,021
Pending Refunds	167,594	167,594	100.0%	0
Total Participants	\$ 144,605,126	\$ 87,519,819	60.5%	\$ 57,085,307
The following results show the combined accrued liabilities and assets for each set of linked divisions. These results are already included in the table above.				
Linked Divisions 18, 10				
Active Employees	\$ 11,911,123	\$ 1,756,458	14.7%	\$ 10,154,665
Vested Former Employees	289,268	61,347	21.2%	227,921
Retirees and Beneficiaries	24,849,012	24,285,133	97.7%	563,879
Pending Refunds	69,750	69,750	100.0%	0
Total	\$ 37,119,153	\$ 26,172,688	70.5%	\$ 10,946,465
Linked Divisions HA, 11				
Active Employees	\$ 2,478,469	\$ 396,918	16.0%	\$ 2,081,551
Vested Former Employees	155,764	18,333	11.8%	137,431
Retirees and Beneficiaries	5,596,023	5,190,917	92.8%	405,106
Pending Refunds	20,384	20,384	100.0%	0
Total	\$ 8,250,640	\$ 5,626,552	68.2%	\$ 2,624,088
Linked Divisions 20, 12				
Active Employees	\$ 7,601,740	\$ 878,873	11.6%	\$ 6,722,867
Vested Former Employees	464,332	52,952	11.4%	411,380
Retirees and Beneficiaries	14,153,226	9,209,074	65.1%	4,944,152
Pending Refunds	0	0	0.0%	0
Total	\$ 22,219,298	\$ 10,140,899	45.6%	\$ 12,078,399
Linked Divisions 19, 14				
Active Employees	\$ 8,547,041	\$ 1,273,784	14.9%	\$ 7,273,257
Vested Former Employees	600,783	111,225	18.5%	489,558
Retirees and Beneficiaries	20,025,877	18,789,581	93.8%	1,236,296
Pending Refunds	40,343	40,343	100.0%	0
Total	\$ 29,214,044	\$ 20,214,933	69.2%	\$ 8,999,111

¹ Includes both employer and employee assets.

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

See Section 46 of the Plan Document for MERS Fiscal Responsibility policy, on the MERS website at:
<https://employerportal.mersofmich.com/SharePointFormsService/Default.aspx?Publication=MERSPlanDocument.pdf>.

Actuarial Accrued Liabilities - Comparative Schedule

Table 7

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2002	\$ 80,336,233	\$ 61,264,130	76%	\$ 19,072,103
2003	86,671,937	65,724,348	76%	20,947,589
2004	92,602,174	69,677,870	75%	22,924,304
2005	98,161,300	73,555,512	75%	24,605,788
2006	103,019,360	78,530,625	76%	24,488,735
2007	108,343,302	83,685,510	77%	24,657,792
2008	114,485,126	85,758,953	75%	28,726,173
2009	117,667,634	87,170,898	74%	30,496,736
2010	121,967,784	88,247,674	72%	33,720,110
2011	125,554,938	86,028,191	69%	39,526,747
2012	125,080,017	85,424,555	68%	39,655,462
2013	128,362,120	87,954,127	69%	40,407,993
2014	132,642,371	88,405,918	67%	44,236,453
2015	142,257,026	88,014,967	62%	54,242,059
2016	144,605,126	87,519,819	61%	57,085,307

Notes: Actuarial assumptions were revised for the 2004, 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Division 01 - Gnrl NonUn.

Table 8-01: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 25,079,309	\$ 18,948,871	76%	\$ 6,130,438
2007	25,786,814	19,673,236	76%	6,113,578
2008	26,704,641	19,486,827	73%	7,217,814
2009	27,086,420	18,980,302	70%	8,106,118
2010	28,139,605	18,498,320	66%	9,641,285
2011	28,719,364	17,717,784	62%	11,001,580
2012	28,445,176	17,201,716	61%	11,243,460
2013	28,920,190	17,110,935	59%	11,809,255
2014	30,180,098	17,320,168	57%	12,859,930
2015	33,548,161	17,578,580	52%	15,969,581
2016	34,669,914	17,918,013	52%	16,751,901

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

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		
2006	56	\$ 3,764,706	16.90%	2.00%
2007	53	3,739,599	17.18%	2.00%
2008	50	3,475,062	20.49%	2.00%
2009	52	3,688,557	21.40%	2.00%
2010	48	3,321,913	25.71%	2.00%
2011	47	3,325,529	28.91%	2.00%
2012	49	3,513,560	29.29%	2.00%
2013	50	3,505,149	30.35%	2.00%
2014	52	3,749,622	30.62%	2.00%
2015	56	3,938,414	35.64%	3.00%
2016	60	4,381,947	34.68%	3.00%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 10 - General AFSCME

Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 28,290,683	\$ 22,713,433	80%	\$ 5,577,250
2007	29,391,569	24,067,849	82%	5,323,720
2008	30,476,499	24,602,751	81%	5,873,748
2009	30,931,179	25,382,663	82%	5,548,516
2010	31,695,838	26,016,328	82%	5,679,510
2011	32,153,521	25,978,676	81%	6,174,845
2012	32,140,644	26,043,511	81%	6,097,133
2013	32,923,896	26,215,800	80%	6,708,096
2014	33,785,664	26,306,791	78%	7,478,873
2015	36,066,837	26,079,521	72%	9,987,316
2016	36,467,677	25,501,801	70%	10,965,876

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

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		
2006	143	\$ 5,886,162	12.87%	2.50%
2007	140	5,964,726	12.66%	2.50%
2008	136	6,040,939	14.00%	2.50%
2009	129	5,841,342	14.15%	2.50%
2010	113	4,907,939	15.70%	2.50%
2011	96	4,447,277	\$ 60,959	2.50%
2012	91	3,935,769	\$ 57,221	2.50%
2013	78	3,433,686	\$ 58,710	2.50%
2014	74	3,506,111	\$ 65,035	2.50%
2015	64	3,048,947	\$ 81,776	2.50%
2016	59	2,871,821	\$ 86,243	2.75%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 11 - Gnl Transit

Table 8-11: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 5,206,246	\$ 4,307,851	83%	\$ 898,395
2007	5,654,231	4,645,208	82%	1,009,023
2008	6,044,798	4,831,082	80%	1,213,716
2009	6,164,769	4,961,344	80%	1,203,425
2010	6,398,996	5,089,138	80%	1,309,858
2011	6,792,528	5,220,156	77%	1,572,372
2012	7,046,884	5,309,103	75%	1,737,781
2013	7,368,535	5,405,653	73%	1,962,882
2014	7,425,844	5,507,426	74%	1,918,418
2015	7,900,780	5,491,536	70%	2,409,244
2016	8,074,463	5,438,120	67%	2,636,343

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-11: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2006	34	\$ 1,244,168	12.64%	2.50%
2007	31	1,240,108	13.30%	2.50%
2008	32	1,264,369	14.44%	2.50%
2009	35	1,389,512	13.93%	2.50%
2010	31	1,245,573	\$ 14,966	2.50%
2011	30	1,248,167	\$ 17,132	2.50%
2012	29	1,247,665	\$ 18,161	2.50%
2013	24	1,067,838	\$ 18,189	2.50%
2014	21	922,129	\$ 16,948	2.50%
2015	19	818,690	\$ 20,243	2.50%
2016	14	654,579	\$ 20,305	2.50%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 12 - Gnrl BCSA

Table 8-12: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 13,528,838	\$ 9,314,881	69%	\$ 4,213,957
2007	14,936,058	10,283,713	69%	4,652,345
2008	16,233,895	10,727,912	66%	5,505,983
2009	16,834,204	10,890,369	65%	5,943,835
2010	18,287,546	11,222,688	61%	7,064,858
2011	19,498,544	10,596,421	54%	8,902,123
2012	19,174,093	10,216,513	53%	8,957,580
2013	19,738,162	10,086,955	51%	9,651,207
2014	20,213,419	9,992,873	49%	10,220,546
2015	21,020,916	9,873,654	47%	11,147,262
2016	22,131,768	10,062,324	46%	12,069,444

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-12: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2006	28	\$ 1,709,751	18.80%	4.16%
2007	28	1,708,339	20.73%	4.16%
2008	31	1,951,546	22.41%	4.16%
2009	31	2,054,806	23.27%	4.16%
2010	22	1,319,575	37.41%	4.16%
2011	24	1,546,987	\$ 55,466	4.16%
2012	23	1,434,721	\$ 54,268	4.16%
2013	23	1,461,271	\$ 59,354	4.16%
2014	22	1,442,714	\$ 63,841	4.16%
2015	21	1,369,555	\$ 72,746	4.16%
2016	22	1,464,338	\$ 78,955	5.16%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 13 - Gnl Housing

Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 3,161,171	\$ 1,500,042	47%	\$ 1,661,129
2007	3,370,371	1,587,309	47%	1,783,062
2008	3,245,000	1,651,560	51%	1,593,440
2009	3,333,272	1,746,352	52%	1,586,920
2010	3,669,970	1,818,280	50%	1,851,690
2011	3,955,186	1,884,314	48%	2,070,872
2012	4,075,358	2,111,297	52%	1,964,061
2013	4,339,820	4,379,313	101%	(39,493)
2014	4,645,898	4,456,553	96%	189,345
2015	5,178,067	4,502,532	87%	675,535
2016	5,325,263	4,570,819	86%	754,444

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

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		
2006	11	\$ 447,215	30.55%	1.50%
2007	12	518,413	29.43%	1.50%
2008	12	505,626	28.33%	1.50%
2009	11	530,871	27.71%	1.50%
2010	13	602,973	28.82%	1.50%
2011	13	615,755	31.57%	1.50%
2012	12	647,094	31.37%	1.50%
2013	13	703,972	9.60%	1.50%
2014	11	650,340	\$ 8,211	1.50%
2015	11	671,847	\$ 12,544	1.50%
2016	10	613,062	\$ 11,874	1.50%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 14 - SEIU Local

Table 8-14: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 20,870,478	\$ 17,780,252	85%	\$ 3,090,226
2007	21,979,653	18,981,747	86%	2,997,906
2008	22,773,684	19,201,960	84%	3,571,724
2009	23,973,170	19,842,162	83%	4,131,008
2010	24,778,206	20,308,324	82%	4,469,882
2011	26,591,360	20,734,278	78%	5,857,082
2012	26,669,481	20,637,251	77%	6,032,230
2013	27,111,309	20,750,141	77%	6,361,168
2014	27,956,726	20,831,443	75%	7,125,283
2015	29,572,682	20,382,825	69%	9,189,857
2016	28,733,313	19,754,399	69%	8,978,914

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

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		
2006	116	\$ 4,700,497	11.37%	2.50%
2007	117	4,795,569	11.32%	2.50%
2008	114	4,800,746	12.93%	2.50%
2009	109	4,771,596	13.90%	2.50%
2010	100	4,298,849	15.31%	2.50%
2011	84	3,642,189	\$ 57,214	2.50%
2012	78	3,448,701	\$ 55,641	2.50%
2013	70	3,170,776	\$ 56,299	2.50%
2014	67	3,128,958	\$ 61,491	2.50%
2015	60	2,876,019	\$ 75,943	2.50%
2016	47	2,255,302	\$ 68,730	3.00%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 15 - City Mngr.

Table 8-15: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 3,643,263	\$ 1,465,693	40%	\$ 2,177,570
2007	3,742,626	1,612,267	43%	2,130,359
2008	5,277,094	2,092,857	40%	3,184,237
2009	5,424,741	1,854,233	34%	3,570,508
2010	5,464,593	1,697,637	31%	3,766,956
2011	5,508,689	1,582,539	29%	3,926,150
2012	5,510,200	1,459,650	27%	4,050,550
2013	5,659,625	1,321,703	23%	4,337,922
2014	5,766,202	1,011,334	18%	4,754,868
2015	5,778,113	800,626	14%	4,977,487
2016	5,768,822	633,488	11%	5,135,334

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-15: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2006	2	\$ 214,030	62.75%	0.00%
2007	2	229,437	58.81%	0.00%
2008	2	206,689	94.60%	0.00%
2009	2	247,814	87.42%	0.00%
2010	2	242,478	93.59%	0.00%
2011	2	247,780	97.84%	0.00%
2012	2	256,419	106.72%	0.00%
2013	2	239,173	121.87%	0.00%
2014	2	231,433	138.91%	0.00%
2015	2	250,936	375.83%	0.00%
2016	2	261,147	152.10%	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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 16 - Cntrl Disp.

Table 8-16: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 2,949,628	\$ 1,942,126	66%	\$ 1,007,502
2007	3,162,270	2,228,569	70%	933,701
2008	3,372,668	2,527,237	75%	845,431
2009	3,521,563	2,838,167	81%	683,396
2010	3,050,392	2,883,558	95%	166,834
2011	1,801,204	1,546,437	86%	254,767
2012	1,436,711	1,541,444	107%	(104,733)
2013	1,472,927	1,538,184	104%	(65,257)
2014	1,500,422	1,531,662	102%	(31,240)
2015	1,626,639	1,500,876	92%	125,763
2016	1,535,118	1,468,956	96%	66,162

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-16: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2006	20	\$ 901,497	11.82%	7.20%
2007	21	982,174	10.93%	7.20%
2008	19	922,526	11.81%	7.20%
2009	20	988,564	11.06%	7.20%
2010	0	0	\$ 67	0.00%
2011	0	0	\$ 1,156	0.00%
2012	0	0	\$ 0	0.00%
2013	0	0	\$ 0	0.00%
2014	0	0	\$ 0	0.00%
2015	0	0	\$ 995	7.20%
2016	0	0	\$ 482	7.20%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 17 - Corr.Offrcs

Table 8-17: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2006	\$ 289,744	\$ 557,476	192%	\$ (267,732)
2007	319,710	605,612	189%	(285,902)
2008	356,847	636,767	178%	(279,920)
2009	398,316	675,306	170%	(276,990)
2010	481,556	711,082	148%	(229,526)
2011	490,940	717,874	146%	(226,934)
2012	435,200	722,728	166%	(287,528)
2013	447,884	737,311	165%	(289,427)
2014	462,403	752,232	163%	(289,829)
2015	484,089	761,040	157%	(276,951)
2016	502,874	773,471	154%	(270,597)

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-17: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2006	2	\$ 99,360	0.00%	3.12%
2007	2	99,204	0.00%	3.12%
2008	2	104,889	0.00%	3.12%
2009	2	115,295	0.00%	3.12%
2010	1	61,084	0.00%	3.12%
2011	1	56,073	0.00%	3.12%
2012	0	0	\$ 0	0.00%
2013	1	59,571	0.00%	3.12%
2014	1	58,695	0.00%	3.12%
2015	1	55,018	0.00%	3.12%
2016	1	70,915	0.00%	3.12%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 18 - General AFSCME after 12/1/10

Table 8-18: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2011	\$ 30,809	\$ 38,693	126%	\$ (7,884)
2012	97,827	114,705	117%	(16,878)
2013	224,963	232,289	103%	(7,326)
2014	378,614	363,551	96%	15,063
2015	547,342	532,171	97%	15,171
2016	651,476	670,887	103%	(19,411)

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-18: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2011	16	\$ 631,087	4.67%	2.50%
2012	26	996,013	4.46%	2.50%
2013	34	1,365,798	4.67%	2.50%
2014	36	1,611,962	4.92%	2.50%
2015	49	2,110,015	5.29%	2.50%
2016	56	2,351,415	5.36%	2.50%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 19 - Gen. SEIU hired after 7/1/2011

Table 8-19: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2011	\$ 1,988	\$ 0	0%	\$ 1,988
2012	26,191	39,491	151%	(13,300)
2013	85,341	103,141	121%	(17,800)
2014	196,839	204,319	104%	(7,480)
2015	337,562	319,482	95%	18,080
2016	480,731	460,534	96%	20,197

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

Table 9-19: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution ¹	Employee Contribution Rate ²
	Number	Annual Payroll		
2011	5	\$ 138,822	5.09%	2.50%
2012	16	510,841	4.86%	2.50%
2013	28	928,192	4.59%	2.50%
2014	35	1,269,348	4.78%	2.50%
2015	35	1,339,053	5.01%	2.50%
2016	43	1,680,900	4.64%	3.00%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 20 - Gen. BCSA hired after 1/1/2012

Table 8-20: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2013	14,554	17,078	117%	(2,524)
2014	38,187	38,604	101%	(417)
2015	62,944	57,950	92%	4,994
2016	87,530	78,575	90%	8,955

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

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		
2011	0	\$ 0	0.00%	0.00%
2013	1	65,925	4.33%	2.50%
2014	3	166,152	5.18%	2.50%
2015	3	204,667	5.44%	2.50%
2016	3	212,173	5.45%	2.50%

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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division HA - GNL Trans hired after 3/1/10

Table 8-HA: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2010	\$ 1,082	\$ 2,319	214%	\$ (1,237)
2011	10,805	11,019	102%	(214)
2012	22,252	27,146	122%	(4,894)
2013	54,914	55,624	101%	(710)
2014	92,055	88,962	97%	3,093
2015	132,894	134,174	101%	(1,280)
2016	176,177	188,432	107%	(12,255)

Notes: Actuarial assumptions were revised for the 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.

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		
2010	2	\$ 67,555	6.26%	0.00%
2011	3	125,196	6.89%	0.00%
2012	7	266,832	7.08%	0.00%
2013	9	370,383	6.77%	0.00%
2014	12	463,172	6.38%	0.00%
2015	14	566,021	6.93%	0.00%
2016	15	635,176	6.37%	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 for the 12/31/2015 through 12/31/2019 valuations do **not** reflect the phase-in of the increased contribution requirements associated with the new actuarial assumptions. The full contribution without phase-in is shown in Table 9 above. The contribution requirements including the 5-year phase-in are shown on page 7.

See the Benefit Provision History on page 57 for past benefit provision changes.

Division 01 - Gnrl NonUn.

Table 10-01: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 15,969,581	23	\$ 16,685,653	22	\$ 1,137,888
Gain/Loss	12/31/2016	375,584	22	420,081	22	28,644
Total				\$ 17,105,734		\$ 1,166,532

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 10 - General AFSCME

Table 10-10: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 9,987,316	23	\$ 10,555,095	22	\$ 719,808
Gain/Loss	12/31/2016	653,157	22	730,539	22	49,824
Plan Amendments	12/31/2016	(3,650)	22	(4,082)	22	(276)
Total				\$ 11,281,552		\$ 769,356

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 11 - Gnl Transit

Table 10-11: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 2,409,244	23	\$ 2,522,257	22	\$ 172,008
Gain/Loss	12/31/2016	162,926	22	182,229	22	12,432
Total				\$ 2,704,486		\$ 184,440

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 12 - Gnrl BCSA

Table 10-12: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 11,147,262	23	\$ 11,583,930	22	\$ 789,972
Gain/Loss	12/31/2016	695,820	22	778,257	22	53,076
Plan Amendments	12/31/2016	1,542	22	1,725	22	120
Total				\$ 12,363,912		\$ 843,168

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 13 - Gnl Housing

Table 10-13: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 675,535	20	\$ 772,761	18	\$ 60,288
Gain/Loss	12/31/2016	6,402	18	7,160	18	564
Total				\$ 779,921		\$ 60,852

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 14 - SEIU Local

Table 10-14: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 9,189,857	23	\$ 9,702,124	22	\$ 661,644
Gain/Loss	12/31/2016	(537,210)	22	(600,855)	22	(40,980)
Plan Amendments	12/31/2016	5,043	22	5,640	22	384
Total				\$ 9,106,909		\$ 621,048

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 15 - City Mngr.

Table 10-15: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 4,977,487	23	\$ 4,452,403	22	\$ 381,612
Gain/Loss	12/31/2016	77,986	22	87,225	22	5,952
Total				\$ 4,539,628		\$ 387,564

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 16 - Cntrl Disp.

Table 10-16: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 125,763	16	\$ 139,272	14	\$ 13,056
Gain/Loss	12/31/2016	(69,400)	14	(77,622)	14	(7,272)
Total				\$ 61,650		\$ 5,784

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 17 - Corr.Offrcs

Table 10-17: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ (276,951)	10	\$ (321,577)	10	\$ (39,336)
Gain/Loss	12/31/2016	23,820	15	26,642	15	2,376
Total				\$ (294,935)		\$ (36,960)

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 18 - General AFSCME after 12/1/10

Table 10-18: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Gain/Loss	12/31/2016	(15,112)	15	(16,902)	15	(1,500)
Total				\$ (16,902)		\$ (1,500)

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 19 - Gen. SEIU hired after 7/1/2011

Table 10-19: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 18,080	23	\$ 26,049	22	\$ 1,776
Gain/Loss	12/31/2016	(875)	22	(979)	22	(72)
Plan Amendments	12/31/2016	(5,553)	22	(6,211)	22	(420)
Total				\$ 18,859		\$ 1,284

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division 20 - Gen. BCSA hired after 1/1/2012

Table 10-20: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Initial	12/31/2015	\$ 4,994	23	\$ 7,719	22	\$ 528
Gain/Loss	12/31/2016	1,814	22	2,029	22	144
Total				\$ 9,748		\$ 672

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

Division HA - GNL Trans hired after 3/1/10

Table 10-HA: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance	Original Amortization Period**	Amounts for Fiscal Year Beginning 7/1/2018		
				Outstanding UAL Balance*	Amortization Period**	Amortization Payment
Gain/Loss	12/31/2016	(11,961)	15	(13,378)	15	(1,188)
Total				\$ (13,378)		\$ (1,188)

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

** Please see the [Appendix](#) on the MERS website for a description of the amortization policy.

The unfunded accrued liability as of December 31, 2016 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2016 valuation to take into account the expected future contributions that are based on past valuations. The projected unfunded accrued liability is amortized over the appropriate period.

GASB 68 Information

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

Actuarial Valuation Date:	12/31/2016
Measurement Date of Total Pension Liability (TPL):	12/31/2016

At 12/31/2016, the following employees were covered by the benefit terms:

Inactive employees or beneficiaries currently receiving benefits:	403
Inactive employees entitled to but not yet receiving benefits:	45
Active employees:	<u>332</u>
	780

Total Pension Liability as of 12/31/2015 measurement date:	\$ 138,929,731
Total Pension Liability as of 12/31/2016 measurement date:	\$ 141,255,649
Service Cost for the year ending on the 12/31/2016 measurement date:	\$ 1,934,782

Change in the Total Pension Liability due to:

- Benefit changes ¹ :	\$ (2,988)
- Differences between expected and actual experience ² :	\$ (833,627)
- Changes in assumptions ² :	\$ 0

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.

Average expected remaining service lives of all employees (active and inactive):	4
Covered employee payroll: (Needed for Required Supplementary Information)	\$ 17,452,775

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

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
Change in Net Pension Liability as of 12/31/2016:	\$ 14,230,567	-	\$ (12,183,451)

Note: The current discount rate shown for GASB 68 purposes is higher than the MERS assumed rate of return. This is because for GASB 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 - Gnrl NonUn.

12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2015	Participant Contribution Rate 3%
4/1/2010	Non Standard Compensation Definition
7/1/2000	Temporary Benefit F55 (With 20 Years of Service) (07/01/2000 - 09/03/2000)
1/1/1996	Benefit B-4 (80% max)
1/1/1996	Member Contribution Rate 2.00%
7/1/1994	Member Contribution Rate 1.50%
6/1/1993	Temporary Benefit RS 50 (50% Post-Ret. Spouse Benefits) (06/01/1993 - 08/03/1993)
6/1/1993	Benefit FAC-3 (3 Year Final Average Compensation)
6/1/1993	Benefit B-3 (80% max)
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
3/1/1987	Benefit F55 (With 25 Years of Service)
3/1/1987	Member Contribution Rate 0.00%
2/1/1986	Benefit C-2/Base B-1
5/6/1975	Exclude Temporary Employees
8/1/1973	Benefit C-1 (Old)
7/10/1973	Covered by Act 88
7/1/1962	Fiscal Month - July
7/1/1962	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1962	10 Year Vesting
7/1/1962	Benefit C (Old)
7/1/1962	Member Contribution Rate 3.00% Under \$4,200.00 - Then 5.00%

10 - General AFSCME

12/1/2016	Service Credit Purchase Estimates - Yes
9/1/2016	Participant Contribution Rate 2.75%
1/1/2011	Non Standard Compensation Definition
10/1/1995	Member Contribution Rate 2.50%
6/1/1995	Benefit B-4 (80% max)
6/1/1995	Member Contribution Rate 2.00%
1/1/1994	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/1994	Benefit B-3 (80% max)
1/1/1994	Member Contribution Rate 1.50%
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
2/1/1986	Benefit FAC-5 (5 Year Final Average Compensation)
2/1/1986	10 Year Vesting
2/1/1986	Benefit C-2/Base B-1
2/1/1986	Benefit F55 (With 25 Years of Service)
2/1/1986	Member Contribution Rate 0.00%
7/10/1973	Covered by Act 88

10 - General AFSCME

7/1/1962 Fiscal Month - July

11 - Gnl Transit

12/1/2016 Service Credit Purchase Estimates - Yes
 11/1/2009 Non Standard Compensation Definition
 12/1/2001 Temporary 8 Year Vesting (12/01/2001 - 02/03/2002)
 11/1/2000 Member Contribution Rate 2.50%
 10/1/1998 Member Contribution Rate 1.75%
 9/1/1998 Benefit B-4 (80% max)
 1/1/1997 Benefit B-3 (80% max)
 1/1/1997 Member Contribution Rate 1.50%
 1/1/1997 Benefit FAC-3 (3 Year Final Average Compensation)
 1/1/1988 Flexible E 2% COLA Adopted (01/01/1988)
 11/1/1986 Benefit C-2/Base B-1
 4/1/1986 Benefit FAC-5 (5 Year Final Average Compensation)
 4/1/1986 10 Year Vesting
 4/1/1986 Benefit F55 (With 25 Years of Service)
 4/1/1986 Member Contribution Rate 0.00%
 7/10/1973 Covered by Act 88
 7/1/1962 Fiscal Month - July

12 - Gnrl BCSA

12/1/2016 Service Credit Purchase Estimates - Yes
 9/1/2016 Participant Contribution Rate 5.16%
 6/1/2010 Non Standard Compensation Definition
 5/1/2003 Benefit RS 50 (50% Post-Ret. Spouse Benefits)
 5/1/2003 Member Contribution Rate 4.16%
 7/1/1996 Member Contribution Rate 2.50%
 1/1/1996 Benefit FAC-3 (3 Year Final Average Compensation)
 1/1/1996 Benefit B-4 (80% max)
 1/1/1996 Member Contribution Rate 2.00%
 1/1/1994 Benefit B-3 (80% max)
 1/1/1994 Member Contribution Rate 1.50%
 1/1/1989 Flexible E 2% COLA Adopted (01/01/1989)
 6/1/1987 Benefit F55 (With 25 Years of Service)
 6/1/1986 Benefit FAC-5 (5 Year Final Average Compensation)
 6/1/1986 10 Year Vesting
 6/1/1986 Benefit C-2/Base B-1
 5/11/1986 Member Contribution Rate 0.00%
 7/10/1973 Covered by Act 88
 7/1/1962 Fiscal Month - July

13 - Gnl Housing

12/1/2016 Service Credit Purchase Estimates - Yes
 12/1/2013 Option B Yes

13 - Gnl Housing

12/1/2013	DC Adoption Date 12-01-2013
8/1/2005	Temporary 24 Years & Out (08/01/2005 - 10/03/2005)
5/1/2000	E2 2.5% COLA for future retirees (05/01/2000)
10/1/1998	Benefit B-4 (80% max)
7/1/1994	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/1994	Benefit B-3 (80% max)
7/1/1994	Member Contribution Rate 1.50%
1/1/1988	Flexible E 2% COLA Adopted (01/01/1988)
1/1/1987	Flexible E 2% COLA Adopted (01/01/1987)
12/1/1986	Benefit F55 (With 25 Years of Service)
5/1/1986	Benefit FAC-5 (5 Year Final Average Compensation)
5/1/1986	10 Year Vesting
5/1/1986	Benefit C-2/Base B-1
5/1/1986	Member Contribution Rate 0.00%
7/10/1973	Covered by Act 88
7/1/1962	Fiscal Month - July

14 - SEIU Local

12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2016	Participant Contribution Rate 3%
1/1/2012	Non Standard Compensation Definition
1/1/1997	Member Contribution Rate 2.50%
1/1/1996	Benefit B-4 (80% max)
1/1/1996	Member Contribution Rate 2.00%
1/1/1994	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/1994	Benefit B-3 (80% max)
1/1/1994	Member Contribution Rate 1.50%
1/1/1989	Flexible E 2% COLA Adopted (01/01/1989)
9/1/1987	Benefit F55 (With 25 Years of Service)
11/1/1986	Benefit C-2/Base B-1
10/17/1986	Benefit FAC-5 (5 Year Final Average Compensation)
10/17/1986	10 Year Vesting
10/17/1986	Member Contribution Rate 0.00%
7/10/1973	Covered by Act 88
7/1/1962	Fiscal Month - July

15 - City Mngr.

12/1/2016	Service Credit Purchase Estimates - Yes
7/1/1996	Benefit RS 50 (50% Post-Ret. Spouse Benefits)
7/1/1996	Benefit B-4 (80% max)
7/1/1996	Benefit F50 (With 25 Years of Service)
5/1/1993	Benefit FAC-3 (3 Year Final Average Compensation)
5/1/1993	10 Year Vesting
5/1/1993	Benefit B-3 (80% max)
5/1/1993	Benefit F55 (With 15 Years of Service)

15 - City Mngr.

5/1/1993	Member Contribution Rate 0.00%
7/10/1973	Covered by Act 88
7/1/1962	Fiscal Month - July

16 - Cntrl Disp.

12/1/2016	Service Credit Purchase Estimates - Yes
1/1/2004	Member Contribution Rate 7.20%
1/1/2004	E2 2.5% COLA for future retirees (01/01/2004)
1/1/2003	Member Contribution Rate 2.50%
1/1/2002	Member Contribution Rate 1.75%
1/1/2001	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/2001	Benefit B-4 (80% max)
1/1/2001	Member Contribution Rate 1.00%
1/1/1994	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1994	10 Year Vesting
1/1/1994	Benefit C-2/Base B-1
1/1/1994	Benefit F55 (With 25 Years of Service)
1/1/1994	Member Contribution Rate 0.00%
7/10/1973	Covered by Act 88
7/1/1962	Fiscal Month - July

17 - Corr.Offrcs

12/1/2016	Service Credit Purchase Estimates - Yes
3/1/2001	Benefit B-3 (80% max)
3/1/2001	Member Contribution Rate 3.12%
1/1/1994	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/1994	10 Year Vesting
1/1/1994	Benefit C-2/Base B-1
1/1/1994	Benefit F55 (With 25 Years of Service)
1/1/1994	Member Contribution Rate 0.00%
7/10/1973	Covered by Act 88
7/1/1962	Fiscal Month - July

18 - General AFSCME after 12/1/10

12/1/2016	Service Credit Purchase Estimates - Yes
1/1/2011	Non Standard Compensation Definition
12/1/2010	Day of work defined as 80 Hours a Month for All employees.
12/1/2010	Benefit FAC-3 (3 Year Final Average Compensation)
12/1/2010	10 Year Vesting
12/1/2010	Benefit C-1 (New)
12/1/2010	Member Contribution Rate 2.50%
7/10/1973	Covered by Act 88
7/1/1962	Fiscal Month - July

19 - Gen. SEIU hired after 7/1/2011

12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2016	Participant Contribution Rate 3%
1/1/2012	Non Standard Compensation Definition
7/1/2011	Day of work defined as 80 Hours a Month for All employees.
7/1/2011	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/2011	10 Year Vesting
7/1/2011	Benefit C-1 (New)
7/1/2011	Member Contribution Rate 2.50%
7/10/1973	Covered by Act 88
7/1/1962	Fiscal Month - July

20 - Gen. BCSA hired after 1/1/2012

12/1/2016	Service Credit Purchase Estimates - Yes
1/1/2012	Member Contribution Rate 2.50%
7/1/2011	Benefit FAC-3 (3 Year Final Average Compensation)
7/1/2011	10 Year Vesting
7/1/2011	Benefit C-1 (New)
7/10/1973	Covered by Act 88
7/1/1962	Fiscal Month - July

HA - GNL Trans hired after 3/1/10

10/1/2015	Hybrid Elapsed Time
3/1/2010	60
3/1/2010	Benefit FAC-3 (3 Year Final Average Compensation)
3/1/2010	Loans
3/1/2010	Pickup
3/1/2010	Rollovers
3/1/2010	6 Year Vesting
3/1/2010	1.25% Multiplier
7/10/1983	Covered by ACT 88
7/1/1962	Fiscal Month - July

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
01 - Gnrl NonUn.	2.00%
10 - General AFSCME	2.00%
11 - Gnl Transit	4.00%
12 - Gnrl BCSA	2.00%
13 - Gnl Housing	4.00%
14 - SEIU Local	2.00%
15 - City Mngr.	4.00%
17 - Corr.Offrcs	4.00%
18 - General AFSCME after 12	2.00%
19 - Gen. SEIU hired after 7	4.00%
20 - Gen. BCSA hired after 1	4.00%
HA - GNL Trans hired after 3	4.00%

Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
All Divisions	70%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Divisions

Closed Division	Amortization Option
13 - Gnl Housing	Accelerated to 15-Year Amortization
16 - Cntrl Disp.	Accelerated to 5-Year Amortization