

# Protecting Local Government Retirement and Benefits Act

## Corrective Action Plan:

### Defined Benefit Pension Retirement Systems

Issued under authority of Public Act 202 of 2017.

#### 1. MUNICIPALITY INFORMATION

Local Unit Name: City of Ironwood Six-Digit Muni Code: 272020  
Defined Benefit Pension System Name: Municipal Employees' Retirement System  
Contact Name (Administrative Officer): Paul Linn  
Title if not Administrative Officer: Finance Director/Treasurer  
Email: linnp@cityofironwood.org Telephone Number: (906) 932-5050

#### 2. GENERAL INFORMATION

**Corrective Action Plan:** An underfunded local unit of government shall develop and submit for approval a corrective action plan for the local unit of government. The local unit of government shall determine the components of the corrective action plan. This Corrective Action Plan shall be submitted by any local unit of government with at least one defined benefit pension retirement system that has been determined to have an underfunded status. Underfunded status for a defined benefit pension system is defined as being less than 60% funded according to the most recent audited financial statements, and, if the local unit of government is a city, village, township, or county, the annually required contribution for all of the defined benefit pension retirement systems of the local unit of government is greater than 10% of the local unit of government's annual governmental fund revenues, based on the most recent fiscal year.

**Due Date:** The local unit of government has **180 days from the date of notification** to submit a corrective action plan to the Municipal Stability Board (the Board). The Board may extend the 180-day deadline by up to an additional 45 days if the local unit of government submits a reasonable draft of a corrective action plan and requests an extension.

**Filing:** Per Sec. 10(1) of PA 202 of 2017 (the Act), this Corrective Action Plan must be approved by the local government's administrative officer and its governing body. **You must provide proof of your governing body approving this Corrective Action Plan and attach the documentation as a separate PDF document.** Per Sec. 10(4) of the Act, failure to provide documentation that demonstrates approval from your governing body will result in a determination of noncompliance by the Board.

The completed plan must be submitted via email to Treasury at [LocalRetirementReporting@michigan.gov](mailto:LocalRetirementReporting@michigan.gov) for review by the Board. **If you have multiple underfunded retirement systems, you are required to complete separate plans and send a separate email for each underfunded system.** Please attach each plan as a separate PDF document in addition to all applicable supporting documentation.

The subject line of the email(s) should be in the following format: **Corrective Action Plan-2017, Local Unit Name, Retirement System Name** (e.g. Corrective Action Plan-2017, City of Lansing, Employees' Retirement System Pension Plan). Treasury will send an automatic reply acknowledging receipt of the email. Your individual email settings must allow for receipt of Treasury's automatic reply. This will be the only notification confirming receipt of the application(s).

**Municipal Stability Board:** The Municipal Stability Board shall review and vote on the approval of a corrective action plan submitted by a local unit of government. If corrective action is approved, the Board will monitor the corrective action for the following two years, and the Board will report on the local unit of government's compliance with the Act not less than every two years.

**Review Process:** Following receipt of the email by Treasury, the Board will accept the corrective action plan submission at the next scheduled meeting of the Board. The Board shall then approve or reject the corrective action plan within 45 days from the date of the meeting.

**Considerations for Approval:** A successful corrective action plan will demonstrate the actions for correcting underfunded status as set forth in Sec. 10(7) of the Act (listed below), as well as any additional solutions to address the underfunded status. Please also include steps already taken to address your underfunded status as well as the date prospective actions will be taken. A local unit of government may also include in its corrective action plan, a review of the local unit of government's budget and finances to determine any alternative methods available to address its underfunded status. A corrective action plan under this section may include the development and implementation of corrective options for the local unit of government to address its underfunded status. The corrective options as described in Sec. 10(7) may include, but are not limited to, any of the following:

- (i) Closing the current defined benefit plan.
- (ii) Implementing a multiplier limit.
- (iii) Reducing or eliminating new accrued benefits.
- (iv) Implementing final average compensation standards.

**Implementation:** The local unit of government has up to 180 days after the approval of a corrective action plan to begin to implement the corrective action plan to address its underfunded status. The Board shall monitor each underfunded local unit of government's compliance with this act and any corrective action plan. The Board shall adopt a schedule, not less than every 2 years, to certify that the underfunded local unit of government is in substantial compliance with the act. If the Board determines that an underfunded local unit of government is not in substantial compliance under this subsection, the Board shall within 15 days provide notification and report to the local unit of government detailing the reasons for the determination of noncompliance with the corrective action plan. The local unit of government has 60 days from the date of the notification to address the determination of noncompliance.

### 3. DESCRIPTIONS OF PRIOR ACTIONS

Prior actions are separated into three categories below: System Design Changes, Additional Funding, and Other Considerations. Please provide a brief description of the prior actions implemented by the local government to address the retirement system's underfunded status within the appropriate category section. Within each category are sample statements that you may choose to use to indicate the changes to your system that will positively affect your funded status. For retirement systems that have multiple divisions, departments, or plans within the same retirement system, please indicate how these changes impact the retirement **system** as a whole.

- **Please Note:** If applicable, prior actions listed within your waiver application(s) may also be included in your corrective action plan.

Please indicate where in the attached supporting documentation these changes are described and the impact of those changes (i.e. what has the local unit of government done to improve its underfunded status, and where can we find the proof of these changes in the supporting documentation?).

**Note:** Please provide the name of the system impacted, the date you made the change, the relevant page number(s) within the supporting documentation, and the resulting change to the system's funded ratio.

**Category of Prior Actions:**

**System Design Changes** - System design changes may include the following: Lower tier of benefits for new hires, final average compensation limitations, freeze future benefit accruals for active employees in the defined benefit system, defined contribution system for new hires, hybrid system for new hires, bridged multiplier for active employees, etc.

**Sample Statement:** *The system's multiplier for current employees was lowered from 2.5X to 2X for the **General Employees' Retirement System** on **January 1, 2017**. On page **8** of the attached actuarial supplemental valuation, it shows our funded ratio will be **60%** by fiscal year **2020**.*

Multiple system design changes have been made to the City's Municipal Employees' Retirement System. These changes are summarized on attachment 7a (along with the applicable supporting documents for each change). On page 14 of the attached AAV 12/31/17 (Attachment 2a), it shows our funded ratio will be 60% by fiscal year 2025.

**Additional Funding** – Additional funding may include the following: Voluntary contributions above the actuarially determined contribution, bonding, millage increases, restricted funds, etc.

**Sample Statement:** *The local unit provided a lump sum payment of **\$1 million** to the **General Employees' Retirement System** on **January 1, 2017**. This lump sum payment was in addition to the actuarially determined contribution (ADC) of the system. The additional contribution will increase the retirement system's funded ratio to **61% by 2025**. Please see page **10** of the attached enacted budget, which highlights this contribution of **\$1 million**.*

The City of Ironwood has provided extra contributions above the actuarially determined contribution for each of the past three (3) years totaling \$776,600.29 (Attachments 4a, 4b and 4c). On page 14 of the attached AAV 12/31/17 (Attachment 2a), it shows our funded ratio will be 60% by fiscal year 2025. The payment made on June 29, 2018 is not factored into this calculation. This payment should help increase the retirement system's funded ratio to 60% prior to fiscal year 2025.

**Other Considerations** – Other considerations may include the following: outdated Form 5572 information, actuarial assumption changes, amortization policy changes, etc.

**Sample Statement:** *The information provided on the Form 5572 from the audit used actuarial data from **2015**. Attached is an updated actuarial valuation for **2017** that shows our funded ratio has improved to **62%** as indicated on page **13**.*

The City of Ironwood's pension plan is administered by Municipal Employees' Retirement System (MERS), which provides a high level of effective plan administration. MERS performed an experience study in 2015 and changed our amortization policy from a rolling amortization period to a fixed amortization period. The MERS funding policy uses a level-percent-of-payroll amortization method. On page 14 of the attached AAV 12/31/17 (Attachment 2a), it shows our funded ratio will be 60% by fiscal year 2025 and 100% by fiscal year 2039.

**4. DESCRIPTION OF PROSPECTIVE ACTIONS**

The corrective action plan allows you to submit a plan of prospective actions which are separated into three categories below: System Design Changes, Additional Funding, and Other Considerations. Please provide a brief description of the additional actions the local government is planning to implement to address the retirement system's underfunded status within the appropriate category section. Within each category are sample statements that you may choose to use to indicate the changes to your system that will positively affect your funded status. For retirement systems that have multiple divisions, departments, or plans within the same retirement system, please indicate how these changes impact the retirement **system** as a whole.

Please indicate where in the attached supporting documentation these changes are described and the impact of those changes (i.e. what will the local unit of government do to improve its underfunded status, and where can we find the proof of these changes in the supporting documentation?).

**Category of Prospective Actions:**

**System Design Changes** - System design changes may include the following: Lower tier of benefits for new hires, final average compensation limitations, freeze future benefit accruals for active employees in the defined benefit system, defined contribution system for new hires, hybrid system for new hires, bridged multiplier for active employees, etc.

**Sample Statement:** Beginning with **summer 2018** contract negotiations, the local unit will seek to lower the system's multiplier for current employees from 2.5X to 2X for the **General Employees' Retirement System**. On page **8** of the attached actuarial supplemental valuation, it shows our funded ratio would be **60%** funded by **fiscal year 2020** if these changes were adopted and implemented by **fiscal year 2019**.

**Additional Funding** – Additional funding may include the following: voluntary contributions above the actuarially determined contribution, bonding, millage increases, restricted funds, etc.

**Sample Statement:** Beginning in **fiscal year 2019**, the local unit will provide a lump sum payment of **\$1 million** to the **General Employees' Retirement System**. This lump sum payment will be in addition to the actuarially determined contribution (ADC) of the system. The additional contribution will increase the retirement system's funded ratio to **61% by 2025**. Please see page **10** of the attached enacted budget, which highlights this contribution of **\$1 million**. Please see page **12** of the attached supplemental actuarial valuation showing the projected change to the system's funded ratio with this additional contribution.

**Other Considerations** – Other considerations may include the following: outdated Form 5572 information, actuarial assumption changes, amortization policy changes, etc.

**Sample Statement:** Beginning in **fiscal year 2019**, the local unit will begin amortizing the unfunded portion of the pension liability using a **level-dollar amortization method over a closed period of 10 years**. This will allow the retirement system to reach a funded status of **62%** by **2022** as shown in the attached actuarial analysis on page **13**.

The City levies a millage to fund our annual actuarially determined contribution for our Public Safety divisions under Public Act 345 of 1937. This millage rate is conservatively calculated each year to ensure sufficient funding. As a result, the City is able to make the annual required contribution, as well as an additional contribution, each fiscal year.

**5. CONFIRMATION OF FUNDING**

**Please check the applicable answer:**

Do the corrective actions listed in this plan allow for (insert local unit name) City of Ironwood to make, at a minimum, the annual required contribution payment for the defined benefit pension system according to your long-term budget forecast?

**Yes**

**No**

**If No, Explain:**

**6. DOCUMENTATION ATTACHED TO THIS CORRECTIVE ACTION PLAN**

Documentation should be attached as a .pdf to this Corrective Action Plan. The documentation should detail the corrective action plan that would be implemented to adequately address the local unit of government’s underfunded status. Please check all documents that are included as part of this plan and attach in successive order as provided below:

**Naming convention:** when attaching documents please use the naming convention shown below. If there is more than one document in a specific category that needs to be submitted, include a, b, or c for each document. For example, if you are submitting two supplemental valuations, you would name the first document “Attachment 2a” and the second document “Attachment 2b”.

Naming Convention	Type of Document
<input checked="" type="checkbox"/> Attachment – 1	<b>This Corrective Action Plan Form (Required)</b>
<input checked="" type="checkbox"/> Attachment – 1a	<b>Documentation from the governing body approving this Corrective Action Plan (Required)</b>
<input checked="" type="checkbox"/> Attachment – 2a	Actuarial Analysis (annual valuation, supplemental valuation, projection)
<input type="checkbox"/> Attachment – 3a	Internally Developed Projection Study
<input checked="" type="checkbox"/> Attachment – 4a	Documentation of additional payments in past years that is not reflected in your audited financial statements (e.g. enacted budget, system provided information).
<input type="checkbox"/> Attachment – 5a	Documentation of commitment to additional payments in future years (e.g. resolution, ordinance)
<input type="checkbox"/> Attachment – 6a	A separate corrective action plan that the local unit has approved to address its underfunded status, which includes documentation of prior actions, prospective actions, and the positive impact on the system’s funded ratio
<input checked="" type="checkbox"/> Attachment – 7a	Other documentation, not categorized above

**7. LOCAL UNIT OF GOVERNMENT’S ADMINISTRATIVE OFFICER APPROVAL OF CORRECTIVE ACTION PLAN**

I, Scott Erickson, as the government’s administrative officer (*enter title*)  
City Manager (Ex: City/Township Manager, Executive director, and Chief Executive Officer, etc.) approve this Corrective Action Plan and will implement the prospective actions contained in this Corrective Action Plan.

Signature 

Date 11/12/2018

## Ironwood City Commission Meeting Minutes

A Regular Meeting of the Ironwood City Commission was held on November 12, 2018 at 5:30 P.M. in the City Commission Chambers, Second Floor of the Municipal Memorial Building in the City of Ironwood.

A. Mayor Pro Tem Mildren called the meeting to order at 5:30 P.M.

Mayor Pro Tem Mildren requested the City Commission excuse Mayor Burchell and Commissioner Cayer from tonight's meeting.

*Motion was made by Semo, seconded by Corcoran and carried to excuse Mayor Burchell and Commissioner Cayer from tonight's meeting.*

B. Recording of the Roll.

PRESENT: Commissioner Corcoran, Semo, and Mayor Pro Tem Mildren.

ABSENT: Commissioner Cayer (excused) and Mayor Burchell (excused).

Mayor Pro Tem Mildren took a moment of silence to remember, thank, and show gratitude for our Veterans on Veterans Day.

C. Approval of the Consent Agenda.\*

\*1) Approval of Minutes – Regular City Commission Meeting Minutes of October 22nd.

\*2) Review and Place on File:

- a. Carnegie Library Meeting Minutes of September 28th.
- b. Ironwood Planning Commission Meeting Minutes of October 4th, 2018.
- c. Parks and Recreation Committee Meeting Minutes of October 1st, 2018.
- d. Downtown Development Authority Meeting Minutes of August 23rd, 2018.
- e. Economic Development Corporation Meeting Minutes of October 3rd, 2018.

*Motion was made by Corcoran, seconded by Semo, to approve the consent agenda as presented. Unanimously passed by roll call vote.*

D. Approval of the Agenda

*Motion was made by Corcoran, seconded by Semo, and carried to approve the agenda as presented.*

E. Citizens wishing to address the Commission on Items on the Agenda. (Three Minute Limit).

There were none.

- F. Citizens wishing to address the Commission on Items not on the Agenda (Three Minute Limit)

Micky Valley, of 160 Cloverland Drive addressed the City Commission noting that he would like to open a Marihuana Micro Building in that area.

- G. AUDIENCE: Kerry Noble, Commercial Field Specialist, CLEAResult  
(RE: Rebate programs for Xcel Electric and Gas).

Kerry Noble, Commercial Field Specialist for Efficiency United, addressed the Ironwood City Commission regarding rebate programs for Xcel Electric and Gas. He stated since 2009, when Public Act 295 went into effect, Xcel Energy was to save customers money on gas and electric. He further mentioned some of the types of savings such as LED Street Lights, boilers, annual tune ups, and many other projects that Efficiency United could help with. Additional comments were received regarding the many programs.

#### OLD BUSINESS

- H. Discuss and Consider approving extension of Lease Agreement with the Social Security Administration and authorize Mayor Pro Tem and City Clerk to sign same.

*Motion was made by Semo, seconded by Corcoran, to approve the extension of the Lease Agreement with the Social Security Administration and authorize the Mayor Pro Tem and City Clerk to sign same. Unanimously passed by roll call vote.*

- I. Discuss and consider approving the Corrective Action Plan for the City's Defined Benefit Pension Retirement System.

*Motion was made by Semo, seconded by Corcoran, to approve the Corrective Action Plan for the City's Defined Benefit Pension Retirement System. Unanimously passed by roll call vote.*

#### NEW BUSINESS

- J. Discuss and Consider request from the Gogebic County Fair/Friends of the Fair for a "Special Event Water Rate" for the 2018/2019 Snowmobile Olympus being held at the Gogebic County Fair Grounds on December 29, 2018, January 5th & 6th, 2019, and February 16th & 17th, 2019.

*Motion was made by Corcoran, seconded by Semo, to approve the "Special Event Water Rate" for the 2018/2019 Snowmobile Olympus being held at the Gogebic County Fair Grounds on December 29, 2018, January 5<sup>th</sup> & 6<sup>th</sup>, 2019, and February 16<sup>th</sup> & 17<sup>th</sup>, 2019. Unanimously passed by roll call vote.*

K. Discuss and Consider the sale of a portion of surplus property to Andrew & Jean Saari, of 123 Luxmore Street in the amount of \$2,217.50.

*Motion was made by Semo, seconded by Corcoran, to authorize a portion of the surplus property to Andrew & Jean Saari of 123 Luxmore Street with all fees and costs associated with the sale to be paid by buyer. Unanimously passed by roll call vote.*

L. Discuss and Consider declaring four (4) used grader tires surplus and selling them to the Iron County non-profit ATV/UTV Association for \$1.00.

*Motion was made by Semo, seconded by Corcoran, to declare four (4) used grader tires surplus and sell them to the Iron County non-profit ATV/UTV Association for \$1.00. Unanimously passed by roll call vote.*

M. Discuss and Consider approving a 5-year agreement with Axon for Public Safety Body Cameras in the amount of \$12,182.40/yr.

*Motion was made by Semo, seconded by Corcoran, to approve the 5-year agreement with Axon for Public Safety Body Cameras in the amount of \$12,182.40/yr. Unanimously passed by roll call vote.*

N. Manager's Report.

*City Manager Scott B. Erickson verbally gave the Manager's report noting the following items:*

- \*He gave praise to the Department of Public Works (DPW) for cleaning up the streets during and after the recent storm.*
- \*DPW will be pulling snow at 1:00 a.m. tomorrow morning.*
- \*Jack Frost Parade will be Saturday, December 1<sup>st</sup>.*
- \*Frost Friday will be Friday, November 30<sup>th</sup> to coincide with the Jack Frost Festivities.*
- \*Santa's Headquarters is scheduled for December 5<sup>th</sup> from 9:30 a.m. – 1:00 p.m. at the Memorial Building.*
- \*The downtown tree lighting ceremony will be Wednesday, November 14<sup>th</sup> from 6:00 p.m. – 7:00 p.m.*
- \*The City of Ironwood should be notified sometime in December on the DNR Trust Fund Grant Applications recently submitted.*

O. Other Matters.

Mayor Pro Tem Mildren thanked all the groups that turn out to help over 400 families during the Santa's Headquarters. He wanted to note two (2) special groups such as Ojibway Corrections who gave a check for \$700 along with the Marine group.



P. Adjournment.

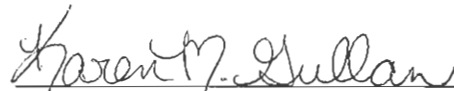
*Motion was made by Semo, seconded by Corcoran and carried to adjourn the meeting at 6:05 P.M.*

Jim Mildren, Mayor Pro Tem

Karen M. Gullan, City Clerk

STATE OF MICHIGAN )  
  ) ss.  
COUNTY OF GOGEBIC)

I hereby certify that the foregoing is a true and complete copy of the minutes from the Monday, November 12, 2018 Ironwood City Commission Meeting, and that said meeting was conducted and public notice of said meeting was given pursuant to and in full compliance with the Open Meetings Act, being Act 267, Public Acts of Michigan, 1976, and that the minutes of said meeting were kept and will be or have been made available as required by said Act.

  
\_\_\_\_\_  
Karen M. Gullan, City Clerk

# Attachment 2a



**MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN**  
ANNUAL ACTUARIAL VALUATION REPORT DECEMBER 31, 2017  
IRONWOOD, CITY OF (2706)



Spring, 2018

Ironwood, 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, 2017. The report includes the determination of liabilities and contribution rates resulting from the participation of Ironwood, City of (2706) in the Municipal Employees' Retirement System of Michigan ("MERS"). MERS is an independent, professional retirement services company that was created to administer retirement plans for Michigan municipalities on a not-for-profit basis. This report contains the minimum actuarially determined contribution requirement, in alignment with the MERS Plan Documents, funding policy and Michigan Constitution. Ironwood, 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, 2017 annual actuarial valuation is to:

- Measure funding progress
- Establish contribution requirements for the fiscal year beginning July 1, 2019
- 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, 2017 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-2017AnnualActuarialValuation-Appendix.pdf](http://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2017AnnualActuarialValuation-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

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### 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:

	12/31/2017 *	12/31/2016
<b>Funded Ratio</b>	52%	51%

\* Reflects assets from Surplus divisions, if any.

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 third 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 2018 your municipality is making employer contributions based on rates without the phase-in applied, contact MERS to ensure the No Phase-in rate is used again for 2019 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:	12/31/2017	12/31/2017	12/31/2016	12/31/2016	12/31/2017	12/31/2017	12/31/2016	12/31/2016
Fiscal Year Beginning:	July 1, 2019	July 1, 2019	July 1, 2018	July 1, 2018	July 1, 2019	July 1, 2019	July 1, 2018	July 1, 2018
<b>Division</b>								
01 - General hired prior to	-	-	-	-	\$ 20,954	\$ 22,004	\$ 19,329	\$ 20,904
02 - Police and Fire (prior	-	-	-	-	19,492	19,652	20,936	21,176
07 - Library Employees	30.04%	31.81%	23.71%	26.53%	816	864	605	677
10 - General hired 7/1/94 -	-	-	-	-	6,314	6,674	6,179	6,719
11 - General hired after 7/	-	-	-	-	1,978	2,034	1,853	1,937
12 - General after 7/1/12	-	-	-	-	897	941	803	869
13 - Housing Commission	29.14%	30.36%	27.36%	29.25%	4,721	4,919	4,308	4,605
14 - Gen aft 7/1/16 AFSCME	-	-	5.47%	5.47%	399	399	1,390	1,390
15 - Grnl aft 7/1/17 (AFSCM	5.92%	5.92%			1,243	1,243		
20 - Police and Fire (Post	-	-	-	-	11,355	11,601	12,048	12,417
21 - Police/Fire after 4/1/	12.08%	12.08%	8.46%	8.46%	1,018	1,018	433	433
<b>Municipality Total</b>					<b>\$ 69,187</b>	<b>\$ 71,349</b>	<b>\$ 67,884</b>	<b>\$ 71,127</b>

Employee contribution rates reflected in the valuations are shown below:

Valuation Date:	Employee Contribution Rate	
	12/31/2017	12/31/2016
<b>Division</b>		
01 - General hired prior to	4.77%	4.77%
02 - Police and Fire (prior	5.00%	5.00%
07 - Library Employees	4.77%	4.77%
10 - General hired 7/1/94 -	4.77%	4.77%
11 - General hired after 7/	4.77%	4.77%
12 - General after 7/1/12	4.77%	4.77%



Valuation Date:	Employee Contribution Rate	
	12/31/2017	12/31/2016
<b>Division</b>		
13 - Housing Commission	4.77%	4.77%
14 - Gen aft 7/1/16 AFSCME	6.00%	6.00%
15 - Grnl aft 7/1/17 (AFSCM	6.00%	0.00%
20 - Police and Fire (Post	5.00%	5.00%
21 - Police/Fire after 4/1/	5.00%	5.00%

The employer may contribute more than the minimum required contributions, as these additional contributions will earn investment income and may result in lower future contribution requirements. Employers making contributions in excess of the minimum requirements may elect to apply the excess contribution immediately to a particular division, or segregate the excess into one or more of what MERS calls "Surplus" divisions. An election in the first case would immediately reduce any unfunded accrued liability and lower the amortization payments throughout the remaining amortization period. An election to set up Surplus divisions would not immediately lower future contributions, however the assets from the Surplus divisions could be transferred to an unfunded division in the future to reduce the unfunded liability in future years, or to be used to pay all or a portion of the minimum required contribution in a future year. For purposes of this report, the assets in any Surplus division have been included in the municipality's total assets, unfunded accrued liability and funded status, however, these assets are not used in calculating the minimum required contribution.

**MERS strongly encourages employers to contribute more than the minimum contribution shown above.**

Assuming that experience of the plan meets actuarial assumptions:

- To accelerate to a 100% funding ratio in 10 years, estimated monthly employer contributions for the fiscal year beginning in 2019 for the entire employer would be \$113,656, instead of \$71,349.

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 Investment Return Assumption and Asset Smoothing

A defined benefit plan is funded by employer contributions, participant contributions, and investment earnings. Investment earnings have historically provided **more than half** of the funding. The larger the share of benefits being provided from investment returns, the smaller the required contributions, and vice versa. Determining the contributions required to prefund the promised retirement benefits requires an assumption of what investment earnings are expected to add to the fund over a long period of time. This is called the **Investment Return Assumption**.

The MERS Investment Return Assumption is **7.75%** per year. This, along with all of our other actuarial assumptions, is reviewed every five years in an Experience Study that compares the assumptions used against actual experience and recommends adjustments if necessary. If your municipality would like to explore contributions at lower investment return assumptions, please review the budget projection scenarios later in this report.

To avoid dramatic spikes and dips in annual contribution requirements due to short term fluctuations in asset markets, MERS applies a technique called **asset smoothing**. This spreads out each year's investment gains or losses over the prior year and the following four years. This smoothing method is used to determine your actuarial value of assets (valuation assets), which is then used to determine both your funded ratio and your required contributions. The (smoothed) **actuarial rate of return for 2017 was 6.08%, while the actual market rate of return was 13.07%**. To see historical details of the market rate of return, compared to the smoothed actuarial rate of return, refer to this report's [Appendix](#), or visit our [Defined Benefit resource page](#) on the MERS website.

As of December 31, 2017 the actuarial value of assets is 101% of market value due to asset smoothing. 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, or contribution requirements will continue to increase.

If the December 31, 2017 valuation results were based on market value instead of the actuarial value:

- The funded percent of your entire municipality would be 51% (instead of 52%); and
- Your total employer contribution requirement for the fiscal year starting July 1, 2019 would be \$865,464 (instead of \$856,188).

## 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. An Experience Study is completed every five years to review the assumptions and methods. The next Experience Study will be completed in 2020.

Risk can also be managed through a plan design that provides benefits that are sustainable in the long run.

The Actuarial Standards Board has issued Actuarial Standards of Practice (ASOP) No. 51. This standard will be effective for any actuarial work with a measurement date on or after November 1, 2018. This means, the December 31, 2018 and later annual actuarial valuation reports for MERS will have to comply with this standard. This standard will require the actuary to identify risks that, in the actuary's professional judgment may significantly impact the plan's future financial condition. The actuary will have to assess the potential effects of the identified risks on the plan's future financial condition. The assessment may or may not be based on numerical calculations. However, the assessment should reflect the specifics of the plan (i.e. funded status, plan demographics, funding policy, etc.). If the actuary concludes that numerical calculations are necessary to assess the risk, the actuary can use various methods to quantify the risk such as scenario tests, sensitivity tests, stress tests, etc.

Some of these risk assessment measures have already been incorporated in the MERS annual valuation reports. For example, the projections of funded percentage and employer contributions shown on the following pages could be used to gauge the risk associated with long term investment rates of return different than the assumed 7.75% annual rate. A history of the municipality's funded percentage as shown in Table 7, could indicate the trend in funded status over time.

## 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 the Investment Return Assumption. 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, 2017 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 Investment Return Assumption			
	Lower Future Annual Returns		Valuation Assumption	Higher Returns
	5.75%	6.75%	7.75%	8.75%
<b>12/31/2017 Valuation Results</b>				
Accrued Liability	\$ 24,651,706	\$ 22,233,883	\$ 20,182,044	\$ 18,428,666
Valuation Assets <sup>1</sup>	\$ 10,478,858	\$ 10,478,858	\$ 10,478,858	\$ 10,478,858
Unfunded Accrued Liability	\$ 14,172,848	\$ 11,755,025	\$ 9,703,186	\$ 7,949,808
<b>Funded Ratio</b>	43%	47%	52%	57%
Monthly Normal Cost	\$ 26,356	\$ 19,627	\$ 14,414	\$ 10,361
Monthly Amortization Payment	\$ 69,541	\$ 63,082	\$ 56,935	\$ 50,290
<b>Total Employer Contribution<sup>2</sup></b>	\$ 95,897	\$ 82,709	\$ 71,349	\$ 60,651

<sup>1</sup> The Valuation Assets include assets from Surplus divisions, if any.

<sup>2</sup> 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 assumption scenarios. All four projections take into account the past investment losses that will continue to affect the actuarial rate of return in the short term. Under the 7.75% scenarios in the table on the next page, 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 annual investment returns of 6.75% and 5.75% over the long-term.

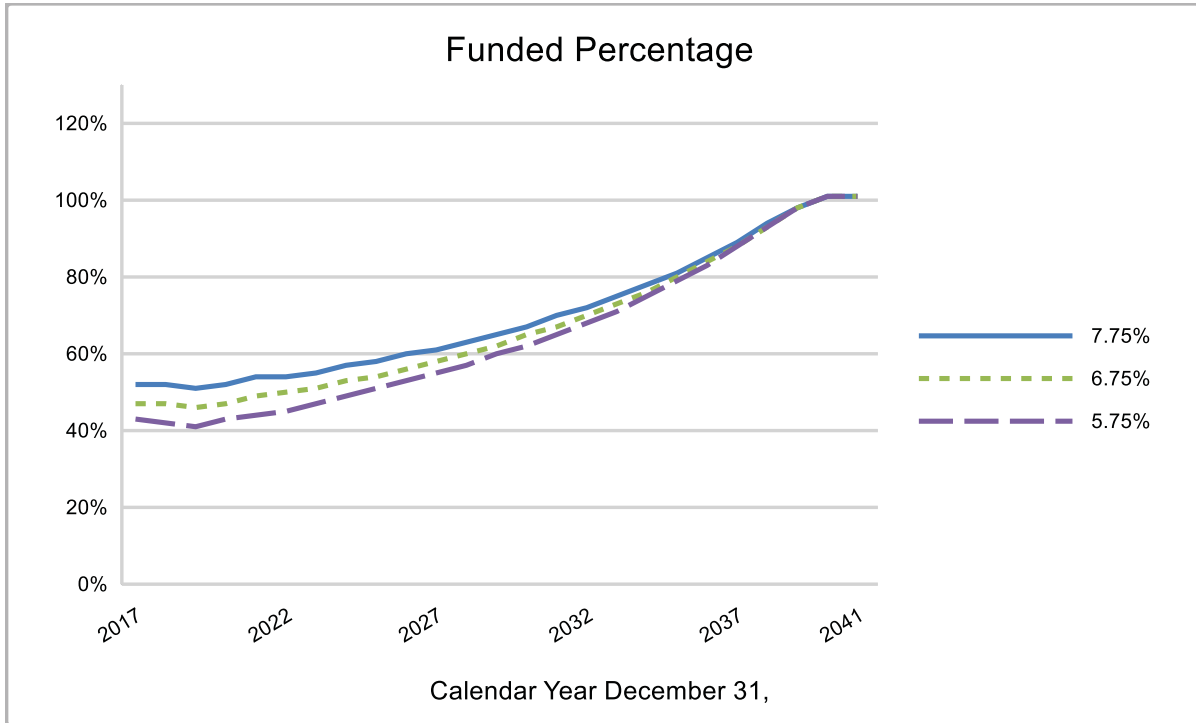
The projections are shown both in tabular and graphical form in total for the employer. The tables show projections for six years. The graphs show projections for twenty five years.

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 <sup>2</sup>	Funded Percentage	Computed Annual Employer Contribution
<b>7.75%<sup>1</sup></b>					
<b>WITH 5-YEAR PHASE-IN</b>					
2017	2019	\$ 20,182,044	\$ 10,478,858	52%	\$ 830,244
2018	2020	20,500,000	10,600,000	52%	890,000
2019	2021	20,800,000	10,600,000	51%	955,000
2020	2022	21,100,000	11,000,000	52%	980,000
2021	2023	21,500,000	11,500,000	53%	1,110,000
2022	2024	21,800,000	11,800,000	54%	1,150,000
<b>NO 5-YEAR PHASE-IN</b>					
2017	2019	\$ 20,182,044	\$ 10,478,858	52%	\$ 856,188
2018	2020	20,500,000	10,600,000	52%	901,000
2019	2021	20,800,000	10,600,000	51%	952,000
2020	2022	21,100,000	11,100,000	52%	976,000
2021	2023	21,500,000	11,500,000	54%	1,100,000
2022	2024	21,800,000	11,800,000	54%	1,150,000
<b>6.75%<sup>1</sup></b>					
<b>NO 5-YEAR PHASE-IN</b>					
2017	2019	\$ 22,233,883	\$ 10,478,858	47%	\$ 992,508
2018	2020	22,500,000	10,500,000	47%	1,050,000
2019	2021	22,800,000	10,500,000	46%	1,110,000
2020	2022	23,200,000	11,000,000	47%	1,160,000
2021	2023	23,500,000	11,400,000	49%	1,290,000
2022	2024	23,900,000	11,800,000	50%	1,320,000
<b>5.75%<sup>1</sup></b>					
<b>NO 5-YEAR PHASE-IN</b>					
2017	2019	\$ 24,651,706	\$ 10,478,858	43%	\$ 1,150,764
2018	2020	24,900,000	10,400,000	42%	1,230,000
2019	2021	25,300,000	10,400,000	41%	1,280,000
2020	2022	25,600,000	10,900,000	43%	1,370,000
2021	2023	26,000,000	11,400,000	44%	1,480,000
2022	2024	26,300,000	11,900,000	45%	1,510,000

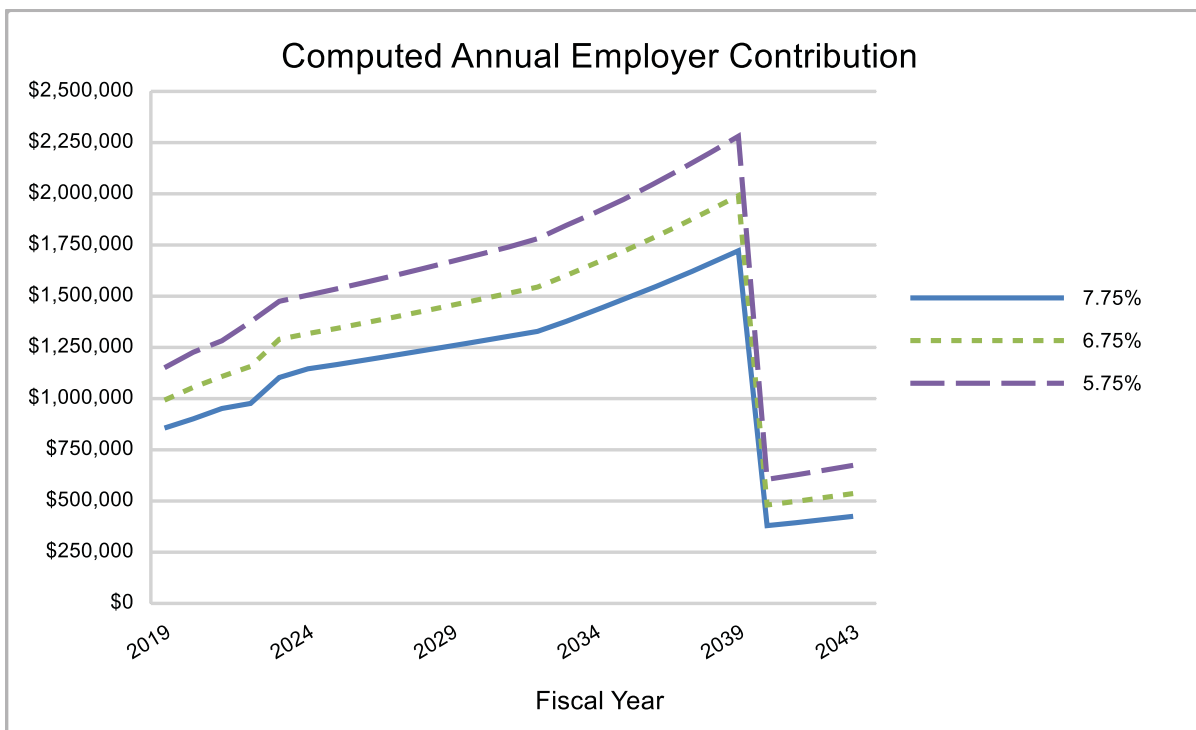
<sup>1</sup> Represents both the interest rate for discounting liabilities and the future investment return assumption on the Market Value of assets.

<sup>2</sup> Valuation Assets do not include assets from Surplus divisions, if any.



Notes:

All projected funded percentages are shown with no phase-in.



Notes:

All projected contributions are shown with no phase-in.



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
2017	2019	No	No	No	No
2018	2020	No	No	No	No
2019	2021	No	No	No	No
2020	2022	No	No	02	02
2021	2023	02	02	02	02
2022	2024	02	02	02	02

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, 2019

**Table 1**

Division	Total Normal Cost	Employee Contrib. Rate	Employer Contributions <sup>1</sup>			Computed Employer Contrib. With Phase-In	Blended ER Rate No Phase-In <sup>5</sup>	Blended ER Rate With Phase-In <sup>5</sup>	Employee Contrib. Conversion Factor <sup>2</sup>
			Employer Normal Cost	Payment of the Unfunded Accrued Liability <sup>4</sup>	Computed Employer Contrib. No Phase-In				
<b>Percentage of Payroll</b>									
01 - General hired prio	10.92%	4.77%	-	-	-	-	30.84%	29.44%	
02 - Police and Fire (p	0.00%	5.00%	-	-	-	-	64.27%	63.46%	0.83%
07 - Library Employees	13.32%	4.77%	8.55%	23.26%	31.81%	30.04%	30.84%	29.44%	
10 - General hired 7/1/	12.06%	4.77%	-	-	-	-	30.84%	29.44%	
11 - General hired afte	11.25%	4.77%	-	-	-	-	30.84%	29.44%	
12 - General after 7/1/	11.08%	4.77%	-	-	-	-	30.84%	29.44%	
13 - Housing Commission	12.09%	4.77%	7.32%	23.04%	30.36%	29.14%	30.84%	29.44%	0.82%
14 - Gen aft 7/1/16 AFS	11.50%	6.00%	-	-	-	-	30.84%	29.44%	
15 - Grnl aft 7/1/17 (A	11.93%	6.00%	5.93%	-0.01%	5.92%	5.92%	30.84%	29.44%	0.74%
20 - Police and Fire (P	16.77%	5.00%	-	-	-	-	64.27%	63.46%	
21 - Police/Fire after	18.59%	5.00%	13.59%	-1.51%	12.08%	12.08%	64.27%	63.46%	0.97%
<b>Estimated Monthly Contribution<sup>3</sup></b>									
01 - General hired prio			\$ 928	\$ 21,076	\$ 22,004	\$ 20,954			
02 - Police and Fire (p			0	19,652	19,652	19,492			
07 - Library Employees			232	632	864	816			
10 - General hired 7/1/			1,839	4,835	6,674	6,314			
11 - General hired afte			1,370	664	2,034	1,978			
12 - General after 7/1/			1,144	(203)	941	897			
13 - Housing Commission			1,186	3,733	4,919	4,721			
14 - Gen aft 7/1/16 AFS			406	(7)	399	399			
15 - Grnl aft 7/1/17 (A			1,245	(2)	1,243	1,243			
20 - Police and Fire (P			4,919	6,682	11,601	11,355			
21 - Police/Fire after			1,145	(127)	1,018	1,018			
<b>Total Municipality</b>			<b>\$ 14,414</b>	<b>\$ 56,935</b>	<b>\$ 71,349</b>	<b>\$ 69,187</b>			

**Table 1 (continued)**

Division	Total Normal Cost	Employee Contribut. Rate	Employer Contributions <sup>1</sup>			Computed Employer Contribut. With Phase-In	Blended ER Rate No Phase-In <sup>5</sup>	Blended ER Rate With Phase-In <sup>5</sup>	Employee Contribut. Conversion Factor <sup>2</sup>
			Employer Normal Cost	Payment of the Unfunded Accrued Liability <sup>4</sup>	Computed Employer Contribut. No Phase-In				
<b>Estimated Annual Contribution<sup>3</sup></b>			\$ 172,968	\$ 683,220	\$ 856,188	\$ 830,244			

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

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

3 For divisions that are open to new hires, estimated contributions are based on projected fiscal year payroll. Actual contributions will be based on actual reported monthly pays, and will be different from the above amounts. For divisions that will have no new hires (i.e. closed divisions), invoices will be based on the above dollar amounts which are based on projected fiscal year payroll. See description of Open Divisions and Closed Divisions in the [Appendix](#).

4 If projected assets exceed projected liabilities as of the beginning of the July 1, 2019 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-MERS (6377).

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

## Benefit Provisions

### Table 2

#### 01 - General hired prior to 7/1/94: Closed to new hires, linked to Division 15

	2017 Valuation	2016 Valuation
<b>Benefit Multiplier:</b>	2.25% Multiplier (no max)	2.25% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	4.77%	4.77%
<b>D-2:</b>	D-2 (25%)	D-2 (25%)
	SLIF (260 Days)	SLIF (260 Days)
<b>Act 88:</b>	No	No

#### 02 - Police and Fire (prior 4/1/95): Closed to new hires, linked to Division 21

	2017 Valuation	2016 Valuation
<b>Benefit Multiplier:</b>	2.50% Multiplier (no max)	2.50% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	50/25	50/25
<b>Early Retirement (Reduced):</b>	55/15	55/15
<b>Final Average Compensation:</b>	3 years	3 years
<b>Employee Contributions:</b>	5%	5%
<b>RS50% Percentage:</b>	60%	60%
<b>D-2:</b>	D-2 (25%)	D-2 (25%)
	SLIF (260 Days)	SLIF (260 Days)
<b>Act 88:</b>	No	No

#### 07 - Library Employees: Open Division

	2017 Valuation	2016 Valuation
<b>Benefit Multiplier:</b>	2.25% Multiplier (no max)	2.25% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	4.77%	4.77%
<b>D-2:</b>	D-2 (25%)	D-2 (25%)
<b>Act 88:</b>	No	No

Table 2 (continued)

**10 - General hired 7/1/94 - 6/30/06: Closed to new hires, linked to Division 15**

	2017 Valuation	2016 Valuation
<b>Benefit Multiplier:</b>	2.25% Multiplier (no max)	2.25% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	4.77%	4.77%
<b>D-2:</b>	D-2 (25%)	D-2 (25%)
	SLIF (100 Days)	SLIF (100 Days)
<b>Act 88:</b>	No	No

**11 - General hired after 7/1/06: Closed to new hires, linked to Division 15**

	2017 Valuation	2016 Valuation
<b>Benefit Multiplier:</b>	2.25% Multiplier (no max)	2.25% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	4.77%	4.77%
<b>D-2:</b>	D-2 (25%)	D-2 (25%)
<b>Act 88:</b>	No	No

**12 - General after 7/1/12: Closed to new hires, linked to Division 15**

	2017 Valuation	2016 Valuation
<b>Benefit Multiplier:</b>	2.25% Multiplier (no max)	2.25% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	4.77%	4.77%
<b>D-2:</b>	D-2 (25%)	D-2 (25%)
<b>Act 88:</b>	No	No

Table 2 (continued)

<b>13 - Housing Commission: Open Division</b>		
	<b>2017 Valuation</b>	<b>2016 Valuation</b>
<b>Benefit Multiplier:</b>	2.25% Multiplier (no max)	2.25% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	4.77%	4.77%
<b>D-2:</b>	D-2 (25%)	D-2 (25%)
	SLIF (100 Days)	SLIF (100 Days)
<b>Act 88:</b>	No	No
<b>14 - Gen aft 7/1/16 AFSCME Un &amp; Non: Closed to new hires, linked to Division 15</b>		
	<b>2017 Valuation</b>	<b>2016 Valuation</b>
<b>Benefit Multiplier:</b>	2.25% Multiplier (no max)	2.25% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	55/20	55/20
<b>Early Retirement (Reduced):</b>	50/25	50/25
	55/15	55/15
<b>Final Average Compensation:</b>	5 years	5 years
<b>Employee Contributions:</b>	6%	6%
<b>D-2:</b>	D-2 (25%)	D-2 (25%)
<b>Act 88:</b>	No	No
<b>15 - Grnl aft 7/1/17 (AFSCME &amp; N-U): Open Division, linked to Division 01, 10, 11, 12, 14</b>		
	<b>2017 Valuation</b>	<b>2016 Valuation</b>
<b>Benefit Multiplier:</b>	2.00% Multiplier (no max)	-
<b>Normal Retirement Age:</b>	60	-
<b>Vesting:</b>	10 years	-
<b>Early Retirement (Unreduced):</b>	55/20	-
<b>Early Retirement (Reduced):</b>	50/25	-
	55/15	-
<b>Final Average Compensation:</b>	5 years	-
<b>Employee Contributions:</b>	6%	-
<b>D-2:</b>	D-2 (25%)	-
<b>Act 88:</b>	No	-

**Table 2 (continued)****20 - Police and Fire (Post 4/1/95): Closed to new hires, linked to Division 21**

	<b>2017 Valuation</b>	<b>2016 Valuation</b>
<b>Benefit Multiplier:</b>	2.50% Multiplier (no max)	2.50% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	50/25	50/25
<b>Early Retirement (Reduced):</b>	55/15	55/15
<b>Final Average Compensation:</b>	3 years	3 years
<b>Employee Contributions:</b>	5%	5%
<b>RS50% Percentage:</b>	60%	60%
<b>D-2:</b>	D-2 (25%) SLIF (100 Days)	D-2 (25%) SLIF (100 Days)
<b>Act 88:</b>	No	No

**21 - Police/Fire after 4/1/12: Open Division, linked to Division 02, 20**

	<b>2017 Valuation</b>	<b>2016 Valuation</b>
<b>Benefit Multiplier:</b>	2.25% Multiplier (no max)	2.25% Multiplier (no max)
<b>Normal Retirement Age:</b>	60	60
<b>Vesting:</b>	10 years	10 years
<b>Early Retirement (Unreduced):</b>	50/20	50/20
<b>Early Retirement (Reduced):</b>	55/15	55/15
<b>Final Average Compensation:</b>	3 years	3 years
<b>Employee Contributions:</b>	5%	5%
<b>RS50% Percentage:</b>	60%	60%
<b>D-2:</b>	D-2 (25%)	D-2 (25%)
<b>Act 88:</b>	No	No

## Participant Summary

**Table 3**

Division	2017 Valuation		2016 Valuation		2017 Valuation		
	Number	Annual Payroll <sup>1</sup>	Number	Annual Payroll <sup>1</sup>	Average Age	Average Benefit Service <sup>2</sup>	Average Eligibility Service <sup>2</sup>
01 - General hired prior							
Active Employees	4	\$ 206,461	4	\$ 207,788	54.7	30.3	30.3
Vested Former Employees	1	9,471	1	9,471	51.3	0.0	20.0
Retirees and Beneficiaries	48	669,095	49	675,749	74.4		
02 - Police and Fire (pri							
Active Employees	0	\$ 0	0	\$ 0	0.0	0.0	0.0
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	19	533,850	19	542,433	72.1		
07 - Library Employees							
Active Employees	1	\$ 29,737	1	\$ 27,943	57.5	9.9	9.9
Vested Former Employees	1	6,597	1	6,648	57.1	10.8	10.8
Retirees and Beneficiaries	3	12,606	3	12,606	70.7		
10 - General hired 7/1/94							
Active Employees	8	\$ 367,763	10	\$ 453,588	57.8	16.7	16.7
Vested Former Employees	1	11,005	1	11,005	45.5	11.8	11.8
Retirees and Beneficiaries	4	89,560	2	53,306	62.6		
11 - General hired after							
Active Employees	4	\$ 251,522	4	\$ 245,353	45.9	9.3	9.3
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
12 - General after 7/1/12							
Active Employees	5	\$ 227,202	5	\$ 216,218	43.4	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		
13 - Housing Commission							
Active Employees	4	\$ 177,291	4	\$ 172,282	48.4	4.9	4.9
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	9	113,179	9	113,179	69.7		
14 - Gen aft 7/1/16 AFSCM							
Active Employees	2	\$ 99,476	2	\$ 70,145	32.0	1.2	1.2
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
15 - Grnl aft 7/1/17 (AFS							
Active Employees	1	\$ 28,944		\$	49.7	0.1	0.1
Vested Former Employees	0	0			0.0	0.0	0.0
Retirees and Beneficiaries	0	0			0.0		



**Table 3 (continued)**

Division	2017 Valuation		2016 Valuation		2017 Valuation		
	Number	Annual Payroll <sup>1</sup>	Number	Annual Payroll <sup>1</sup>	Average Age	Average Benefit Service <sup>2</sup>	Average Eligibility Service <sup>2</sup>
20 - Police and Fire (Pos)							
Active Employees	8	\$ 470,650	9	\$ 524,565	46.2	17.6	17.6
Vested Former Employees	2	45,910	1	20,324	47.9	15.0	15.0
Retirees and Beneficiaries	2	56,016	2	56,016	56.9		
21 - Police/Fire after 4/							
Active Employees	2	\$ 78,887	1	\$ 42,191	48.8	0.4	10.2
Vested Former Employees	0	0	0	0	0.0	0.0	0.0
Retirees and Beneficiaries	0	0	0	0	0.0		
<b>Total Municipality</b>							
<b>Active Employees</b>	<b>39</b>	<b>\$ 1,937,933</b>	<b>40</b>	<b>\$ 1,960,073</b>	<b>49.1</b>	<b>12.5</b>	<b>13.0</b>
<b>Vested Former Employees</b>	<b>5</b>	<b>72,983</b>	<b>4</b>	<b>47,448</b>	<b>49.9</b>	<b>10.5</b>	<b>14.5</b>
<b>Retirees and Beneficiaries</b>	<b>85</b>	<b>1,474,306</b>	<b>84</b>	<b>1,453,289</b>	<b>72.3</b>		
<b>Total Participants</b>	<b>129</b>		<b>128</b>				

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

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

**Reported Assets (Market Value)****Table 4**

Division	2017 Valuation		2016 Valuation	
	Employer and Retiree <sup>1</sup>	Employee <sup>2</sup>	Employer and Retiree <sup>1</sup>	Employee <sup>2</sup>
01 - General hired prior to 7/1/94	\$ 3,617,627	\$ 312,470	\$ 3,602,203	\$ 297,388
02 - Police and Fire (prior 4/1/95)	1,882,433	0	1,596,978	0
07 - Library Employees	106,011	27,047	97,557	39,208
10 - General hired 7/1/94 - 6/30/06	1,147,791	280,040	906,639	321,929
11 - General hired after 7/1/06	195,478	109,322	143,651	95,641
12 - General after 7/1/12	120,509	57,147	80,485	45,508
13 - Housing Commission	547,617	36,777	532,959	27,831
14 - Gen aft 7/1/16 AFSCME Un & Non	6,862	6,674	669	693
15 - Grnl aft 7/1/17 (AFSCME & N-U)	110	145		
20 - Police and Fire (Post 4/1/95)	1,239,272	653,263	1,024,249	615,601
21 - Police/Fire after 4/1/12	13,427	1,534	8,399	3,991
<b>Municipality Total</b>	<b>\$ 8,877,137</b>	<b>\$ 1,484,419</b>	<b>\$ 7,993,789</b>	<b>\$ 1,447,790</b>
<b>Combined Assets</b>	<b>\$10,361,556</b>		<b>\$9,441,579</b>	

<sup>1</sup> Reserve for Employer Contributions and Benefit Payments

<sup>2</sup> Reserve for Employee Contributions

The December 31, 2017 valuation assets (actuarial value of assets) are equal to 1.011321 times the reported market value of assets (compared to 1.077095 as of December 31, 2016). 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 (Valuation Assets)	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
	Required	Additional						
2009	\$ 5,609,847		\$ 1,587,063	\$ 1,822,719	\$ 0	\$ 0	\$ 0	\$ 9,019,629
2010	1,701,181		130,158	805,765	(1,094,217)	(3,439)	66,391	10,625,468
2011	733,728	\$ 1,085	172,634	473,382	(1,278,378)	0	(198,536)	10,529,383
2012	604,636	0	106,752	400,512	(1,359,331)	0	0	10,281,952
2013	586,331	0	92,863	540,102	(1,377,422)	(7,055)	0	10,116,771
2014	609,927		99,794	543,924	(1,361,303)	0	0	10,009,169
2015	628,415		101,247	455,119	(1,353,985)	0	29,245	9,869,212
2016	690,766		102,647	535,704	(1,381,105)	0	0	10,169,476
2017	804,236		99,301	605,664	(1,473,944)	(4,620)	0	10,478,858

**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.

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

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

## Actuarial Accrued Liabilities and Valuation Assets As of December 31, 2017

Table 6

Division	Actuarial Accrued Liability	Valuation Assets <sup>1</sup>	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - General hired prior to 7/1/94				
Active Employees	\$ 1,367,158	\$ 290,463	21.2%	\$ 1,076,695
Vested Former Employees	81,776	22,007	26.9%	59,769
Retirees And Beneficiaries	6,064,499	3,662,120	60.4%	2,402,379
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	<b>\$ 7,513,433</b>	<b>\$ 3,974,590</b>	<b>52.9%</b>	<b>\$ 3,538,843</b>
02 - Police and Fire (prior 4/1/95)				
Active Employees	\$ 0	\$ 0	0.0%	\$ 0
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	5,317,544	1,903,744	35.8%	3,413,800
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	<b>\$ 5,317,544</b>	<b>\$ 1,903,744</b>	<b>35.8%</b>	<b>\$ 3,413,800</b>
07 - Library Employees				
Active Employees	\$ 56,074	\$ 12,882	23.0%	\$ 43,192
Vested Former Employees	56,803	14,165	24.9%	42,638
Retirees And Beneficiaries	126,604	107,517	84.9%	19,087
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	<b>\$ 239,481</b>	<b>\$ 134,564</b>	<b>56.2%</b>	<b>\$ 104,917</b>
10 - General hired 7/1/94 - 6/30/06				
Active Employees	\$ 1,296,036	\$ 479,110	37.0%	\$ 816,926
Vested Former Employees	38,908	38,908	100.0%	0
Retirees And Beneficiaries	925,977	925,977	100.0%	0
Pending Refunds	<u>0</u>	<u>0</u>	0.0%	<u>0</u>
Total	<b>\$ 2,260,921</b>	<b>\$ 1,443,995</b>	<b>63.9%</b>	<b>\$ 816,926</b>
11 - General hired after 7/1/06				
Active Employees	\$ 416,663	\$ 305,476	73.3%	\$ 111,187
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>2,775</u>	<u>2,775</u>	100.0%	<u>0</u>
Total	<b>\$ 419,438</b>	<b>\$ 308,251</b>	<b>73.5%</b>	<b>\$ 111,187</b>
12 - General after 7/1/12				
Active Employees	\$ 142,750	\$ 167,492	117.3%	\$ (24,742)
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	<u>12,175</u>	<u>12,175</u>	100.0%	<u>0</u>
Total	<b>\$ 154,925</b>	<b>\$ 179,667</b>	<b>116.0%</b>	<b>\$ (24,742)</b>

**Table 6 (continued)**

<b>Division</b>	<b>Actuarial Accrued Liability</b>	<b>Valuation Assets<sup>1</sup></b>	<b>Percent Funded</b>	<b>Unfunded (Overfunded) Accrued Liabilities</b>
<b>13 - Housing Commission</b>				
Active Employees	\$ 159,243	\$ 36,762	23.1%	\$ 122,481
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	1,057,507	554,248	52.4%	503,259
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 1,216,750</b>	<b>\$ 591,010</b>	<b>48.6%</b>	<b>\$ 625,740</b>
<b>14 - Gen aft 7/1/16 AFSCME Un &amp; Non</b>				
Active Employees	\$ 12,763	\$ 13,689	107.3%	\$ (926)
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 12,763</b>	<b>\$ 13,689</b>	<b>107.3%</b>	<b>\$ (926)</b>
<b>15 - Grnl aft 7/1/17 (AFSCME &amp; N-U)</b>				
Active Employees	\$ 82	\$ 258	314.6%	\$ (176)
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 82</b>	<b>\$ 258</b>	<b>314.6%</b>	<b>\$ (176)</b>
<b>20 - Police and Fire (Post 4/1/95)</b>				
Active Employees	\$ 2,204,873	\$ 1,072,302	48.6%	\$ 1,132,571
Vested Former Employees	205,620	205,620	100.0%	0
Retirees And Beneficiaries	632,282	632,282	100.0%	0
Pending Refunds	<u>3,756</u>	<u>3,756</u>	100.0%	0
<b>Total</b>	<b>\$ 3,046,531</b>	<b>\$ 1,913,960</b>	<b>62.8%</b>	<b>\$ 1,132,571</b>
<b>21 - Police/Fire after 4/1/12</b>				
Active Employees	\$ 176	\$ 15,130	8,596.6%	\$ (14,954)
Vested Former Employees	0	0	0.0%	0
Retirees And Beneficiaries	0	0	0.0%	0
Pending Refunds	0	0	0.0%	0
<b>Total</b>	<b>\$ 176</b>	<b>\$ 15,130</b>	<b>8,596.6%</b>	<b>\$ (14,954)</b>
<b>Total Municipality</b>				
<b>Active Employees</b>	<b>\$ 5,655,818</b>	<b>\$ 2,393,564</b>	<b>42.3%</b>	<b>\$ 3,262,254</b>
<b>Vested Former Employees</b>	<b>383,107</b>	<b>280,700</b>	<b>73.3%</b>	<b>102,407</b>
<b>Retirees and Beneficiaries</b>	<b>14,124,413</b>	<b>7,785,888</b>	<b>55.1%</b>	<b>6,338,525</b>
<b>Pending Refunds</b>	<b><u>18,706</u></b>	<b><u>18,706</u></b>	<b><u>100.0%</u></b>	<b><u>0</u></b>
<b>Total</b>	<b>\$ 20,182,044</b>	<b>\$ 10,478,858</b>	<b>51.9%</b>	<b>\$ 9,703,186</b>
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.				

**Table 6** (continued)

<b>Division</b>	<b>Actuarial Accrued Liability</b>	<b>Valuation Assets<sup>1</sup></b>	<b>Percent Funded</b>	<b>Unfunded (Overfunded) Accrued Liabilities</b>
Linked Divisions 15, 01, 10, 11, 12, 14				
Active Employees	\$ 3,235,452	\$ 1,256,488	38.8%	\$ 1,978,964
Vested Former Employees	120,684	60,915	50.5%	59,769
Retirees and Beneficiaries	6,990,476	4,588,097	65.6%	2,402,379
Pending Refunds	<u>14,950</u>	<u>14,950</u>	100.0%	<u>0</u>
Total	<b>\$ 10,361,562</b>	<b>\$ 5,920,450</b>	<b>57.1%</b>	<b>\$ 4,441,112</b>
Linked Divisions 21, 02, 20				
Active Employees	\$ 2,205,049	\$ 1,087,432	49.3%	\$ 1,117,617
Vested Former Employees	205,620	205,620	100.0%	0
Retirees and Beneficiaries	5,949,826	2,536,026	42.6%	3,413,800
Pending Refunds	<u>3,756</u>	<u>3,756</u>	100.0%	<u>0</u>
Total	<b>\$ 8,364,251</b>	<b>\$ 3,832,834</b>	<b>45.8%</b>	<b>\$ 4,531,417</b>

<sup>1</sup> Includes both employer and employee assets.

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

## Actuarial Accrued Liabilities - Comparative Schedule

**Table 7**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2009	\$ 16,784,123	\$ 9,019,629	54%	\$ 7,764,494
2010	17,599,898	10,625,468	60%	6,974,430
2011	17,754,420	10,529,383	59%	7,225,037
2012	17,756,991	10,281,952	58%	7,475,039
2013	18,003,366	10,116,771	56%	7,886,595
2014	18,554,029	10,009,169	54%	8,544,860
2015	19,545,142	9,869,212	51%	9,675,930
2016	20,112,346	10,169,476	51%	9,942,870
2017	20,182,044	10,478,858	52%	9,703,186

Notes: Actuarial assumptions were revised for the 2004, 2008, 2009, 2010, 2011, 2012 and 2015 actuarial valuations.  
The Valuation Assets include assets from Surplus divisions, if any.

## Division 01 - General hired prior to 7/1/94

### Table 8-01: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2009	\$ 9,270,097	\$ 5,132,267	55%	\$ 4,137,830
2010	8,363,878	5,924,974	71%	2,438,904
2011	8,343,026	5,917,172	71%	2,425,854
2012	7,892,378	5,561,680	71%	2,330,698
2013	7,706,585	5,275,312	69%	2,431,273
2014	7,669,335	5,004,506	65%	2,664,829
2015	7,528,576	4,498,357	60%	3,030,219
2016	7,612,123	4,200,230	55%	3,411,893
2017	7,513,433	3,974,590	53%	3,538,843

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2009	32	\$ 1,438,030	22.14%	4.77%
2010	10	453,880	\$ 12,906	4.77%
2011	7	300,875	\$ 13,174	4.77%
2012	5	227,239	\$ 12,828	4.77%
2013	5	241,671	\$ 13,495	4.77%
2014	5	258,422	\$ 15,252	4.77%
2015	4	198,098	\$ 18,229	4.77%
2016	4	207,788	\$ 20,904	4.77%
2017	4	206,461	\$ 22,004	4.77%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.



## Division 02 - Police and Fire (prior 4/1/95)

### Table 8-02: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2009	\$ 7,514,026	\$ 3,887,362	52%	\$ 3,626,664
2010	6,058,868	3,211,403	53%	2,847,465
2011	5,826,603	2,475,384	43%	3,351,219
2012	5,704,603	2,247,543	39%	3,457,060
2013	5,635,716	2,071,862	37%	3,563,854
2014	5,596,107	1,888,321	34%	3,707,786
2015	5,605,709	1,647,613	29%	3,958,096
2016	5,508,181	1,720,097	31%	3,788,084
2017	5,317,544	1,903,744	36%	3,413,800

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

### Table 9-02: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2009	12	\$ 609,707	42.37%	8.33%
2010	2	113,625	\$ 15,234	5.00%
2011	1	54,747	\$ 17,914	5.00%
2012	1	51,952	\$ 18,512	5.00%
2013	1	52,958	\$ 18,937	5.00%
2014	1	55,493	\$ 20,049	5.00%
2015	1	58,421	\$ 30,893	5.00%
2016	0	0	\$ 21,176	5.00%
2017	0	0	\$ 19,652	5.00%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.

## Division 07 - Library Employees

**Table 8-07: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2012	\$ 164,548	\$ 103,316	63%	\$ 61,232
2013	182,479	112,556	62%	69,923
2014	202,404	122,810	61%	79,594
2015	234,103	134,240	57%	99,863
2016	227,021	147,309	65%	79,712
2017	239,481	134,564	56%	104,917

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

**Table 9-07: Computed Employer Contributions - Comparative Schedule**

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2012	2	\$ 52,893	14.37%	4.77%
2013	2	53,009	15.45%	4.77%
2014	2	53,570	16.45%	4.77%
2015	2	53,796	19.70%	4.77%
2016	1	27,943	26.53%	4.77%
2017	1	29,737	31.81%	4.77%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.

## Division 10 - General hired 7/1/94 - 6/30/06

### Table 8-10: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2010	\$ 1,509,468	\$ 818,948	54%	\$ 690,520
2011	1,684,141	863,893	51%	820,248
2012	1,973,457	1,013,912	51%	959,545
2013	2,200,747	1,158,386	53%	1,042,361
2014	2,464,383	1,305,289	53%	1,159,094
2015	1,921,617	1,013,533	53%	908,084
2016	2,123,290	1,323,284	62%	800,006
2017	2,260,921	1,443,995	64%	816,926

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2010	18	\$ 812,974	\$ 7,625	4.77%
2011	16	697,635	\$ 7,957	4.77%
2012	16	773,280	\$ 9,025	4.77%
2013	15	642,607	\$ 8,510	4.77%
2014	14	633,291	\$ 9,149	4.77%
2015	11	495,462	\$ 7,374	4.77%
2016	10	453,588	\$ 6,719	4.77%
2017	8	367,763	\$ 6,674	4.77%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.

## Division 11 - General hired after 7/1/06

**Table 8-11: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2010	\$ 119,127	\$ 66,914	56%	\$ 52,213
2011	160,672	79,791	50%	80,881
2012	154,525	102,564	66%	51,961
2013	188,992	129,365	68%	59,627
2014	248,669	171,927	69%	76,742
2015	306,387	212,215	69%	94,172
2016	361,930	257,740	71%	104,190
2017	419,438	308,251	74%	111,187

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2010	8	\$ 331,681	7.57%	4.77%
2011	8	316,880	7.87%	4.77%
2012	5	268,159	\$ 1,413	4.77%
2013	4	226,904	\$ 1,373	4.77%
2014	4	238,791	\$ 1,621	4.77%
2015	4	236,321	\$ 1,820	4.77%
2016	4	245,353	\$ 1,937	4.77%
2017	4	251,522	\$ 2,034	4.77%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.

## Division 12 - General after 7/1/12

**Table 8-12: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2012	\$ 1,927	\$ 0	0%	\$ 1,927
2013	22,539	34,641	154%	(12,102)
2014	55,290	64,555	117%	(9,265)
2015	93,003	98,896	106%	(5,893)
2016	114,357	135,706	119%	(21,349)
2017	154,925	179,667	116%	(24,742)

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2012	4	\$ 141,979	6.14%	4.77%
2013	5	225,651	5.40%	4.77%
2014	6	261,629	5.84%	4.77%
2015	6	265,183	6.28%	4.77%
2016	5	216,218	\$ 869	4.77%
2017	5	227,202	\$ 941	4.77%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.

## Division 13 - Housing Commission

**Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2015	\$ 1,160,284	\$ 615,843	53%	\$ 544,441
2016	1,202,623	604,024	50%	598,599
2017	1,216,750	591,010	49%	625,740

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2015	3	\$ 113,299	36.23%	4.77%
2016	4	172,282	29.25%	4.77%
2017	4	177,291	30.36%	4.77%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.

## Division 14 - Gen aft 7/1/16 AFSCME Un & Non

**Table 8-14: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2016	\$ 400	\$ 1,467	367%	\$ (1,067)
2017	12,763	13,689	107%	(926)

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2016	2	\$ 70,145	5.47%	6.00%
2017	2	99,476	\$ 399	6.00%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.

## Division 15 - Grnl aft 7/1/17 (AFSCME & N-U)

**Table 8-15: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2017	\$ 82	\$ 258	315%	\$ (176)

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2017	1	\$ 28,944	5.92%	6.00%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.



## Division 20 - Police and Fire (Post 4/1/95)

### Table 8-20: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2010	\$ 1,548,557	\$ 603,229	39%	\$ 945,328
2011	1,739,978	1,193,143	69%	546,835
2012	1,865,553	1,252,937	67%	612,616
2013	2,066,308	1,334,649	65%	731,659
2014	2,317,841	1,451,761	63%	866,080
2015	2,694,740	1,642,455	61%	1,052,285
2016	2,955,227	1,766,274	60%	1,188,953
2017	3,046,531	1,913,960	63%	1,132,571

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 <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2010	10	\$ 501,414	18.62%	9.00%
2011	10	448,642	14.71%	9.00%
2012	10	445,504	\$ 7,649	5.00%
2013	9	452,480	\$ 8,385	5.00%
2014	9	479,871	\$ 9,579	5.00%
2015	9	499,255	\$ 11,275	5.00%
2016	9	524,565	\$ 12,417	5.00%
2017	8	470,650	\$ 11,601	5.00%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.

## Division 21 - Police/Fire after 4/1/12

**Table 8-21: Actuarial Accrued Liabilities - Comparative Schedule**

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2015	723	6,060	838%	(5,337)
2016	7,194	13,345	186%	(6,151)
2017	176	15,130	8597%	(14,954)

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

**Table 9-21: Computed Employer Contributions - Comparative Schedule**

Valuation Date December 31	Active Employees		Computed Employer Contribution <sup>1</sup>	Employee Contribution Rate <sup>2</sup>
	Number	Annual Payroll		
2015	1	40,703	9.19%	5.00%
2016	1	42,191	8.46%	5.00%
2017	2	78,887	12.08%	5.00%

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

<sup>2</sup> 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 6.

See the Benefit Provision History on page 53 for past benefit provision changes.

**Division 01 - General hired prior to 7/1/94****Table 10-01: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
Initial	12/31/2015	\$ 3,030,219	23	\$ 3,179,626	21	\$ 223,476
(Gain)/Loss	12/31/2016	313,863	22	353,398	21	24,840
(Gain)/Loss	12/31/2017	58,401	21	65,320	21	4,596
<b>Total</b>				<b>\$ 3,598,344</b>		<b>\$ 252,912</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

## Division 02 - Police and Fire (prior 4/1/95)

**Table 10-02: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
Initial	12/31/2015	\$ 3,958,096	23	\$ 4,025,932	21	\$ 282,948
(Gain)/Loss	12/31/2016	(244,051)	22	(274,796)	21	(19,308)
(Gain)/Loss	12/31/2017	(353,846)	21	(395,768)	21	(27,816)
<b>Total</b>				<b>\$ 3,355,368</b>		<b>\$ 235,824</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

## Division 07 - Library Employees

**Table 10-07: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
Initial	12/31/2015	\$ 99,863	23	\$ 106,071	21	\$ 7,452
(Gain)/Loss	12/31/2016	(21,995)	22	(24,763)	21	(1,740)
(Gain)/Loss	12/31/2017	23,782	21	26,599	21	1,872
<b>Total</b>				<b>\$ 107,907</b>		<b>\$ 7,584</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

**Division 10 - General hired 7/1/94 - 6/30/06****Table 10-10: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
Initial	12/31/2015	\$ 908,084	23	\$ 912,620	21	\$ 64,140
(Gain)/Loss	12/31/2016	(103,677)	22	(116,736)	21	(8,208)
(Gain)/Loss	12/31/2017	26,605	21	29,757	21	2,088
<b>Total</b>				<b>\$ 825,641</b>		<b>\$ 58,020</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

## Division 11 - General hired after 7/1/06

**Table 10-11: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
Initial	12/31/2015	\$ 94,172	23	\$ 102,185	21	\$ 7,188
(Gain)/Loss	12/31/2016	5,680	22	6,397	21	456
(Gain)/Loss	12/31/2017	4,080	21	4,563	21	324
<b>Total</b>				<b>\$ 113,145</b>		<b>\$ 7,968</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

## Division 12 - General after 7/1/12

**Table 10-12: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
Initial	12/31/2015	\$ (5,893)	10	\$ (2,608)	10	\$ (324)
(Gain)/Loss	12/31/2016	(19,364)	15	(21,331)	14	(2,004)
(Gain)/Loss	12/31/2017	(1,080)	15	(1,208)	15	(108)
<b>Total</b>				<b>\$ (25,147)</b>		<b>\$ (2,436)</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.



## Division 13 - Housing Commission

**Table 10-13: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
Initial	12/31/2015	\$ 544,441	23	\$ 557,621	21	\$ 39,192
(Gain)/Loss	12/31/2016	47,930	22	53,964	21	3,792
(Gain)/Loss	12/31/2017	23,027	21	25,755	21	1,812
<b>Total</b>				<b>\$ 637,340</b>		<b>\$ 44,796</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

## Division 14 - Gen aft 7/1/16 AFSCME Un & Non

**Table 10-14: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
(Gain)/Loss	12/31/2016	\$ (947)	15	\$ (1,041)	14	\$ (96)
(Gain)/Loss	12/31/2017	93	15	104	15	12
<b>Total</b>				<b>\$ (937)</b>		<b>\$ (84)</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

## Division 15 - Grnl aft 7/1/17 (AFSCME & N-U)

**Table 10-15: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
(Gain)/Loss	12/31/2017	\$ (176)	15	\$ (197)	15	\$ (24)
<b>Total</b>				<b>\$ (197)</b>		<b>\$ (24)</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

**Division 20 - Police and Fire (Post 4/1/95)****Table 10-20: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
Initial	12/31/2015	\$ 1,052,285	23	\$ 1,116,617	21	\$ 78,480
(Gain)/Loss	12/31/2016	105,029	22	118,253	21	8,316
(Gain)/Loss	12/31/2017	(84,162)	21	(94,133)	21	(6,612)
<b>Total</b>				<b>\$ 1,140,737</b>		<b>\$ 80,184</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

**Division 21 - Police/Fire after 4/1/12****Table 10-21: Layered Amortization Schedule**

Type of UAL	Date Established	Original Balance <sup>1</sup>	Original Amortization Period <sup>2</sup>	Amounts for Fiscal Year Beginning 7/1/2019		
				Outstanding UAL Balance <sup>3</sup>	Remaining Amortization Period <sup>2</sup>	Annual Amortization Payment
Initial	12/31/2015	\$ (5,337)	10	\$ (2,765)	10	\$ (336)
(Gain)/Loss	12/31/2016	(3,205)	15	(3,526)	14	(336)
(Gain)/Loss	12/31/2017	(8,522)	15	(9,532)	15	(852)
<b>Total</b>				<b>\$ (15,823)</b>		<b>\$ (1,524)</b>

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

<sup>2</sup> According to the MERS amortization policy, each type of UAL (layer) is amortized over a specific period (see [Appendix](#) on MERS website).

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

The unfunded accrued liability (UAL) as of December 31, 2017 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2017 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the [Appendix](#) on the MERS website for a detailed description of the amortization policy.

## 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](http://www.mersofmich.com).

Actuarial Valuation Date:	12/31/2017
Measurement Date of Total Pension Liability (TPL):	12/31/2017

At 12/31/2017, the following employees were covered by the benefit terms:

Inactive employees or beneficiaries currently receiving benefits:	85
Inactive employees entitled to but not yet receiving benefits:	5
Active employees:	<u>39</u>
	129

Covered employee payroll: (Needed for Required Supplementary Information)	\$	1,937,933
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Average expected remaining service lives of all employees (active and inactive):		2
--	--	---

Total Pension Liability as of 12/31/2016 measurement date:	\$	19,643,760
--	----	------------

Total Pension Liability as of 12/31/2017 measurement date:	\$	19,718,019
--	----	------------

Service Cost for the year ending on the 12/31/2017 measurement date:	\$	237,968
--	----	---------

Change in the Total Pension Liability due to:

- Benefit changes <sup>1</sup> :	\$	0
- Differences between expected and actual experience <sup>2</sup> :	\$	(203,626)
- Changes in assumptions <sup>2</sup> :	\$	0

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

<sup>2</sup> 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.

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 12/31/2017:	\$ 1,971,542	-	\$ (1,687,573)

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 - General hired prior to 7/1/94

12/1/2016	Service Credit Purchase Estimates - Yes
6/15/2010	Blanket Resolution (Generic Service)
10/1/2009	Day of work defined as 130 Hours a Month for All employees.
10/1/2009	Benefit D2 Plan
10/1/2009	Benefit FAC-5 (5 Year Final Average Compensation)
10/1/2009	Non Standard Compensation Definition
10/1/2009	Exclude Temporary Employees requiring less than 12 months
10/1/2009	Sick Eligibility - 2080 Hours
10/1/2009	10 Year Vesting
10/1/2009	2.25% Multiplier (no max)
10/1/2009	Benefit F55 (With 20 Years of Service)
10/1/2009	Member Contribution Rate 4.77%
10/1/2009	Fiscal Month - July
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

### 02 - Police and Fire (prior 4/1/95)

12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2011	Sick Eligibility - 2080 Hours
6/15/2010	Blanket Resolution (Generic Service)
10/1/2009	Fiscal Month - July
10/1/2009	Day of work defined as 130 Hours a Month for All employees.
10/1/2009	Benefit D2 Plan
10/1/2009	Benefit FAC-3 (3 Year Final Average Compensation)
10/1/2009	Non Standard Compensation Definition
10/1/2009	Benefit RS 60 (60% Post-Ret. Spouse Benefits)
10/1/2009	Exclude Temporary Employees requiring less than 12 months
10/1/2009	Sick Eligibility - 1248 Hours
10/1/2009	10 Year Vesting
10/1/2009	2.5% Multiplier (no max)
10/1/2009	Benefit F50 (With 25 Years of Service)
10/1/2009	Member Contribution Rate 5.00%
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

### 07 - Library Employees

12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2012	Day of work defined as 130 Hours a Month for All employees.
7/1/2012	Benefit D2 Plan
7/1/2012	Benefit FAC-5 (5 Year Final Average Compensation)

**07 - Library Employees**

7/1/2012	Non Standard Compensation Definition
7/1/2012	Exclude Temporary Employees requiring less than 12 months
7/1/2012	10 Year Vesting
7/1/2012	2.25% Multiplier (no max)
7/1/2012	Benefit F55 (With 20 Years of Service)
7/1/2012	Member Contribution Rate 4.77%
6/15/2010	Blanket Resolution (Generic Service)
10/1/2009	Fiscal Month - July
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

**10 - General hired 7/1/94 - 6/30/06**

12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2011	Day of work defined as 130 Hours a Month for All employees.
7/1/2011	Benefit D2 Plan
7/1/2011	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/2011	Non Standard Compensation Definition
7/1/2011	Exclude Temporary Employees requiring less than 12 months
7/1/2011	Sick Eligibility - 800 Hours
7/1/2011	10 Year Vesting
7/1/2011	2.25% Multiplier (no max)
7/1/2011	Benefit F55 (With 20 Years of Service)
7/1/2011	Member Contribution Rate 4.77%
6/15/2010	Blanket Resolution (Generic Service)
10/1/2009	Fiscal Month - July
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

**11 - General hired after 7/1/06**

12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2011	Day of work defined as 130 Hours a Month for All employees.
7/1/2011	Benefit D2 Plan
7/1/2011	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/2011	Exclude Temporary Employees requiring less than 12 months
7/1/2011	10 Year Vesting
7/1/2011	2.25% Multiplier (no max)
7/1/2011	Benefit F55 (With 20 Years of Service)
7/1/2011	Member Contribution Rate 4.77%
6/15/2010	Blanket Resolution (Generic Service)
10/1/2009	Fiscal Month - July
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

**12 - General after 7/1/12**

12/1/2016	Service Credit Purchase Estimates - Yes
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**12 - General after 7/1/12**

7/1/2012	Day of work defined as 130 Hours a Month for All employees.
7/1/2012	Benefit D2 Plan
7/1/2012	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/2012	Non Standard Compensation Definition
7/1/2012	Exclude Temporary Employees requiring less than 12 months
7/1/2012	10 Year Vesting
7/1/2012	2.25% Multiplier (no max)
7/1/2012	Benefit F55 (With 20 Years of Service)
7/1/2012	Member Contribution Rate 4.77%
6/15/2010	Blanket Resolution (Generic Service)
10/1/2009	Fiscal Month - July
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

**13 - Housing Commission**

12/1/2016	Service Credit Purchase Estimates - Yes
1/1/2016	Blanket Resolution (Generic Service)
1/1/2016	Day of work defined as 130 Hours a Month for All employees.
1/1/2016	Benefit D2 Plan
1/1/2016	Benefit FAC-5 (5 Year Final Average Compensation)
1/1/2016	Non Standard Compensation Definition
1/1/2016	Exclude Temporary Employees requiring less than 12 months
1/1/2016	Sick Eligibility - 800 Hours
1/1/2016	2.25% Multiplier (no max)
1/1/2016	Benefit F55 (With 20 Years of Service)
1/1/2016	Participant Contribution Rate 4.77%
1/1/2016	10 Year Vesting
10/1/2009	Fiscal Month - July
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

**14 - Gen aft 7/1/16 AFSCME Un & Non**

12/1/2016	Service Credit Purchase Estimates - Yes
7/1/2016	Day of work defined as 130 Hours a Month for All employees.
7/1/2016	Benefit D2 Plan
7/1/2016	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/2016	Non Standard Compensation Definition
7/1/2016	Exclude Temporary Employees requiring less than 12 months
7/1/2016	10 Year Vesting
7/1/2016	2.25% Multiplier (no max)
7/1/2016	Benefit F55 (With 20 Years of Service)
7/1/2016	Participant Contribution Rate 6%
6/15/2010	Blanket Resolution (Generic Service)
10/1/2009	Fiscal Month - July
	Defined Benefit Normal Retirement Age - 60

**14 - Gen aft 7/1/16 AFSCME Un & Non**

Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

**15 - Grnl aft 7/1/17 (AFSCME & N-U)**

7/1/2017 Day of work defined as 130 Hours a Month for All employees.  
 7/1/2017 Benefit D2 Plan  
 7/1/2017 Benefit FAC-5 (5 Year Final Average Compensation)  
 7/1/2017 Non Standard Compensation Definition  
 7/1/2017 Exclude Temporary Employees requiring less than 12 months  
 7/1/2017 10 Year Vesting  
 7/1/2017 Defined Benefit Normal Retirement Age - 60  
 7/1/2017 Service Credit Purchase Estimates - Yes  
 7/1/2017 Benefit B-2  
 7/1/2017 Benefit F55 (With 20 Years of Service)  
 7/1/2017 Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years  
 7/1/2017 Participant Contribution Rate 6%  
 10/1/2009 Fiscal Month - July

**20 - Police and Fire (Post 4/1/95)**

12/1/2016 Service Credit Purchase Estimates - Yes  
 8/1/2012 Member Contribution Rate 5.00%  
 7/1/2011 Sick Eligibility - 800 Hours  
 6/15/2010 Blanket Resolution (Generic Service)  
 10/1/2009 Day of work defined as 130 Hours a Month for All employees.  
 10/1/2009 Benefit D2 Plan  
 10/1/2009 Benefit FAC-3 (3 Year Final Average Compensation)  
 10/1/2009 Non Standard Compensation Definition  
 10/1/2009 Benefit RS 60 (60% Post-Ret. Spouse Benefits)  
 10/1/2009 Exclude Temporary Employees requiring less than 12 months  
 10/1/2009 Sick Eligibility - 1248 Hours  
 10/1/2009 10 Year Vesting  
 10/1/2009 2.5% Multiplier (no max)  
 10/1/2009 Benefit F50 (With 25 Years of Service)  
 10/1/2009 Member Contribution Rate 9.00%  
 10/1/2009 Fiscal Month - July  
 Defined Benefit Normal Retirement Age - 60  
 Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

**21 - Police/Fire after 4/1/12**

12/1/2016 Service Credit Purchase Estimates - Yes  
 4/1/2012 10 Year Vesting  
 4/1/2012 2.25% Multiplier (no max)  
 4/1/2012 Benefit F50 (With 20 Years of Service)  
 4/1/2012 Member Contribution Rate 5.00%  
 4/1/2012 Day of work defined as 130 Hours a Month for All employees.  
 4/1/2012 Benefit D2 Plan

**21 - Police/Fire after 4/1/12**

4/1/2012	Benefit FAC-3 (3 Year Final Average Compensation)
4/1/2012	Non Standard Compensation Definition
4/1/2012	Benefit RS 60 (60% Post-Ret. Spouse Benefits)
4/1/2012	Exclude Temporary Employees requiring less than 12 months
6/15/2010	Blanket Resolution (Generic Service)
10/1/2009	Fiscal Month - July
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years

## 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	SLIF Increase Assumption
01 - General hired prior to	0.00%	6.92%
07 - Library Employees	0.00%	0.00%
10 - General hired 7/1/94 -	0.00%	6.92%
11 - General hired after 7/1	0.00%	0.00%
12 - General after 7/1/12	2.00%	0.00%
13 - Housing Commission	0.00%	6.92%
14 - Gen aft 7/1/16 AFSCME U	2.00%	0.00%
15 - Grnl aft 7/1/17 (AFSCME	2.00%	0.00%
20 - Police and Fire (Post 4	0.00%	12.82%
21 - Police/Fire after 4/1/1	4.00%	0.00%

### Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
01 - General hired prior to	100%
07 - Library Employees	100%
10 - General hired 7/1/94 -	100%
11 - General hired after 7/1	100%
12 - General after 7/1/12	100%
13 - Housing Commission	100%
14 - Gen aft 7/1/16 AFSCME U	100%
15 - Grnl aft 7/1/17 (AFSCME	100%
20 - Police and Fire (Post 4	60%
21 - Police/Fire after 4/1/1	60%

### Miscellaneous and Technical Assumptions

Loads – None.



1134 Municipal Way  
Lansing, MI 48917  
www.mersofmich.com  
800.767.2308 | 517.703.9030

Your Account ▶

City of Ironwood [ [Logout](#) ]

### Confirmation

**MERS**  
1134 Municipal Way  
Lansing, MI 48917

**Customer Number:** 270601  
**Customer Name:** City of Ironwood

**Payment Number:** WEBPMT0000042058  
**Created Date:** 1/28/2016  
**Status:** Processed  
**Process Date:** 1/28/2016  
**Amount:** \$350,000.00

### Transaction Details

**Capture Amount:** \$350,000.00      **Status:** Approved  
**Type:** ECheck      **Origination ID:** 1041139081  
**Card / Account Number:** XXXXXX2107      **Authorization Code:** ACKIHR  
**Billing Address:** Paul Linn  
213 So. Marquette St  
Ironwood, MI 49938  
United States

### Paid Invoice List

Invoice #	Amount Applied
00054606-01	\$150,000.00
00054606-02	\$200,000.00
<b>Total: \$350,000.00</b>	

POWERED BY NODUS



1134 Municipal Way  
Lansing, MI 48917  
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800.767.2308 | 517.703.9030

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City of Ironwood [ [Logout](#) ]

### Confirmation

**MERS**  
1134 Municipal Way  
Lansing, MI 48917

**Customer Number:** 270601  
**Customer Name:** City of Ironwood

**Payment Number:** WEBPMT0000057240  
**Created Date:** 6/28/2017  
**Status:** Processed  
**Process Date:** 6/28/2017  
**Amount:** \$278,532.46

### Transaction Details

**Capture Amount:** \$278,532.46  
**Type:** ECheck  
**Card / Account Number:** XXXXXX2107  
**Billing Address:** Paul Linn  
213 So. Marquette St  
Ironwood, MI 49938  
United States

**Status:** Approved  
**Origination ID:** 1590010673  
**Authorization Code:** ANG4M

### Paid Invoice List

Invoice #	Amount Applied
00071044-02	\$249,019.36
00071044-01	\$29,513.10
<b>Total: \$278,532.46</b>	

POWERED BY MODUS

# Attachment 4c

MERS  
1134 Municipal Way  
Lansing, MI 48917

Customer Number: 270601  
Customer Name: City of Ironwood

Payment Number: WEBPMT0000071935  
Created Date: 6/29/2018  
Status: Processed  
Process Date: 6/29/2018  
Amount: \$148,067.83

### Transaction Details

Capture Amount: \$148,067.83 Status: Approved  
Type: ECheck Origination ID: 2013581920  
Card / Account Number: XXXXXX2107 Authorization Code: AS5UK9  
Billing Address: Paul Linn  
213 So. Marquette St  
Ironwood, MI 49938  
United States

### Paid Invoice List

Core Invoice #	Invoice #	Reporting Period	Division Number	Division Name	Amount Applied
00084044-2	00084044-02	201806	01	General hired prior to 7/1/94	\$52.30
00084044-2	00084044-01	201806	02	Police and Fire (prior 4/1/95)	\$148,015.53
					Total: \$148,067.83

# Attachment 7a

## System Design Changes

- 7/1/94 - Sick eligibility reduced for new hires from 2,080 hours to 800 hours (AFSCME union and Non-union). See Attachment 7b, page 2.
- 4/1/95 - Sick eligibility reduced for new hires from 2,080 hours to 800 hours (Police and Fire union). See Attachment 7b, pages 3 and 4.
- 7/1/06 - Sick eligibility reduced for new hires from 800 hours to 0 hours (AFSCME union and Non-union). See Attachment 7c.
- 4/1/12 - Multiplier reduced for new hires from 2.5% to 2.25%. Also, FAC for new hires limited to 240 hours of paid leave, no overtime (Police and Fire union). See Attachment 7d.
- 7/1/12 - FAC for new hires limited to 240 hours of paid leave, no overtime (AFSCME union and Non-union). See Attachment 7e.
- 7/1/16 - Employee contributions for new hires increased from 4.77% to 6% (AFSCME union and Non-union). See Attachment 7f.
- 7/1/17 - Multiplier reduced for new hires from 2.25% to 2.0% (AFSCME union and Non-union). See Attachment 7g.

The City analyzed additional system design changes in 2017 with the assistance of Municipal Employees' Retirement System (MERS) including:

- Freezing the current defined benefit plan for all employees and opening a defined contribution plan.
- Closing the current defined benefit plan for new hires and opening a defined contribution plan for new hires.
- Bridging the defined benefit plan for current/future employees (lowering the multiplier).

While both defined contribution options would allow the plan to reach 100% funding sooner, they would require higher annual contributions than our current plan (for a number of years), which would not be financially feasible (see Attachment 7h). The bridging change would certainly reduce our annual contribution, however, we felt that this would negatively affect our ability to attract and retain a talented workforce.



**Attachment 7b**  
**MERS Benefit Provision System**  
*Provisions In Effect As Of*  
3/8/2018

**Employer -- Reporting Unit -- Division Plan**

**2706 Ironwood, City of (Active)**

Group Life and Disability Voluntary: No  
Short Term Disability: No  
Long Term Disability: No  
Life Insurance: No  
Accidental Death / Disability: No

01 - RU01 Fiscal Month: July (Active)

2706 01 - 01 - General hired prior to 7/1/94 Defined Benefit (Closed - Closed to New Hires DB 7/1/2011)

Date Joined: 10/1/2009

Provisions

2.25% Multiplier (no max) (NoMax) (NonStandard)	10/1/2009
Benefit F55 (With 20 Years of Service)	10/1/2009
Benefit D2 Plan	10/1/2009
Benefit FAC-5 (5 Year Final Average Compensation)	10/1/2009
10 Year Vesting	10/1/2009
Member Contribution Rate 4.77%	10/1/2009
Sick Eligibility - 2080 Hours (NonStandard)	10/1/2009
Blanket Resolution (Generic Service)	6/15/2010
Exclude Temporary Employees requiring less than 12 months	10/1/2009
Non Standard Compensation Definition - Yes	10/1/2009
Day of work defined as 130 Hours a Month for All employees.	10/1/2009
Service Credit Purchase Estimates - Yes	12/1/2016
Defined Benefit Normal Retirement Age - 60	1/1/1900

2706 02 - 02 - Police and Fire (prior 4/1/95) Defined Benefit (Closed - Closed to New Hires DB 7/1/2011)

Date Joined: 10/1/2009

Provisions

2.5% Multiplier (no max) (NoMax) (NonStandard)	10/1/2009
Benefit F50 (With 25 Years of Service)	10/1/2009
Benefit RS 60 (60% Post-Ret. Spouse Benefits) (NonStandard)	10/1/2009
Benefit D2 Plan	10/1/2009
Benefit FAC-3 (3 Year Final Average Compensation)	10/1/2009
10 Year Vesting	10/1/2009
Member Contribution Rate 5.00%	10/1/2009
Sick Eligibility - 2080 Hours (NonStandard)	7/1/2011
Blanket Resolution (Generic Service)	6/15/2010
Exclude Temporary Employees requiring less than 12 months	10/1/2009
Non Standard Compensation Definition - Yes	10/1/2009
Day of work defined as 130 Hours a Month for All employees.	10/1/2009
Service Credit Purchase Estimates - Yes	12/1/2016
Defined Benefit Normal Retirement Age - 60	1/1/1900

2706 07 - 07 - Library Employees Defined Benefit (Active)

Date Joined: 7/1/2012

Provisions

2.25% Multiplier (no max) (NoMax) (NonStandard)	7/1/2012
Benefit F55 (With 20 Years of Service)	7/1/2012
Benefit D2 Plan	7/1/2012

Benefit FAC-5 (5 Year Final Average Compensation)	7/1/2012
10 Year Vesting	7/1/2012
Member Contribution Rate 4.77%	7/1/2012
Blanket Resolution (Generic Service)	6/15/2010
Exclude Temporary Employees requiring less than 12 months	7/1/2012
Non Standard Compensation Definition - Yes	7/1/2012
Day of work defined as 130 Hours a Month for All employees.	7/1/2012
Service Credit Purchase Estimates - Yes	12/1/2016
Defined Benefit Normal Retirement Age - 60	1/1/1900

2706 10 - 10 - **General hired 7/1/94** - 6/30/06 Defined Benefit (Closed - Closed to New Hires DB 7/1/2011)

Date Joined: 7/1/2011

Provisions

2.25% Multiplier (no max) (NoMax) (NonStandard)	7/1/2011
Benefit F55 (With 20 Years of Service)	7/1/2011
Benefit D2 Plan	7/1/2011
Benefit FAC-5 (5 Year Final Average Compensation)	7/1/2011
10 Year Vesting	7/1/2011
Member Contribution Rate 4.77%	7/1/2011
<b>Sick Eligibility - 800 Hours</b> (NonStandard)	7/1/2011
Blanket Resolution (Generic Service)	6/15/2010
Exclude Temporary Employees requiring less than 12 months	7/1/2011
Non Standard Compensation Definition - Yes	7/1/2011
Day of work defined as 130 Hours a Month for All employees.	7/1/2011
Service Credit Purchase Estimates - Yes	12/1/2016
Defined Benefit Normal Retirement Age - 60	1/1/1900

2706 11 - 11 - General hired after 7/1/06 Defined Benefit (Closed - Closed to New Hires DB 7/1/2012)

Date Joined: 7/1/2011

Provisions

2.25% Multiplier (no max) (NoMax) (NonStandard)	7/1/2011
Benefit F55 (With 20 Years of Service)	7/1/2011
Benefit D2 Plan	7/1/2011
Benefit FAC-5 (5 Year Final Average Compensation)	7/1/2011
10 Year Vesting	7/1/2011
Member Contribution Rate 4.77%	7/1/2011
Blanket Resolution (Generic Service)	6/15/2010
Exclude Temporary Employees requiring less than 12 months	7/1/2011
Day of work defined as 130 Hours a Month for All employees.	7/1/2011
Service Credit Purchase Estimates - Yes	12/1/2016
Defined Benefit Normal Retirement Age - 60	1/1/1900

2706 12 - 12 - General after 7/1/12 Defined Benefit (Closed - Closed to New Hires DB 7/1/2016)

Date Joined: 7/1/2012

Provisions

2.25% Multiplier (no max) (NoMax) (NonStandard)	7/1/2012
Benefit F55 (With 20 Years of Service)	7/1/2012
Benefit D2 Plan	7/1/2012
Benefit FAC-5 (5 Year Final Average Compensation)	7/1/2012
10 Year Vesting	7/1/2012
Member Contribution Rate 4.77%	7/1/2012
Blanket Resolution (Generic Service)	6/15/2010
Exclude Temporary Employees requiring less than 12 months	7/1/2012
Non Standard Compensation Definition - Yes	7/1/2012
Day of work defined as 130 Hours a Month for All employees.	7/1/2012
Service Credit Purchase Estimates - Yes	12/1/2016

Defined Benefit Normal Retirement Age - 60	1/1/1900
2706 13 - 13 - Housing Commission Defined Benefit (Active)	
Date Joined: 1/1/2016	
Provisions	
2.25% Multiplier (no max) (NoMax) (NonStandard)	1/1/2016
Benefit F55 (With 20 Years of Service)	1/1/2016
Benefit D2 Plan	1/1/2016
Benefit FAC-5 (5 Year Final Average Compensation)	1/1/2016
10 Year Vesting	1/1/2016
Participant Contribution Rate 4.77%	1/1/2016
Sick Eligibility - 800 Hours (NonStandard)	1/1/2016
Blanket Resolution (Generic Service)	1/1/2016
Exclude Temporary Employees requiring less than 12 months	1/1/2016
Non Standard Compensation Definition - Yes	1/1/2016
Day of work defined as 130 Hours a Month for All employees.	1/1/2016
Service Credit Purchase Estimates - Yes	12/1/2016
Defined Benefit Normal Retirement Age - 60	1/1/1900
2706 14 - 14 - Gen aft 7/1/16 AFSCME Un & Non Defined Benefit (Closed - Closed to New Hires DB 7/1/2017)	
Date Joined: 7/1/2016	
Provisions	
2.25% Multiplier (no max) (NoMax) (NonStandard)	7/1/2016
Benefit F55 (With 20 Years of Service)	7/1/2016
Benefit D2 Plan	7/1/2016
Benefit FAC-5 (5 Year Final Average Compensation)	7/1/2016
10 Year Vesting	7/1/2016
Participant Contribution Rate 6%	7/1/2016
Blanket Resolution (Generic Service)	6/15/2010
Exclude Temporary Employees requiring less than 12 months	7/1/2016
Non Standard Compensation Definition - Yes	7/1/2016
Day of work defined as 130 Hours a Month for All employees.	7/1/2016
Service Credit Purchase Estimates - Yes	12/1/2016
Defined Benefit Normal Retirement Age - 60	1/1/1900
2706 15 - 15 - Grnl aft 7/1/17 (AFSCME & N-U) Defined Benefit (Active)	
Date Joined: 7/1/2017	
Provisions	
Benefit B-2 (NoMax)	7/1/2017
Benefit F55 (With 20 Years of Service)	7/1/2017
Benefit D2 Plan	7/1/2017
Benefit FAC-5 (5 Year Final Average Compensation)	7/1/2017
10 Year Vesting	7/1/2017
Participant Contribution Rate 6%	7/1/2017
Exclude Temporary Employees requiring less than 12 months	7/1/2017
Non Standard Compensation Definition - Yes	7/1/2017
Day of work defined as 130 Hours a Month for All employees.	7/1/2017
Service Credit Purchase Estimates - Yes	7/1/2017
Defined Benefit Normal Retirement Age - 60	7/1/2017
2706 20 - 20 - <b>Police and Fire (Post 4/1/95)</b> Defined Benefit (Closed - Closed to New Hires DB 4/1/2012)	
Date Joined: 10/1/2009	
Provisions	
2.5% Multiplier (no max) (NoMax) (NonStandard)	10/1/2009
Benefit F50 (With 25 Years of Service)	10/1/2009
Benefit RS 60 (60% Post-Ret. Spouse Benefits) (NonStandard)	10/1/2009

Benefit D2 Plan	10/1/2009
Benefit FAC-3 (3 Year Final Average Compensation)	10/1/2009
10 Year Vesting	10/1/2009
Member Contribution Rate 5.00%	8/1/2012
Sick Eligibility - 800 Hours (NonStandard)	7/1/2011
Blanket Resolution (Generic Service)	6/15/2010
Exclude Temporary Employees requiring less than 12 months	10/1/2009
Non Standard Compensation Definition - Yes	10/1/2009
Day of work defined as 130 Hours a Month for All employees.	10/1/2009
Service Credit Purchase Estimates - Yes	12/1/2016
Defined Benefit Normal Retirement Age - 60	1/1/1900

2706 21 - 21 - Police/Fire after 4/1/12 Defined Benefit (Active)

Date Joined: 4/1/2012

Provisions

2.25% Multiplier (no max) (NoMax) (NonStandard)	4/1/2012
Benefit F50 (With 20 Years of Service) (NonStandard)	4/1/2012
Benefit RS 60 (60% Post-Ret. Spouse Benefits) (NonStandard)	4/1/2012
Benefit D2 Plan	4/1/2012
Benefit FAC-3 (3 Year Final Average Compensation)	4/1/2012
10 Year Vesting	4/1/2012
Member Contribution Rate 5.00%	4/1/2012
Blanket Resolution (Generic Service)	6/15/2010
Exclude Temporary Employees requiring less than 12 months	4/1/2012
Non Standard Compensation Definition - Yes	4/1/2012
Day of work defined as 130 Hours a Month for All employees.	4/1/2012
Service Credit Purchase Estimates - Yes	12/1/2016
Defined Benefit Normal Retirement Age - 60	1/1/1900

2706 300304 - 300304 - Library Staff Health Care Savings Program (Active)

Date Joined: 9/1/2010

Provisions

HCSP Vesting Code - NA	9/1/2010
HCSP PostTax Voluntary Flag - Yes	9/1/2010
HCSP ER Contribution Flag - NA	9/1/2010
HCSP Mandatory Salary Reduction Flag - NA	9/1/2010
Vacation: 100% @reg, Sick: 100% @ret	9/1/2010

2706 300305 - 300305 - City Mgr Health Care Savings Program (Active)

Date Joined: 9/1/2010

Provisions

Immediate Vesting	7/15/2011
HCSP PostTax Voluntary Flag - Yes	9/1/2010
2% of base pay	7/15/2011
HCSP Mandatory Salary Reduction Flag - NA	9/1/2010
Vacation: 100% @ret, Sick: 100% @ret	9/1/2010

2706 300306 - 300306 - Public Safety Union Health Care Savings Program (Active)

Date Joined: 9/1/2010

Provisions

HCSP Vesting Code - NA	9/1/2010
HCSP PostTax Voluntary Flag - Yes	9/1/2010
HCSP ER Contribution Flag - NA	9/1/2010
HCSP Mandatory Salary Reduction Flag - NA	9/1/2010
Vacation: 100% @ret, annually excess of 120hrs, Sick: 100% @ret, Personal:	9/1/2010

2706 300307 - 300307 - All ee's: including city mgr a Health Care Savings Program (Active)

Date Joined: 9/1/2010

Provisions

HCSP Vesting Code - NA	9/1/2010
HCSP PostTax Voluntary Flag - Yes	9/1/2010
HCSP ER Contribution Flag - NA	9/1/2010
HCSP Mandatory Salary Reduction Flag - NA	9/1/2010
Vacation: 100% @ret annually excess of 160hrs, Sick: 100% @ret, Personal: 10	9/1/2010

2706 300743 - 300743 - Non-un hired af 10/31/09 Health Care Savings Program (Active)

Date Joined: 7/15/2011

Provisions

HCSP Vesting Code - NA	7/15/2011
HCSP PostTax Voluntary Flag - Yes	7/15/2011
HCSP ER Contribution Flag - NA	7/15/2011
HCSP Mandatory Salary Reduction Flag - NA	7/15/2011
Vacation: 100% @Ret , Sick: 100% @Ret	7/15/2011

2706 400148 - 400148 - All Employees Plan 457 (Active)

Date Joined: 4/23/2012

Provisions

457 Loans Flag - No	4/23/2012
457 Roth Flag - Yes	4/23/2012
Immediate	4/23/2012
457 ER Contribution Flag - No	4/23/2012
457 Automatic Enrollment Flag - No	4/23/2012
Other	4/23/2012

2706 600264 - 600264 - NonUn, AFSCME, PubSafeUnion Retiree Health Funding Vehicle (Active)

Date Joined: 10/24/2011

Provisions

Governing Body	10/24/2011
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CITY OF IRONWOOD'S EMPLOYEE RETIREMENT SYSTEM

Ordinance No 458, Book 4

AN ORDINANCE TO AMEND THE PROVISIONS OF THE CITY OF IRONWOOD GENERAL EMPLOYEES RETIREMENT SYSTEM.

THE CITY OF IRONWOOD ORDAINS:

Section 1. That the City of Ironwood General Employees Retirement System is hereby amended to effectuate the following:

Section 2-107 shall hereby be amended to provide:

For employees hired on or after July 1, 2006, Compensation shall not include lump sum distributions for accumulated sick and vacation pay.

Section 2. If this Ordinance amendment or any portion thereof is held to be invalid by any court of competent jurisdiction, said decision shall not effect the validity of the remaining provisions.

Section 3. This Ordinance shall take effect 4 days from and after the date of its final passage by the City of Ironwood, but the terms thereof shall be effective as of July 1, 2006.

Made and passed by the City of Ironwood, Michigan on this 27th day of November, 2006.

Bruce Noren, Mayor

ATTEST:

Karen M. Gullan, City Clerk

Published in accordance with provisions of Section 6.4, entitled Publications of Ordinances, of Chapter 6 of the Charter for the City of Ironwood, Michigan on the 1st day of December, 2006.

# Attachment 7d

Resolution #012-101



## RESOLUTION FOR ADOPTING MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN DEFINED BENEFIT PROGRAMS (OTHER THAN DB COMPONENT OF HYBRID PROGRAM)

The City Commission of the City of Ironwood,  
(Governing body) (Participating entity)  
whose fiscal year is (month and day) July 1 to June 30, desires to make  
available to its eligible employees (as defined below) benefits provided by the Municipal  
Employees' Retirement System of Michigan (MERS), as authorized by 1996 PA 220. Benefits  
available are those provided under the Plan Document of 1996.

**IT IS RESOLVED** that pursuant to the Initial Actuarial Valuation dated  
November 14, 2012, by MERS' actuary, MERS benefits stated in Section 1 below  
are to be provided to the following employee division (e.g., general, police and fire, DPW, union,  
non-union): General (Post 7/1/2012).  
(Separate resolutions are required for each division)

**Please note: If no Initial Valuation has been done by MERS' actuary on the specific benefit  
program (or combination of programs) selected below; or the Initial Valuation is more than  
one (1) year old at the time MERS' coverage becomes effective as provided under Section 4 of  
this Resolution; then, per Retirement Board requirements, this Resolution will not be  
implemented until a current actuarial valuation is done by MERS' actuary and necessary  
supporting contribution rates certified.**

1. Benefit programs/formulae (e.g., B-2 / DROP+ / F55 / V-8 / FAC 3 / E-2) selected  
are:  
2.25% / 60 / V-10 / F55(20) / FAC 5 / D-2 / Paid Leave 240 Max, No Overtime  
(If other than standard MERS' retirement benefits, supporting collective bargaining agreement to accompany this Resolution)
2. The required employee contribution is 4.77%. (May be any percentage in  
hundredths of a percent, not to exceed ten [10] percent, unless higher rate is  
established by collective bargaining agreement accompanying this Resolution.)
- 3.1 Prior service credit with this municipality/court rendered previously by each covered  
employee in the division is subject to and shall be credited as provided under Section  
2C(3) of the MERS Plan Document and Restated Initial Actuarial Valuation and  
Supplemental Valuation Procedure<sup>(Form 06)</sup> (as approved by the Retirement Board),  
whose respective terms are incorporated by reference.

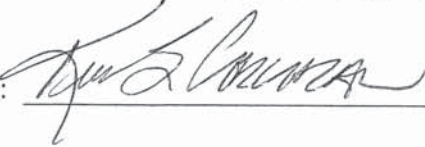
### Choose only one:

- A.  All prior service from date of hire.
- B.  Portion of prior service (actual service up to \_\_\_\_\_ years); or \_\_\_\_\_%.
- C.  Prior service proportional to assets transferred.
- D.  No prior service (if D selected, go to Section 4).

- 3.2 The Initial Valuation discloses the actuarial reduction in the employer's future contribution rate that will occur where assets of a preceding qualified plan (whether defined benefit or defined contribution plan) and/or other source are transferred to MERS.
- 3.3 In all asset transfers, the employer shall furnish MERS with all necessary and specific information required by MERS on the allocation of employer and employee contributions and investment earnings, along with taxable and nontaxable status on the employee contribution portion.
4. The effective date of this Resolution for making deductions for the employee contributions specified above, and for the payment of necessary employer contributions to MERS, as required in the Plan Document, shall be the same date that MERS' coverage begins, which is July 1, 2012.
5. For municipalities, Plan Section 41 requires adoption by affirmative vote of a majority of the governing body; for courts, see Plan Section 41A. A complete copy of the fully executed collective bargaining agreement (if applicable), and certified copy of the complete official minutes or other official authorizing action for the open meeting at which this resolution was adopted must be forwarded to MERS with this resolution.

Certified this 10th day of December, 2012.

By: \_\_\_\_\_



Title: Kim Corcoran, Mayor



# Attachment 7e

Resolution #012-104



## RESOLUTION FOR ADOPTING MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF MICHIGAN DEFINED BENEFIT PROGRAMS (OTHER THAN DB COMPONENT OF HYBRID PROGRAM)

The City Commission \_\_\_\_\_ of the City of Ironwood \_\_\_\_\_,  
(Governing body) (Participating entity)  
whose fiscal year is (month and day) July 1 to June 30, desires to make available to its eligible employees (as defined below) benefits provided by the Municipal Employees' Retirement System of Michigan (MERS), as authorized by 1996 PA 220. Benefits available are those provided under the Plan Document of 1996.

**IT IS RESOLVED** that pursuant to the Initial Actuarial Valuation dated September 12, 2012, by MERS' actuary, MERS benefits stated in Section 1 below are to be provided to the following employee division (e.g., general, police and fire, DPW, union, non-union): Police and Fire (Post 5/1/2012).  
(Separate resolutions are required for each division)

**Please note: If no Initial Valuation has been done by MERS' actuary on the specific benefit program (or combination of programs) selected below; or the Initial Valuation is more than one (1) year old at the time MERS' coverage becomes effective as provided under Section 4 of this Resolution; then, per Retirement Board requirements, this Resolution will not be implemented until a current actuarial valuation is done by MERS' actuary and necessary supporting contribution rates certified.**

1. Benefit programs/formulae (e.g., B-2 / DROP+ / F55 / V-8 / FAC 3 / E-2) selected are:  
2.25% /60/V-10/ F50(20 )/ FAC 3/RS 60% /D-2/ Paid Leave 240 Max, No Overtime  
(If other than standard MERS' retirement benefits, supporting collective bargaining agreement to accompany this Resolution)
2. The required employee contribution is 5.00 %. (May be any percentage in hundredths of a percent, not to exceed ten [10] percent, unless higher rate is established by collective bargaining agreement accompanying this Resolution.)
- 3.1 Prior service credit with this municipality/court rendered previously by each covered employee in the division is subject to and shall be credited as provided under Section 2C(3) of the MERS Plan Document and Restated Initial Actuarial Valuation and Supplemental Valuation Procedure<sup>(Form 06)</sup> (as approved by the Retirement Board), whose respective terms are incorporated by reference.

### Choose only one:

- A.  All prior service from date of hire.
- B.  Portion of prior service (actual service up to \_\_\_\_\_ years); or \_\_\_\_\_ %.
- C.  Prior service proportional to assets transferred.
- D.  No prior service (if D selected, go to Section 4).

- 3.2 The Initial Valuation discloses the actuarial reduction in the employer's future contribution rate that will occur where assets of a preceding qualified plan (whether defined benefit or defined contribution plan) and/or other source are transferred to MERS.
- 3.3 In all asset transfers, the employer shall furnish MERS with all necessary and specific information required by MERS on the allocation of employer and employee contributions and investment earnings, along with taxable and nontaxable status on the employee contribution portion.
4. The effective date of this Resolution for making deductions for the employee contributions specified above, and for the payment of necessary employer contributions to MERS, as required in the Plan Document, shall be the same date that MERS' coverage begins, which is May 1, 2012.
5. For municipalities, Plan Section 41 requires adoption by affirmative vote of a majority of the governing body; for courts, see Plan Section 41A. A complete copy of the fully executed collective bargaining agreement (if applicable), and certified copy of the complete official minutes or other official authorizing action for the open meeting at which this resolution was adopted must be forwarded to MERS with this resolution.

Certified, this 10th day of December, 2012.

By: 

Title: Kim Corcoran, Mayor

# Attachment 7f

Resolution 016-017

## Defined Benefit Plan Adoption Agreement



1134 Municipal Way Lansing, MI 48917 | 800.767.MERS (6377) | Fax 517.703.9711

www.mersofmich.com

The Employer, a participating municipality or participating court within the state of Michigan, hereby agrees to adopt and administer the MERS Defined Benefit Plan provided by the Municipal Employees' Retirement System of Michigan, as authorized by 1996 PA 220, in accordance with the MERS Plan Document, as both may be amended, subject to the terms and conditions herein.

I. Employer Name City of Ironwood Municipality #: 2706

If new to MERS, please provide your municipality's fiscal year: \_\_\_\_\_ through \_\_\_\_\_.  
Month Month

### II. Effective Date

Check one:

A.  If this is the **initial** Adoption Agreement for this group, the effective date shall be the first day of July 1, 2016.

This municipality or division is new to MERS, so vesting credit prior to the **initial** MERS effective date by each eligible participant shall be credited as follows (choose one):

- All prior service from date of hire
- Prior service proportional to assets transferred; all service used for vesting
- Prior service and vesting service proportional to assets transferred
- No prior service but grant vesting credit
- No prior service or vesting credit

Link this new division to division number 12 for purposes of determining contributions (Unless otherwise specified, the standard transfer/rehire rules apply)

B.  If this is an **amendment** of an existing Adoption Agreement (Defined Benefit division number \_\_\_\_\_), the effective date shall be the first day of \_\_\_\_\_, 20\_\_\_\_. *Please note:* You only need to mark **changes** to your plan throughout the remainder of this Agreement.

C.  If this is a **temporary benefit** that lasts 2-6 months, the effective dates of this temporary benefit are from \_\_\_/01/\_\_\_ through \_\_\_/\_\_\_/\_\_\_ for Defined Benefit division number \_\_\_\_\_.  
Last day of month  
*Please note:* You only need to mark **changes** to your plan throughout the remainder of this Agreement.

D.  If this is to **separate employees from an existing Defined Benefit division** (existing division number(s) \_\_\_\_\_) into a new division, the effective date shall be the first day of \_\_\_\_\_, 20\_\_\_\_.

E.  If this is to merge division(s) \_\_\_\_\_ into division(s) \_\_\_\_\_, the effective date shall be the first of \_\_\_\_\_, 20\_\_\_\_.

# Defined Benefit Plan Adoption Agreement

### III. Eligible Employees

Only those Employees eligible for MERS membership may participate in the MERS Defined Benefit Plan. A copy of ALL employee enrollment forms must be submitted to MERS. The following groups of employees are eligible to participate:

General after 7/1/16 (AFSCME Union and Non-Union)

(Name of Defined Benefit division – e.g. All Full Time Employees, or General after 7/01/13)

Only retirees will be in this division.

**These employees are** (check one or both):

In a collective bargaining unit (attach cover page, retirement section, signature page)

Subject to the same personnel policy

**To receive one month of service credit** (check one):

An employee shall work 10 \_\_\_\_\_ hour days.

An employee shall work 130 hours in a month. Regular full time employees only.

All employees as classified under eligible employees, whether full or part time, who meet this criteria must be reported to MERS. If you change your current day of work definition to be more restrictive, the new definition only applies to employees hired after the effective date.

To further define eligibility, check all that apply:

**Probationary Periods** are allowed in one-month increments, no longer than 12 months. During this introductory period, the Employer will not report or provide service time for this period, including retroactively. Service will begin after the probationary period has been satisfied.

The probationary period will be \_\_\_\_\_ month(s).

**Temporary employees** in a position normally requiring less than a total of 12 whole months of work in the position may be *excluded* from membership. These employees must be notified in writing by the participating municipality that they are excluded from membership within 10 business days of date of hire or execution of this Agreement.

The temporary exclusion period will be 12 month(s).

### IV. Provisions

Valuation Date: \_\_\_\_\_, 20\_\_\_\_

#### 1. Review the valuation results

It is recommended that your MERS representative presents and explains the valuation results to your municipality before adopting. Please choose one:

Our MERS representative presented and explained the valuation results to the

\_\_\_\_\_ on \_\_\_\_\_  
(Board, Finance Cmte, etc.) (mm/dd/yyyy)

As an authorized representative of this municipality, I \_\_\_\_\_  
(Name)

\_\_\_\_\_ waive the right for a presentation of the results.  
(Title)

# Defined Benefit Plan Adoption Agreement

2. This Adoption Agreement will be implemented in conjunction with a current actuarial valuation certified by a MERS actuary that sets contribution rates.
3. Annually, the MERS actuary will conduct an actuarial valuation to determine the employers' contribution rates. Employers are responsible for payment of said contributions at the rate, in the form and at the time that MERS determines.
4. Benefit Multiplier (1%-2.5%, increments of 0.05%) 2.25 % (max 80% for multipliers over 2.25%)

Check here if multiplier will be effective for existing active members' future service only (Bridged Benefit as of effective date on page 1)

If checked, select one below:

- Termination Final Average Compensation (calculated over the members entire wage history)
- Frozen Final Average Compensation (FAC is calculated twice, once for the timeframe that matches the original multiplier, and once for the new multiplier)

5. Final Average Compensation (Min 3 yr, increments of 1 yr) 5 years
6. Vesting (5 -10 yrs, increments of 1 yr) 10 years
7. Required employee contribution (Max 10%, increments of 0.01%) 6 %
8. Compensation, for retirement purposes, is defined as base wages and all of the following. Check applicable boxes to *exclude* these types from your MERS reported wages:
  - Longevity pay
  - Overtime pay
  - Shift differentials
  - Pay for periods of absence from work by reason of vacation, holiday, and sickness
  - Workers' compensation weekly benefits (if reported and are higher than regular earnings)
  - A member's pre-tax contributions to a plan established under Section 125 of the IRC
  - Transcript fees paid to a court reporter
  - A taxable car allowance
  - Short term or long term disability payments
  - Payments for achievement of established annual (or similar period) performance goals
  - Payment for attainment of educational degrees from accredited colleges, universities, or for acquisition of job-related certifications
  - Lump sum payments attributable to the member's personal service rendered during the FAC period
  - Other: FAC shall not include more than 240 hours of paid leave
  - Other 2: \_\_\_\_\_

# Defined Benefit Plan Adoption Agreement

## 9. Early Normal Retirement with unreduced benefits

- Age 50 with 25 years of service       Age 50 with 30 years of service  
 Age 55 with 15 years of service       Age 55 with 20 years of service  
 Age 55 with 25 years of service       Age 55 with 30 years of service  
 Any age with (20-30 yrs, in 1 yr increments) \_\_\_\_\_ years of service  
 \_\_\_\_\_

## 10. Other

- Surviving Spouse will receive \_\_\_\_\_% of Straight Life benefit without a reduction to the participant's benefit  
 Duty death or disability enhancement (add up to additional 10 years of service credit not to exceed 30 years of service)  
 Deferred Retirement Option Program (DROP)  
 Annuity Withdrawal Program (AWP)  
 Calculation of the actuarial equivalent of the lump sum distribution made under AWP will be done using:  
 Interest rate for employee contributions as determined by the Retirement Board, or  
 MERS' assumed rate of return as of the date of the distribution.

## 11. Cost-of-Living Adjustment

<input type="checkbox"/> All <b>current</b> retirees as of effective date <input type="checkbox"/> Retirees who retire <b>between</b> ____/01/____ and ____/01/____ <i>(one time increase only)</i>	<input type="checkbox"/> <b>Future</b> retirees who retire after effective date
Increase of ____% or \$____ per month	Increase of ____% or \$____ per month
Select one: <input type="checkbox"/> Annual automatic increase <input type="checkbox"/> One-time increase	<input type="checkbox"/> Annual automatic increase
Select one: <input type="checkbox"/> Compounding <input type="checkbox"/> Non-compounding	Select one: <input type="checkbox"/> Compounding <input type="checkbox"/> Non-compounding
Employees must be retired ____ months (6-12 months, increments of 1 month)	Employees must be retired ____ months (6-12 months, increments of 1 month)

## V. Appointing MERS as the Plan Administrator

The Employer hereby agrees to the provisions of this *MERS Defined Benefit Plan Adoption Agreement* and appoints MERS as the Plan Administrator pursuant to the terms and conditions of the Plan. The Employer also agrees that in the event any conflict between MERS Plan Document and the MERS Defined Benefit Plan, the provisions of the Plan Document control.

# Defined Benefit Plan Adoption Agreement

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## VI. Modification Of The Terms Of The Adoption Agreement

If the Employer desires to amend any of its elections contained in this Adoption Agreement, including attachments, the Governing Body or Chief Judge, by resolution or official action accepted by MERS, must adopt a new Adoption Agreement. The amendment of the new Agreement is not effective until approved by MERS.

## VII. Enforcement

1. The Employer acknowledges that the Michigan Constitution of 1963, Article 9, Section 24, provides that accrued financial benefits arising under a public Employer's retirement plan are a contractual obligation of the Employer that may not be diminished or impaired, and prohibits the use of the Employer's required current service funding to finance unfunded accrued liabilities.
2. The Employer agrees that, pursuant to the Michigan Constitution, its obligations to pay required contributions are contractual obligations to its employees and to MERS and may be enforced in a court of competent jurisdiction;
3. In accordance with the Constitution and this Agreement, if at any time the balance standing to the Employer's credit in the reserve for employer contributions and benefit payments is insufficient to pay all service benefits due and payable to the entity's retirees and beneficiaries, the Employer agrees and covenants to promptly remit to MERS the amount of such deficiency as determined by the Retirement Board within thirty (30) days notice of such deficiency.
4. The Employer acknowledges that wage and service reports are due monthly, and the employee contributions (if any) and Employer contributions are due and payable monthly, and must be submitted in accordance with the MERS Enforcement Procedure for Prompt Reporting and Payment, the terms of which are incorporated herein by reference.
5. Should the Employer fail to make its required contribution(s) when due, the retirement benefits due and payable by MERS on behalf of the entity to its retirees and beneficiaries may be suspended until the delinquent payment is received by MERS. MERS may implement any applicable interest charges and penalties pursuant to the MERS Enforcement Procedure for Prompt Reporting and Payment and Plan Document Section 79, and take any appropriate legal action, including but not limited to filing a lawsuit and reporting the entity to the Treasurer of the State of Michigan in accordance with MCL 141.1544(d), Section 44 of PA 436 of 2012, as may be amended.
6. The Employer acknowledges that changes to the Employer's MERS Defined Benefit Plan must be made in accordance with the MERS Plan Document and applicable law, and agrees that MERS will not administer any such changes unless the MERS Plan Document and applicable law permit same, and MERS is capable of administering same.

# Defined Benefit Plan Adoption Agreement

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## VIII. Execution

### Authorized Designee of Governing Body of Municipality or Chief Judge of Court

The foregoing Adoption Agreement is hereby approved by Ironwood City Commission on  
the 25th day of July, 2016.  
(Name of Approving Employer)

Authorized signature: *Annette DeLee Buschell*

Title: Mayor

Witness signature: *Spencer M. Sullivan*

### Received and Approved by the Municipal Employees' Retirement System of Michigan

Dated: \_\_\_\_\_, 20\_\_\_\_ Signature: \_\_\_\_\_  
(Authorized MERS Signatory)



# Attachment 7g

Resolution 017-020

## Defined Benefit Plan Adoption Agreement



1134 Municipal Way Lansing, MI 48917 | 800.767.MERS (6377) | Fax 517.703.9711

www.mersofmich.com

The Employer, a participating municipality or participating court within the state of Michigan, hereby agrees to adopt and administer the MERS Defined Benefit Plan provided by the Municipal Employees' Retirement System of Michigan, as authorized by 1996 PA 220, in accordance with the MERS Plan Document, as both may be amended, subject to the terms and conditions herein.

**I. Employer Name** City of Ironwood **Municipality #:** 2706

If new to MERS, please provide your municipality's fiscal year: \_\_\_\_\_ through \_\_\_\_\_.  
Month Month

### II. Effective Date

Check one:

A.  If this is the **initial** Adoption Agreement for this group, the effective date shall be the first day of July, 2017.

This municipality or division is new to MERS, so vesting credit prior to the **initial** MERS effective date by each eligible participant shall be credited as follows (choose one):

- All prior service from date of hire
- Prior service proportional to assets transferred; all service used for vesting
- Prior service and vesting service proportional to assets transferred
- No prior service but grant vesting credit
- No prior service or vesting credit

div 14, 12, 01, 10, 11

Link this new division to division number \_\_\_\_\_ for purposes of determining contributions (Unless otherwise specified, the standard transfer/rehire rules apply)

B.  If this is an **amendment** of an existing Adoption Agreement (Defined Benefit division number \_\_\_\_\_), the effective date shall be the first day of \_\_\_\_\_, 20\_\_\_\_. *Please note:* You only need to mark **changes** to your plan throughout the remainder of this Agreement.

C.  If this is a **temporary benefit** that lasts 2-6 months, the effective dates of this temporary benefit are from \_\_\_/01/\_\_\_ through \_\_\_/\_\_\_/\_\_\_ for Defined Benefit division number \_\_\_\_\_.  
Last day of month  
*Please note:* You only need to mark **changes** to your plan throughout the remainder of this Agreement.

D.  If this is to **separate employees from an existing Defined Benefit division** (existing division number(s) \_\_\_\_\_) into a new division, the effective date shall be the first day of \_\_\_\_\_, 20\_\_\_\_.

E.  If this is to merge division(s) \_\_\_\_\_ into division(s) \_\_\_\_\_, the effective date shall be the first of \_\_\_\_\_, 20\_\_\_\_.

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## III. Eligible Employees

Only those Employees eligible for MERS membership may participate in the MERS Defined Benefit Plan. A copy of ALL employee enrollment forms must be submitted to MERS. The following groups of employees are eligible to participate:

### General after 7/1/17 (AFSCME Union and Non-Union)

(Name of Defined Benefit division – e.g. All Full Time Employees, or General after 7/01/13)

Only retirees will be in this division.

**To receive one month of service credit** (check one):

An employee shall work 10 \_\_\_\_\_ hour days.

An employee shall work <sup>130</sup>\_\_\_\_\_ hours in a month.

All employees as classified under eligible employees, whether full or part time, who meet this criteria must be reported to MERS. If you change your current day of work definition to be more restrictive, the new definition only applies to employees hired after the effective date.

To further define eligibility, check all that apply:

**Probationary Periods** are allowed in one-month increments, no longer than 12 months. During this introductory period, the Employer will not report or provide service time for this period, including retroactively. Service will begin after the probationary period has been satisfied.

The probationary period will be \_\_\_\_\_ month(s).

**Temporary employees** in a position normally requiring less than a total of 12 whole months of work in the position may be *excluded* from membership. These employees must be notified in writing by the participating municipality that they are excluded from membership within 10 business days of date of hire or execution of this Agreement.

The temporary exclusion period will be <sup>12</sup>\_\_\_\_\_ month(s).

## IV. Provisions

Valuation Date: \_\_\_\_\_, 20 \_\_\_\_

### 1. Review the valuation results

It is recommended that your MERS representative presents and explains the valuation results to your municipality before adopting. Please choose one:

Our MERS representative presented and explained the valuation results to the

\_\_\_\_\_ on \_\_\_\_\_.  
(Board, Finance Cmte, etc.) (mm/dd/yyyy)

As an authorized representative of this municipality, I \_\_\_\_\_

\_\_\_\_\_ (Name)  
\_\_\_\_\_ (Title) waive the right for a presentation of the results.

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This Adoption Agreement will be implemented in conjunction with a current actuarial valuation certified by a MERS actuary that sets contribution rates.

Annually, the MERS actuary will conduct an actuarial valuation to determine the employers' contribution rates. Employers are responsible for payment of said contributions at the rate, in the form and at the time that MERS determines.

2. Benefit Multiplier (1%-2.5%, increments of 0.05%) 2.0 % (max 80% for multipliers over 2.25%)

Check here if multiplier will be effective for existing active members' future service only (Bridged Benefit as of effective date on page 1)

If checked, select one below:

- Termination Final Average Compensation (calculated over the members entire wage history)
- Frozen Final Average Compensation (FAC is calculated twice, once for the timeframe that matches the original multiplier, and once for the new multiplier)

3. Final Average Compensation (Min 3 yr, increments of 1 yr) 5 years

4. Vesting (5 -10 yrs, increments of 1 yr) 10 years

5. Required employee contribution (Max 10%, increments of 0.01%) 6.00 %

6. Compensation, for retirement purposes, is defined as base wages and all of the following. Check applicable boxes to *include* these types from your MERS reported wages:

- Longevity pay
- Overtime pay
- Shift differentials
- Pay for periods of absence from work by reason of vacation, holiday, and sickness
- Workers' compensation weekly benefits (if reported and are higher than regular earnings)
- A member's pre-tax contributions to a plan established under Section 125 of the IRC
- Transcript fees paid to a court reporter
- A taxable car allowance
- Short term or long term disability payments
- Payments for achievement of established annual (or similar period) performance goals
- Payment for attainment of educational degrees from accredited colleges, universities, or for acquisition of job-related certifications
- Lump sum payments attributable to the member's personal service rendered during the FAC period
- Other: Paid leave shall be capped at 240 hrs max includible in the FAC
- Other 2: \_\_\_\_\_

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7. Normal Retirement Age: 60 (any age from 60 – 70)

8. Unreduced Early Retirement/Service Requirements:

<input type="checkbox"/> Age 50 – 54 _____ Service of either <input type="checkbox"/> 25 or <input type="checkbox"/> 30 years
<input checked="" type="checkbox"/> Age 55 – 65 <u>55</u> Service between 15 and 30 years <u>20</u>
<input type="checkbox"/> Service only (must be any number from 20 – 30 years accrued service): _____
<input type="checkbox"/> Age + Service Points (total must be from 70 – 90): _____ points

9. Other

- Surviving Spouse will receive \_\_\_\_\_% of Straight Life benefit without a reduction to the participant's benefit
- Duty death or disability enhancement (add up to additional 10 years of service credit not to exceed 30 years of service)
- Deferred Retirement Option Program (DROP)
- Annuity Withdrawal Program (AWP)
  - Calculation of the actuarial equivalent of the lump sum distribution made under AWP will be done using:
    - Interest rate for employee contributions as determined by the Retirement Board, or
    - MERS' assumed rate of return as of the date of the distribution.

10. Cost-of-Living Adjustment

<input type="checkbox"/> All <b>current</b> retirees as of effective date <input type="checkbox"/> Retirees who retire <b>between</b> _____/01/____ and _____/01/____ <i>(one time increase only)</i>	<input type="checkbox"/> <b>Future</b> retirees who retire after effective date
Increase of _____% or \$_____ per month	Increase of _____% or \$_____ per month
Select one: <input type="checkbox"/> Annual automatic increase <input type="checkbox"/> One-time increase	<input type="checkbox"/> Annual automatic increase
Select one: <input type="checkbox"/> Compounding <input type="checkbox"/> Non-compounding	Select one: <input type="checkbox"/> Compounding <input type="checkbox"/> Non-compounding
Employees must be retired _____ months (6-12 months, increments of 1 month)	Employees must be retired _____ months (6-12 months, increments of 1 month)

11. Service Credit Purchase Estimates are:

- Not permitted
- Permitted

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## V. Appointing MERS as the Plan Administrator

The Employer hereby agrees to the provisions of this *MERS Defined Benefit Plan Adoption Agreement* and appoints MERS as the Plan Administrator pursuant to the terms and conditions of the Plan. The Employer also agrees that in the event of any conflict between the MERS Plan Document and the MERS Defined Benefit Plan Adoption Agreement, the provisions of the Plan Document control.

## VI. Modification Of The Terms Of The Adoption Agreement

If the Employer desires to amend any of its elections contained in this Adoption Agreement, including attachments, the Governing Body or Chief Judge, by resolution or official action accepted by MERS, must adopt a new Adoption Agreement. The amendment of the new Agreement is not effective until approved by MERS.

## VII. Enforcement

1. The Employer acknowledges that the Michigan Constitution of 1963, Article 9, Section 24, provides that accrued financial benefits arising under a public Employer's retirement plan are a contractual obligation of the Employer that may not be diminished or impaired, and prohibits the use of the Employer's required current service funding to finance unfunded accrued liabilities.
2. The Employer agrees that, pursuant to the Michigan Constitution, its obligations to pay required contributions are contractual obligations to its employees and to MERS and may be enforced in a court of competent jurisdiction;
3. In accordance with the Constitution and this Agreement, if at any time the balance standing to the Employer's credit in the reserve for employer contributions and benefit payments is insufficient to pay all service benefits due and payable to the entity's retirees and beneficiaries, the Employer agrees and covenants to promptly remit to MERS the amount of such deficiency as determined by the Retirement Board within thirty (30) days notice of such deficiency.
4. The Employer acknowledges that wage and service reports are due monthly, and the employee contributions (if any) and Employer contributions are due and payable monthly, and must be submitted in accordance with the MERS Enforcement Procedure for Prompt Reporting and Payment, the terms of which are incorporated herein by reference.
5. Should the Employer fail to make its required contribution(s) when due, the retirement benefits due and payable by MERS on behalf of the entity to its retirees and beneficiaries may be suspended until the delinquent payment is received by MERS. MERS may implement any applicable interest charges and penalties pursuant to the MERS Enforcement Procedure for Prompt Reporting and Payment and Plan Document Section 79, and take any appropriate legal action, including but not limited to filing a lawsuit and reporting the entity to the Treasurer of the State of Michigan in accordance with MCL 141.1544(d), Section 44 of PA 436 of 2012, as may be amended.
6. The Employer acknowledges that changes to the Employer's MERS Defined Benefit Plan must be made in accordance with the MERS Plan Document and applicable law, and agrees that MERS will not administer any such changes unless the MERS Plan Document and applicable law permit same, and MERS is capable of administering same.

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## VIII. Execution

### Authorized Designee of Governing Body of Municipality or Chief Judge of Court

The foregoing Adoption Agreement is hereby approved by Ironwood City Commission on  
the 10th day of July, 2017.  
(Name of Approving Employer)

Authorized signature: *Annitta DeLoe Bundell*

Title: Mayor

Witness signature: *Harvey M. Sullivan, City Clerk*

### Received and Approved by the Municipal Employees' Retirement System of Michigan

Dated: \_\_\_\_\_, 20\_\_\_\_ Signature: \_\_\_\_\_  
(Authorized MERS Signatory)

# Attachment 7h

## City of Ironwood (2706) - Total of All Divisions Estimated Projected Employer Contributions and Funded Ratios

Valuation Year Ending 12/31	Fiscal Year Beginning 7/1	Baseline				Scenario 1 - Close to Sample 10% Employer DC for New Hires						Scenario 2 - Freeze to Sample 10% Employer DC					
		Actuarial Accrued Liability	Valuation Assets	Funded %	Required Annual Employer Contribution	Actuarial Accrued Liability	Valuation Assets	Funded %	Required Annual DB Employer Contribution	Employer DC Contrib.	Total Annual Employer Contribution	Actuarial Accrued Liability	Valuation Assets	Funded %	Required Annual DB Employer Contribution	Employer DC Contrib.	Total Annual Employer Contribution
2015	2017	19,545,142	9,869,212	50%	\$931,644	19,545,142	9,869,212	50%	\$907,812	\$34,646	\$942,458	17,557,236	9,869,212	56%	\$562,272	\$214,991	\$777,263
2016	2018	19,908,614	9,711,708	49%	\$1,045,992	19,898,084	9,697,242	49%	\$1,011,756	\$49,872	\$1,061,628	17,499,047	9,598,731	55%	\$696,276	\$223,053	\$919,329
2017	2019	20,276,314	9,660,339	48%	\$1,082,496	20,232,235	9,605,339	47%	\$1,053,840	\$64,545	\$1,118,385	17,419,644	9,235,557	53%	\$739,644	\$231,417	\$971,061
2018	2020	20,653,787	9,733,919	47%	\$1,120,944	20,554,069	9,622,727	47%	\$1,102,512	\$80,665	\$1,183,177	17,318,258	8,822,978	51%	\$785,352	\$240,095	\$1,025,447
2019	2021	21,062,296	9,879,779	47%	\$1,163,832	20,884,943	9,701,862	46%	\$1,160,412	\$100,138	\$1,260,550	17,211,700	8,497,344	49%	\$838,092	\$249,099	\$1,087,191
2020	2022	21,489,861	10,338,898	48%	\$1,186,872	21,210,817	10,087,299	48%	\$1,169,244	\$123,637	\$1,292,881	17,085,919	8,441,602	49%	\$875,040	\$258,440	\$1,133,480
2021	2023	21,903,597	10,804,532	49%	\$1,212,036	21,493,624	10,479,105	49%	\$1,179,708	\$148,280	\$1,327,988	16,915,760	8,388,441	50%	\$921,960	\$268,132	\$1,190,092
2022	2024	22,262,649	11,315,174	51%	\$1,233,084	21,684,491	10,898,154	50%	\$1,187,364	\$170,113	\$1,357,477	16,676,985	8,377,477	50%	\$986,784	\$278,187	\$1,264,971
2023	2025	22,569,670	11,804,822	52%	\$1,255,068	21,777,960	11,261,299	52%	\$1,196,976	\$190,330	\$1,387,306	16,383,133	8,372,627	51%	\$1,128,372	\$288,619	\$1,416,991
2024	2026	22,839,830	12,289,414	54%	\$1,277,604	21,787,843	11,583,023	53%	\$1,206,552	\$210,997	\$1,417,549	16,042,088	8,400,997	52%	\$1,337,028	\$299,442	\$1,636,470
2025	2027	23,099,144	12,795,230	55%	\$1,301,364	21,741,438	11,889,987	55%	\$1,217,568	\$230,669	\$1,448,237	15,667,856	8,532,014	54%	\$1,386,948	\$310,671	\$1,697,619
2026	2028	23,344,364	13,322,093	57%	\$1,325,580	21,630,611	12,179,044	56%	\$1,232,760	\$249,532	\$1,482,292	15,260,332	8,850,796	58%	\$1,438,620	\$322,321	\$1,760,941
2027	2029	23,576,114	13,873,964	59%	\$1,350,072	21,451,542	12,450,844	58%	\$1,269,564	\$269,095	\$1,538,659	14,820,059	9,327,419	63%	\$1,482,828	\$334,408	\$1,817,236
2028	2030	23,812,803	14,472,498	61%	\$1,374,984	21,221,282	12,726,897	60%	\$1,307,040	\$289,077	\$1,596,117	14,353,281	9,901,370	69%	\$1,525,968	\$346,949	\$1,872,917
2029	2031	24,044,652	15,111,348	63%	\$1,399,896	20,924,949	13,010,319	62%	\$1,345,644	\$309,207	\$1,654,851	13,851,396	10,570,662	76%	\$1,570,344	\$359,959	\$1,930,303
2030	2032	24,271,577	15,794,107	65%	\$1,429,248	20,556,503	13,312,918	65%	\$1,387,704	\$329,056	\$1,716,760	13,315,999	11,342,581	85%	\$2,580	\$373,457	\$376,037
2031	2033	24,509,302	16,540,213	67%	\$1,482,180	20,126,400	13,652,943	68%	\$1,433,496	\$347,937	\$1,781,433	12,759,415	12,240,098	96%	\$144	\$387,462	\$387,606
2032	2034	24,759,052	17,356,968	70%	\$1,537,488	19,629,796	14,035,588	72%	\$1,482,240	\$366,570	\$1,848,810	12,179,484	12,435,763	102%	\$672	\$401,992	\$402,664
2033	2035	25,039,626	18,281,593	73%	\$1,594,668	19,080,856	14,485,552	76%	\$1,533,252	\$385,917	\$1,919,169	11,580,115	11,856,597	102%	\$804	\$417,066	\$417,870
2034	2036	25,373,604	19,355,415	76%	\$1,652,424	18,497,236	15,031,547	81%	\$1,586,592	\$405,803	\$1,992,395	10,970,593	11,267,879	103%	\$924	\$432,706	\$433,630
2035	2037	25,771,114	20,597,515	80%	\$1,714,308	17,881,781	15,688,787	88%	\$1,507,232	\$425,951	\$441,023	10,354,873	10,674,947	103%	\$1,056	\$448,933	\$449,989
2036	2038	26,244,014	22,028,550	84%	\$1,778,532	17,237,968	16,474,181	96%	\$1,255,522	\$446,415	\$458,967	9,737,232	10,082,018	104%	\$1,188	\$465,768	\$466,956
2037	2039	26,805,521	23,672,418	88%	\$1,845,504	16,570,881	16,561,686	100%	\$1,156,686	\$467,132	\$478,700	9,121,286	9,492,867	104%	\$1,320	\$483,234	\$484,554
2038	2040	27,470,143	25,556,067	93%	\$371,232	15,886,055	15,875,135	100%	\$9,816	\$488,181	\$497,997	8,511,795	8,912,425	105%	\$1,440	\$501,355	\$502,795
2039	2041	28,249,041	27,703,418	98%	\$385,212	15,184,931	15,172,787	100%	\$8,184	\$509,738	\$517,922	7,910,537	8,342,640	105%	\$1,548	\$520,156	\$521,704
2040	2042	29,153,045	29,337,319	101%	\$400,236	14,467,954	14,455,179	100%	\$6,864	\$531,620	\$538,484	7,320,023	7,786,207	106%	\$1,644	\$539,662	\$541,306
2041	2043	30,199,132	30,397,198	101%	\$415,332	13,740,599	13,727,304	100%	\$5,964	\$553,720	\$559,684	6,744,967	7,248,038	107%	\$1,728	\$559,899	\$561,627
2042	2044	31,404,438	31,617,649	101%	\$430,932	13,007,485	12,993,889	100%	\$5,208	\$576,218	\$581,426	6,189,352	6,732,317	109%	\$1,116	\$580,896	\$582,012
2043	2045	32,792,408	33,022,267	101%	\$447,864	12,279,110	12,265,405	100%	\$4,608	\$599,244	\$603,852	5,658,318	6,244,410	110%	\$1,080	\$602,679	\$603,759
2044	2046	34,384,648	34,632,525	101%	\$464,352	11,562,815	11,549,256	100%	\$4,164	\$622,874	\$627,038	5,155,464	5,787,800	112%	\$1,020	\$625,280	\$626,300
2045	2047	36,200,754	36,468,496	101%	\$481,812	10,862,706	10,849,505	100%	\$3,900	\$647,075	\$650,975	4,682,783	5,364,658	115%	\$984	\$648,728	\$649,712

Notes: Impacts of the new assumptions will be phased in over a five year period by default. The phase-in was excluded for ballpark and comparison purposes.  
 The amortization schedule used was Option B in Scenario 1 and Option A in Scenario 2. The accelerated amortization schedules (for closed groups) are recommended due to the financial condition and mature demographics of this plan.  
 The assumed future annual investment return is 7.75%.

