Michigan Department of Treasury
5598 (08-18)

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: Cheboygan County Road Commission Six-Digit Muni Code: 160100

Defined Benefit Pension System Name: Municipal Employees Retirement System

Contact Name (Administrative Officer): Robert B. Shank

Title if not Administrative Officer: ______

Email: mgr@chcrc.com Telephone: 231-238-7775

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 (ARC) 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 submitted plan must demonstrate through distinct supporting documentation how and when the local unit will reach the 60% funded ratio. Or, if the local unit is a city, village, township, or county, the submitted plan may demonstrate how and when the ARC for all of the defined benefit pension systems will be less than 10% of annual governmental fund revenues, as defined by the Act. Supporting documentation for the funding ratio and/or ARC must include an actuarial projection, an actuarial valuation, or an internally developed analysis. The local unit must project governmental fund revenues using a reasonable forecast based on historical trends and projected rates of inflation.

The completed plan must be submitted via email to Treasury at 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 (the Board) shall review and vote on the approval of a corrective action plan submitted by a local unit of government. If a corrective action plan is approved, the Board will monitor the corrective action plan 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**.*

For employees hired between April 1, 2013 and March 11, 2016 in the General Unit, Supervisor unit hired after June 1, 2013 the employer lowered the benefit multiplier from 2.5% to 2.0% and the early retirement option from F55/25 years to F55/30 year. See attachment 2a, Actuary Table 2, page 10 and attachment 6a union contract excerpts for general and supervisory units.

For employees in the Defined Benefit Retirement program, the general unit effective after March 11, 2016, the supervisory unit hired

☒ **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 Cheboygan County Road Commission has made additional contribution in addition to the actuarially determined contribution (ADC) with the Municipal Employees Retirement System (MERS). Attachment 2a Table 5 flow of assets page 13

See attachment 2a, table 5, page 13, flow of valuation of assets of the additional employer contributions. Additional contributions have been made as follows: 2011-$25,000, 2014-$106,834, 2015-$21,765, 2016-$117,138, 2017-$264,817, 2018-$304,413 and

☒ **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 Cheboygan County Road Commission follows Municipal Employees Retirement System established fiscal best practices. Fixed amortization schedule for all known obligations to be fully funded. MERS conducts an experience study every 5 years to ensure assumptions match actual experience and makes adjustments where necessary, encourages extra contributions, which we have elected to do, and requires 100% funding before there can be any new benefit enhancements.

Cheboygan County Road Commission has elected our required contributions be calculated based on the no phase amount

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.*

Cheboygan County Road Commission has committed additional contribution in 2020 at $300,000 per the attachment 4b. To date additional contributions made in 2020 to date amount to $303,547.43, with the Board committing to additional contributions if insurance refunds are received throughout the year. Attachment 4b and 4c.

The 2018 actuarial valuation shows a funded level of 47%, an internal projection worksheet (flow of assets), attachment 2a page1 and attachment 2b, shows with the additional minimum contributions of $300,000 we can be 60.2% funded by the year 2029. The

☒ **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**.*

Municipal Employees Retirement System feels if the plan meets actuarial assumptions, Cheboygan County Road could accelerate to 100% funding in 10 years with contributions of $130,589, attachment 2a page 3 instead of the $83,557, at that level of contributions the percentage of contribution to revenue would rise to around 13%, which we feel was high and therefore staying at the 10% mark is what the proposed plan meets. With the additional contribution of $300,000 committed and the monthly no phase in contribution of $83,557, the calculated contribution the Road Commission will be making is $108,557 monthly for 2020

5. CONFIRMATION OF FUNDING

Please check the applicable answer:

Do the corrective actions listed in this plan allow for (insert local unit name) Cheboygan County Road Commi 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
☒ Attachment – 1	**This Corrective Action Plan Form (Required)**
☒ Attachment – 1a	**Documentation from the governing body approving this Corrective Action Plan (Required)**
☒ Attachment – 2a	**An actuarial projection, an actuarial valuation, or an internally developed analysis, which illustrates how and when the local unit will reach the 60% funded ratio. Or, if the local unit is a city, village, township, or county, ARC will be less than 10% of governmental fund revenues, as defined by the Act. (Required)**
☐ Attachment – 3a	Documentation of additional payments in past years that is not reflected in your audited financial statements (e.g. enacted budget, system provided information).
☒ Attachment – 4a	Documentation of commitment to additional payments in future years (e.g. resolution, ordinance)
☐ Attachment – 5a	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
☒ Attachment –6a	Other documentation not categorized above

7. CORRECTIVE ACTION PLAN CRITERIA

Please confirm that each of the four corrective action plan criteria listed below have been satisfied when submitting this document. Specific detail on corrective action plan criteria can be found in the Corrective Action Plan Development: Best Practices and Strategies document.

Corrective Action Plan Criteria	Description
☒ Underfunded Status	Is there a description and adequate supporting documentation of how and when the retirement system will reach the 60% funded ratio? Or, if your local unit is a city, village, township, or county, how and when the ARC of all pension systems will be less than 10 percent of governmental fund revenues?
☒ Reasonable Timeframe	Do the corrective actions address the underfunded status in a reasonable timeframe (see CAP criteria issued by the Board)?
☒ Legal and Feasible	Does the corrective action plan follow all applicable laws? Are all required administrative certifications and governing body approvals included? Are the actions listed feasible?
☒ Affordability	Do the corrective action(s) listed allow the local unit to make the annual required contribution payment for the pension system now and into the future without additional changes to this corrective action plan?

8. LOCAL UNIT OF GOVERNMENT'S ADMINISTRATIVE OFFICER APPROVAL OF CORRECTIVE ACTION PLAN

I Robert B. Shank, as the government's administrative officer *(enter title)* Engineer/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.

I confirm to the best of my knowledge that because of the changes listed above, one of the following statements will occur:

☒ The Cheboygan County Road Commission **(Insert Retirement Pension System Name)** will achieve a funded status of at least 60% by Fiscal Year 2029 as demonstrated by required supporting documentation listed in section 6.

OR, if the local unit is a city, village, township, or county:

☐ The ARC for all of the defined benefit pension retirement systems of ______________ **(Insert local unit name)** will be less than 10% of the local unit of government's annual governmental fund revenues by Fiscal Year ________ as demonstrated by required supporting documentation listed in section 6.

Signature Brent Shank, P.E. Brent Shank Feb 24 2020 9:20 AM Date ______________

Attachment #7a

DAVID D. BROWN
CHAIRMAN

DAVID F. BRANDT
VICE-CHAIRMAN

KENNETH PAQUET
COMMISSIONER

HENRY GINOP
COMMISSIONER

RICHARD A. LAHAIE
COMMISSIONER

Cheboygan County Road Commission
5302 South Straits Highway
Indian River, Michigan 49749
Phone: (231) 238-7775
Fax: (231) 238-0830
877-257-2272

R. BRENT SHANK, P.E.
ENGINEER/MANAGER

DANA S. STEMPKY
CLERK

February 20, 2020

Regular Meeting of Cheboygan County Road Commission

February 20, 2020

MEETING called to order by Chairman David Brown.

PRESENT: D. Brown, D. Brandt, R. LaHaie, H. Ginop, Brent Shank Engineer/Manager and Dana Stempky Clerk

ABSENT: K. Paquet (excused)

MOTION by R. LaHaie seconded by H. Ginop to approve Corrective Action Plan for the Defined Benefit Pension Retirement System as presented, Cheboygan County Road Commission MERS Pension System. Approve Engineer/manager Shank to sign the same.
4 Yeas 1 Absent (Paquet)

CARRIED

I hereby certify that the foregoing is a true and correct copy of a resolution and was adopted at a regular meeting of the Board on the twentieth (20th) day of February, 2020.

Dana S. Stempky

Dana S. Stempky, Clerk
CHEBOYGAN COUNTY ROAD COMMISSION

Attachment 2a

Municipal Employees' Retirement System

Municipal Employees' Retirement System of Michigan

Annual Actuarial Valuation Report
December 31, 2018 - Cheboygan CRC (1601)

Attachment 2a

GRS Retirement Consulting

800.521.0498 | P: 248.799.9000 | F: 248.799.9020 | www.grsconsulting.com

Spring, 2019

Cheboygan CRC

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

This report presents the results of the Annual Actuarial Valuation, prepared for Cheboygan CRC (1601) as of December 31, 2018. The report includes the determination of liabilities and contribution rates resulting from the participation in the Municipal Employees' Retirement System of Michigan ("MERS"). This report contains the minimum actuarially determined contribution requirement, in alignment with the MERS Plan Document, Actuarial Policy, and the Michigan Constitution and governing statutes. Cheboygan CRC is responsible for the employer contributions needed to provide MERS benefits for its employees and former employees.

The purposes of this valuation are to:

- Measure funding progress as of December 31, 2018,
- Establish contribution requirements for the fiscal year beginning January 1, 2020,
- Provide information regarding the identification and assessment of risk,
- Provide actuarial information in connection with applicable Governmental Accounting Standards Board (GASB) statements, and
- Provide information to assist the local unit of government with state reporting requirements.

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

The findings in this report are based on data and other information through December 31, 2018. The valuation was based upon information furnished by MERS concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by MERS.

Attachment 2a

The Municipal Employees' Retirement Act, PA 427 of 1984 and the MERS' Plan Document Article VI sec. 71 (1)(d), provides the MERS Board with the authority to set actuarial assumptions and methods after consultation with the actuary. As the fiduciary of the plan, MERS Retirement Board sets certain assumptions for funding and GASB purposes. These assumptions are checked regularly through a comprehensive study, called an Experience Study. The most recent study was completed in 2015, as prepared by the prior actuary, and is the basis of the assumptions and methods currently in place. **At the February 28, 2019 board meeting, the MERS Retirement Board adopted new economic assumptions effective with the December 31, 2019 annual actuarial valuation, which will impact contributions beginning in 2021.** An illustration of the potential impact is found in this report.

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

For a full list of all the assumptions used, please refer to the division-specific assumptions described in table(s) in this report, and to the Appendix on the MERS website at: http://www.mersofmich.com/Portals/0/Assets/Resources/AAV-Appendix/MERS-2018AnnualActuarialValuation-Appendix.pdf.

The actuarial assumptions used for this valuation are reasonable for purposes of the measurement.

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

David T. Kausch, Rebecca L. Stouffer, and Mark Buis are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor. GRS maintains independent consulting agreements with certain local units of government for services unrelated to the actuarial consulting services provided in this report.

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

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

Attachment 2a

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

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

Sincerely,

David T. Kausch

David T. Kausch, FSA, FCA, EA, MAAA

Rebecca L. Stouffer

Rebecca L. Stouffer, ASA, FCA, MAAA

Mark Buis

Mark Buis, FSA, FCA, EA, MAAA

Attachment 2a

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Attachment 2a

Executive Summary

Funded Ratio

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

	12/31/2018	12/31/2017
Funded Ratio*	47%	47%

* Reflects assets from Surplus divisions, if any.

There has been a change in actuary and actuarial software since the December 31, 2017 valuation. Throughout this report are references to valuation results generated prior to the 2018 valuation date. Results prior to 2018 were received directly from the prior actuary or extracted from the previous valuation system by MERS's technology service provider.

Attachment 2a

Required Employer Contributions:

Your required employer contributions are shown in the following table. Employee contributions, if any, are in addition to the employer contributions. Changes to the actuarial assumptions and methods based on the 2015 Experience Study are phased-in over a 5-year period. This valuation reflects the fourth 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 you requested and have been billed using No Phase-in rates, your 2019 rates will continue to use the No Phase-in method. If you have been billed using the Phased-in rates and wish to change to rates based on No Phase-in, please contact MERS.

	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:	12/31/2018	12/31/2018	12/31/2017	12/31/2017	12/31/2018	12/31/2018	12/31/2017	12/31/2017
Fiscal Year Beginning:	January 1, 2020	January 1, 2020	January 1, 2019	January 1, 2019	January 1, 2020	January 1, 2020	January 1, 2019	January 1, 2019
Division								
01 - Gnrl & Slrd	-	-	-	-	$ 72,527	$ 74,048	$ 65,290	$ 68,332
12 - General & Slrd aftr 04/01/13	-	-	-	-	124	139	169	199
13 - Non-Union	-	-	-	-	9,151	9,370	9,533	9,971
Municipality Total					$ 81,802	$ 83,557	$ 74,992	$ 78,502

Requested No Phase in Payment.

Employee contribution rates:

	Employee Contribution Rate	
Valuation Date:	12/31/2018	12/31/2017
Division		
01 - Gnrl & Slrd	3.00%	2.50%
12 - General & Slrd aftr 04/01/13	3.00%	2.50%
13 - Non-Union	3.00%	3.00%

Attachment 2a

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 division 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 2020 for the entire employer would be $130,589, instead of $83,557.

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.

Comments on Investment Rate of Return Assumption

A defined benefit plan is funded by employer contributions, participant contributions, and investment earnings. Investment earnings have historically provided **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 at least every five years in an Experience Study that compares the assumptions used against actual experience and recommends adjustments if necessary. If your municipality would like to explore contributions at lower assumed investment return assumptions, please review the "what if" projection scenarios later in this report.

Attachment 2a

Assumption Change in 2019

At the February 28, 2019 board meeting, the MERS Retirement Board adjusted key economic assumptions. These assumptions, in particular the investment return assumption, have a significant effect on a plan's required contribution and funding level. Historically low interest rates, along with high equity market valuations, have led to reductions in projected returns for most asset classes. This has resulted in a Board adopted reduction in the investment rate of return assumption to 7.35%, effective with the December 31, 2019 valuation first impacting 2021 contributions. The Board also changed the assumed rate of wage inflation from 3.75% to 3.00%, with the same effective date. This report includes a "What If" scenario of 7.35%/3.00% in order to show the potential impact of this assumption change.

Comments on Asset Smoothing

To avoid dramatic spikes and dips in annual contribution requirements due to short term fluctuations in asset markets, MERS applies a technique called **asset smoothing**. This spreads out each year's investment gains or losses over the prior year and the following four years. 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 2018 was 3.80%, while the actual market rate of return was (4.12)%.** To see historical details of the market rate of return, compared to the smoothed actuarial rate of return, refer to this report's Appendix, or view the "How Smoothing Works" video on the Defined Benefit resource page of the MERS website.

As of December 31, 2018 the actuarial value of assets is 110% 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, 2018 valuation results were based on market value instead of actuarial value:

- The funded percent of your entire municipality would be 43% (instead of 47%); and
- Your total employer contribution requirement for the fiscal year starting January 1, 2020 would be $1,074,252 (instead of $1,002,684)

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.

Attachment 2a

Many assumptions are important in determining the required employer contributions. In the following table, we show the impact of varying the Investment Return assumption and the Wage Inflation assumption. Lower investment returns would result in higher required employer contributions, and vice-versa. Lower wage inflation generally results in lower required employer contributions as a dollar amount in the long run, and vice versa.

The relative impact of each economic 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, 2018 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.

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

The Retirement Board has adopted a change to the Investment Return Assumption from 7.75% to 7.35%, and the wage inflation from 3.75% to 3.00%. This change will be effective in the December 31, 2019 valuation which will impact the Fiscal Year 2021 contribution. The scenario shown using these assumptions as of December 31, 2018 is illustrative only. The actual impact of this change when reflected in the 2019 valuation will be different.

	Assumed Future Annual Smoothed Rate of Investment Return		
12/31/2018 Valuation Results	**Lower Future Annual Returns**	**Adopted 2019 Assumption**	**Valuation Assumptions**
Investment Return Assumption	**5.75%**	**7.35%**	**7.75%**
Wage Increase Assumption	**3.75%**	**3.00%**	**3.75%**
Accrued Liability	$ 26,884,224	$ 22,428,095	$ 21,711,506
Valuation Assets[1]	$ 10,112,529	$ 10,112,529	$ 10,112,529
Unfunded Accrued Liability	$ 16,771,695	$ 12,315,566	$ 11,598,977
Funded Ratio	38%	45%	47%
Monthly Normal Cost	$ 21,394	$ 11,576	$ 11,725
Monthly Amortization Payment	$ 88,703	$ 78,409	$ 71,832
Total Employer Contribution[2]	$ 110,097	$ 89,985	$ 83,557

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

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

Attachment 2a

Projection Scenarios

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

The 7.75%/3.75% scenario provides 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 7.35%/3.00% and 5.75%/3.75% projections provide an indication of the potential required employer contribution if these assumptions were met over the long-term.

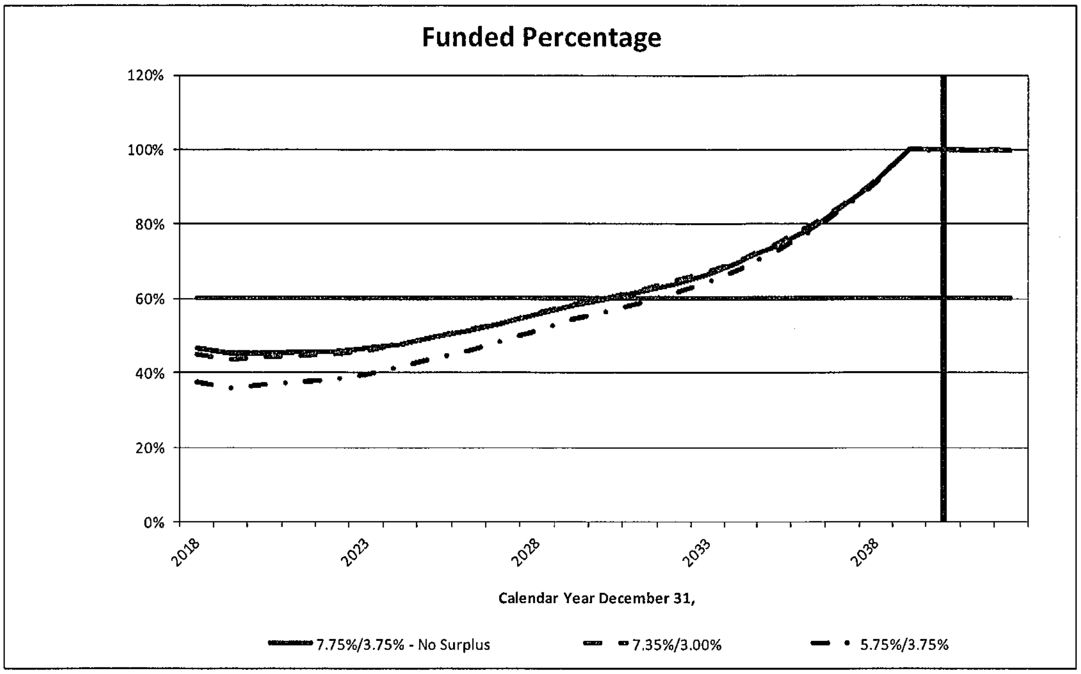
Attachment 2a

Valuation Year Ending 12/31	Fiscal Year Beginning 1/1	Actuarial Accrued Liability	Valuation Assets[2]	Funded Percentage	Computed Annual Employer Contribution
7.75%[1]/3.75%					
NO 5-YEAR PHASE-IN					
2018	2020	$ 21,711,506	$ 10,112,529	47%	$ 1,002,684
2019	2021	$ 22,100,000	$ 10,000,000	45%	$ 1,080,000
2020	2022	$ 22,600,000	$ 10,200,000	45%	$ 1,120,000
2021	2023	$ 22,900,000	$ 10,400,000	45%	$ 1,180,000
2022	2024	$ 23,200,000	$ 10,600,000	46%	$ 1,260,000
2023	2025	$ 23,500,000	$ 10,900,000	46%	$ 1,340,000
7.35%[1]/3.00%					
NO 5-YEAR PHASE-IN					
2018	2020	$ 22,428,095	$ 10,112,529	45%	$ 1,079,820
2019	2021	$ 22,800,000	$ 9,970,000	44%	$ 1,150,000
2020	2022	$ 23,200,000	$ 10,200,000	44%	$ 1,190,000
2021	2023	$ 23,500,000	$ 10,500,000	45%	$ 1,250,000
2022	2024	$ 23,800,000	$ 10,700,000	45%	$ 1,320,000
2023	2025	$ 24,000,000	$ 11,000,000	46%	$ 1,390,000
5.75%[1]/3.75%					
NO 5-YEAR PHASE-IN					
2018	2020	$ 26,884,224	$ 10,112,529	38%	$ 1,321,164
2019	2021	$ 27,300,000	$ 9,810,000	36%	$ 1,400,000
2020	2022	$ 27,700,000	$ 10,200,000	37%	$ 1,450,000
2021	2023	$ 28,100,000	$ 10,500,000	37%	$ 1,520,000
2022	2024	$ 28,300,000	$ 10,800,000	38%	$ 1,610,000
2023	2025	$ 28,600,000	$ 11,300,000	40%	$ 1,700,000

[1] Represents both the interest rate for discounting liabilities and the future investment return assumption on the Market Value of assets.
[2] Valuation Assets do not include assets from Surplus divisions, if any.

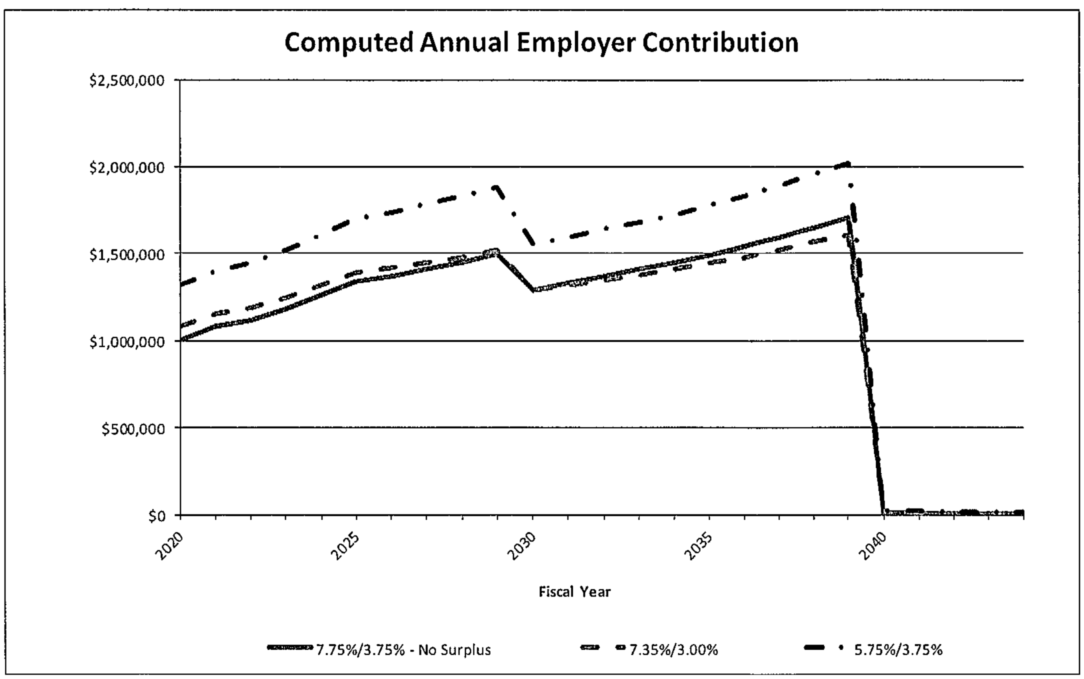
AAL was used on the projected flow of Assets worksheet

Attachment 2a



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

The green indicator lines have been added at 60% funded and 22 years following the valuation date for PA 202 purposes.



Notes:
All projected contributions are shown with no phase-in.

Attachment 2a

Table 1: Employer Contribution Details For the Fiscal Year Beginning January 1, 2020

Division	Total Normal Cost	Employee Contribut. Rate	Employer Contributions[1] Employer Normal Cost	Employer Contributions[1] Payment of the Unfunded Accrued Liability[4]	Employer Contributions[1] Computed Employer Contribut. No Phase-In	Computed Employer Contribut. With Phase-In	Blended ER Rate No Phase-In[5]	Blended ER Rate With Phase-In[5]	Employee Contribut. Conversion Factor[2]
Percentage of Payroll									
01 - Gnrl & Slrd	13.98%	3.00%	-	-	-	-			
12 - General & Slrd aftr 04/01/13	13.25%	3.00%	-	-	-	-			
13 - Non-Union	13.42%	3.00%	-	-	-	-			
Estimated Monthly Contribution[3]									
01 - Gnrl & Slrd			$ 10,019	$ 64,029	$ 74,048	$ 72,527			
12 - General & Slrd aftr 04/01/13			696	(557)	139	124			
13 - Non-Union			1,010	8,360	9,370	9,151			
Total Municipality			**$ 11,725**	**$ 71,832**	**$ 83,557**	**$ 81,802**			
Estimated Annual Contribution[3]			**$ 140,700**	**$ 861,984**	**$ 1,002,684**	**$ 981,624**			

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

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

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

4 Note that if the overfunding credit is larger than the normal cost, the full credit is shown above but the total contribution requirement is zero. This will cause the displayed normal cost and unfunded accrued liability contributions 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.

Attachment 2a

Table 2: Benefit Provisions

01 - Gnrl & Slrd: Closed to new hires

	2018 Valuation	2017 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	3.00%	2.50%
DC Plan for New Hires:	1/1/2016	1/1/2016
Act 88:	Yes (Adopted 1/26/1971)	Yes (Adopted 1/26/1971)

12 - General & Slrd aftr 04/01/13: Closed to new hires

	2018 Valuation	2017 Valuation
Benefit Multiplier:	2.00% Multiplier (no max)	2.00% Multiplier (no max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/30	55/30
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	3.00%	2.50%
DC Plan for New Hires:	1/1/2016	1/1/2016
Act 88:	Yes (Adopted 1/26/1971)	Yes (Adopted 1/26/1971)

Reduced Multiplier from 2.5% to 2.0%

Early Retirement option reduced from 55/25 to 55/30

13 - Non-Union: Closed to new hires

	2018 Valuation	2017 Valuation
Benefit Multiplier:	2.50% Multiplier (80% max)	2.50% Multiplier (80% max)
Normal Retirement Age:	60	60
Vesting:	10 years	10 years
Early Retirement (Unreduced):	55/25	55/25
Early Retirement (Reduced):	50/25	50/25
	55/15	55/15
Final Average Compensation:	3 years	3 years
COLA for Future Retirees:	2.50% (Non-Compound)	2.50% (Non-Compound)
Employee Contributions:	3.00%	3.00%
DC Plan for New Hires:	12/1/2014	12/1/2014
Act 88:	Yes (Adopted 1/26/1971)	Yes (Adopted 1/26/1971)

Attachment 2a

Table 3: Participant Summary

Division	2018 Valuation Number	2018 Valuation Annual Payroll[1]	2017 Valuation Number	2017 Valuation Annual Payroll[1]	2018 Valuation Average Age	2018 Valuation Average Benefit Service[2]	2018 Valuation Average Eligibility Service[2]
01 - Gnrl & Slrd							
Active Employees	23	$ 1,112,792	23	$ 1,028,380	48.7	16.1	16.1
Vested Former Employees	3	30,343	3	30,343	53.7	10.8	10.8
Retirees and Beneficiaries	53	1,247,543	55	1,237,536	71.1		
12 - General & Slrd aftr 04/01/13							
Active Employees	2	$ 86,116	2	$ 79,364	50.7	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 - Non-Union							
Active Employees	5	$ 128,810	5	$ 123,682	59.6	16.4	16.4
Vested Former Employees	3	62,928	3	62,929	53.6	15.7	25.3
Retirees and Beneficiaries	7	119,414	8	144,144	72.6		
Total Municipality							
Active Employees	**30**	**$ 1,327,718**	**30**	**$ 1,231,426**	**50.7**	**15.4**	**15.4**
Vested Former Employees	**6**	**93,271**	**6**	**93,272**	**53.7**	**13.3**	**18.1**
Retirees and Beneficiaries	**60**	**1,366,957**	**63**	**1,381,680**	**71.3**		
Total Participants	**96**		**99**				

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

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

Attachment 2a

Table 4: Reported Assets (Market Value)

Division	2018 Valuation		2017 Valuation	
	Employer and Retiree[1]	Employee[2]	Employer and Retiree[1]	Employee[2]
01 - Gnrl & Slrd	$ 7,455,908	$ 368,534	$ 8,041,636	$ 333,210
12 - General & Slrd aftr 04/01/13	99,175	7,307	77,622	4,712
13 - Non-Union	1,208,756	92,622	1,238,521	86,484
Municipality Total[3]	**$ 8,763,840**	**$ 468,463**	**$ 9,357,779**	**$ 424,406**
Combined Assets[3]	**$9,232,303**		**$9,782,185**	

1 Reserve for Employer Contributions and Benefit Payments.

2 Reserve for Employee Contributions.

3 Totals may not add due to rounding.

The December 31, 2018 valuation assets (actuarial value of assets) are equal to 1.095342 times the reported market value of assets (compared to 1.011321 as of December 31, 2017). Refer to the Appendix for a description of the valuation asset derivation and a detailed calculation of valuation assets.

Attachment 2a

Table 5: Flow of Valuation Assets

Year Ended 12/31	Employer Contributions Required	Employer Contributions Additional	Employee Contributions	Investment Income (Valuation Assets)	Benefit Payments	Employee Contribution Refunds	Net Transfers	Valuation Asset Balance
2008	$ 508,836		$ 27,367	$ 419,893	$ (848,934)	$ (12,498)	$ 0	$ 9,848,840
2009	517,183		27,745	364,626	(937,741)	0	0	9,820,653
2010	489,732		25,101	445,678	(976,422)	(9,698)	0	9,795,044
2011	532,096	$ 25,000	5,820	457,133	(986,248)	(1,548)	1,753	9,829,050
2012	542,597	0	0	402,286	(992,131)	0	0	9,781,802
2013	518,386	0	0	526,718	(1,131,524)	0	0	9,695,382
2014	452,434	106,834	0	517,340	(1,191,864)	(10,837)	0	9,569,289
2015	702,811	21,765	0	443,167	(1,229,200)	0	0	9,507,832
2016	755,671	117,138	13,472	458,208	(1,296,034)	0	0	9,556,287
2017	801,962	264,817	29,845	561,962	(1,321,944)	0	0	9,892,929
2018	883,092	304,413	38,094	369,436	(1,375,435)	0	0	10,112,529

4,966,447

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 Asset balance includes assets from Surplus divisions, if any.

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

Total Investment Income 4,966,447/11 years

451,495 average per year

Attachment 2a

Table 6: Actuarial Accrued Liabilities and Valuation Assets as of December 31, 2018

Division	Actuarial Accrued Liability: Active Employees	Vested Former Employees	Retirees and Beneficiaries	Pending Refunds	Total	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
01 - Gnrl & Slrd	$ 4,950,357	$ 286,459	$ 13,833,567	$ 1,695	$ 19,072,078	$ 8,570,440	44.9%	$ 10,501,638
12 - General & Slrd aftr 04/01/13	61,872	0	0	2,161	64,033	116,634	182.1%	(52,601)
13 - Non-Union	945,801	490,624	1,138,970	0	2,575,395	1,425,455	55.3%	1,149,940
Total	**$ 5,958,030**	**$ 777,083**	**$ 14,972,537**	**$ 3,856**	**$ 21,711,506**	**$ 10,112,529**	**46.6%**	**$ 11,598,977**

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

Attachment 2a

Table 7: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2004	$ 13,782,867	$ 8,527,856	62%	$ 5,255,011
2005	14,449,667	8,867,942	61%	5,581,725
2006	15,169,395	9,313,327	61%	5,856,068
2007	15,347,911	9,754,176	64%	5,593,735
2008	16,005,121	9,848,840	62%	6,156,281
2009	16,599,420	9,820,653	59%	6,778,767
2010	16,590,612	9,795,044	59%	6,795,568
2011	17,245,637	9,829,050	57%	7,416,587
2012	17,398,006	9,781,802	56%	7,616,204
2013	18,171,674	9,695,382	53%	8,476,292
2014	18,759,338	9,569,289	51%	9,190,049
2015	20,285,984	9,507,832	47%	10,778,152
2016	20,908,783	9,556,287	46%	11,352,496
2017	21,134,153	9,892,929	47%	11,241,224
2018	21,711,506	10,112,529	47%	11,598,977

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.

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

Attachment 2a

Tables 8 and 9: Division-Based Comparative Schedules

Division 01 - Gnrl & Slrd

Table 8-01: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2008	$ 8,976,254	$ 5,867,642	65%	$ 3,108,612
2009	9,256,722	5,283,065	57%	3,973,657
2010	9,178,722	5,302,474	58%	3,876,248
2011	9,570,480	5,385,129	56%	4,185,351
2012	9,297,725	5,309,242	57%	3,988,483
2013	18,171,853	9,693,727	53%	8,478,126
2014	18,747,874	9,558,837	51%	9,189,037
2015	17,749,137	8,301,127	47%	9,448,010
2016	18,273,204	8,264,889	45%	10,008,315
2017	18,426,726	8,469,658	46%	9,957,068
2018	19,072,078	8,570,440	45%	10,501,638

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

Table 9-01: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution[1]	Employee Contribution Rate[2]
	Number	Annual Payroll		
2008	36	$ 1,316,024	23.48%	2.00%
2009	35	1,378,396	26.64%	2.00%
2010	34	1,232,601	28.14%	2.00%
2011	33	1,208,244	31.94%	0.00%
2012	31	1,125,827	33.98%	0.00%
2013	39	1,386,858	$ 58,802	0.00%
2014	36	1,385,752	$ 62,500	0.00%
2015	27	1,113,976	$ 64,988	0.00%
2016	24	1,075,495	$ 68,263	1.50%
2017	23	1,028,380	$ 68,332	2.50%
2018	23	1,112,792	$ 74,048	3.00%

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

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

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

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

Attachment 2a

Division 12 - General & Slrd aftr 04/01/13

Table 8-12: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2008	$ 0	$ 0	0%	$ 0
2009	0	0	0%	0
2010	0	0	0%	0
2011	0	0	0%	0
2012	0	0	0%	0
2013	(179)	1,655	0%	(1,834)
2014	11,464	10,452	91%	1,012
2015	35,070	29,976	86%	5,094
2016	50,482	52,921	105%	(2,439)
2017	42,085	83,266	198%	(41,181)
2018	64,033	116,634	182%	(52,601)

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 Number	Active Employees Annual Payroll	Computed Employer Contribution[1]	Employee Contribution Rate[2]
2008	0	$ 0	$ 0	0.00%
2009	0	0	$ 0	0.00%
2010	0	0	$ 0	0.00%
2011	0	0	$ 0	0.00%
2012	0	0	$ 0	0.00%
2013	1	36,088	11.13%	0.00%
2014	3	102,311	10.09%	0.00%
2015	6	202,069	10.82%	0.00%
2016	4	161,671	9.96%	1.50%
2017	2	79,364	$ 199	2.50%
2018	2	86,116	$ 139	3.00%

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

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

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

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

Attachment 2a

Division 13 - Non-Union

Table 8-13: Actuarial Accrued Liabilities - Comparative Schedule

Valuation Date December 31	Actuarial Accrued Liability	Valuation Assets	Percent Funded	Unfunded (Overfunded) Accrued Liabilities
2008	$ 0	$ 0	0%	$ 0
2009	0	0	0%	0
2010	0	0	0%	0
2011	0	0	0%	0
2012	0	0	0%	0
2013	0	0	0%	0
2014	0	0	0%	0
2015	2,501,777	1,176,729	47%	1,325,048
2016	2,585,097	1,238,477	48%	1,346,620
2017	2,665,342	1,340,005	50%	1,325,337
2018	2,575,395	1,425,455	55%	1,149,940

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

Table 9-13: Computed Employer Contributions - Comparative Schedule

Valuation Date December 31	Active Employees		Computed Employer Contribution[1]	Employee Contribution Rate[2]
	Number	Annual Payroll		
2008	0	$ 0	$ 0	0.00%
2009	0	0	$ 0	0.00%
2010	0	0	$ 0	0.00%
2011	0	0	$ 0	0.00%
2012	0	0	$ 0	0.00%
2013	0	0	$ 0	0.00%
2014	0	0	$ 0	0.00%
2015	6	124,663	$ 9,154	0.00%
2016	5	121,447	$ 9,561	2.50%
2017	5	123,682	$ 9,971	3.00%
2018	5	128,810	$ 9,370	3.00%

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

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

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

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

Attachment 2a

Table 10: Division-Based Layered Amortization Schedule

Division 01 - Gnrl & Slrd

Table 10-01: Layered Amortization Schedule

				Amounts for Fiscal Year Beginning 1/1/2020		
Type of UAL	Date Established	Original Balance[1]	Original Amortization Period[2]	Outstanding UAL Balance[3]	Remaining Amortization Period[2]	Annual Amortization Payment
Initial	12/31/2015	$ 9,448,010	23	$ 9,748,430	20	$ 707,628
(Gain)/Loss	12/31/2016	466,019	22	507,777	20	36,864
Amendment	12/31/2016	(15,139)	22	(16,493)	20	(1,200)
(Gain)/Loss	12/31/2017	(162,454)	21	(175,839)	20	(12,768)
Amendment	12/31/2017	(6,248)	21	(6,768)	20	(492)
(Gain)/Loss	12/31/2018	493,614	20	531,869	20	38,604
Amendment	12/31/2018	(3,607)	20	(3,887)	20	(288)
Total				**$ 10,585,089**		**$ 768,348**

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

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

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

The unfunded accrued liability (UAL) as of December 31, 2018 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2018 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

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

Attachment 2a

Division 12 - General & Slrd aftr 04/01/13

Table 10-12: Layered Amortization Schedule

				Amounts for Fiscal Year Beginning 1/1/2020		
Type of UAL	Date Established	Original Balance[1]	Original Amortization Period[2]	Outstanding UAL Balance[3]	Remaining Amortization Period[2]	Annual Amortization Payment
(Gain)/Loss	12/31/2016	$ (2,867)	15	$ (2,979)	13	$ (300)
(Gain)/Loss	12/31/2017	(37,369)	10	(38,277)	9	(5,112)
Amendment	12/31/2017	(723)	10	(740)	9	(96)
(Gain)/Loss	12/31/2018	(8,022)	10	(8,644)	10	(1,056)
Amendment	12/31/2018	(494)	5	(532)	5	(120)
Total				**$ (51,172)**		**$ (6,684)**

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

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

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

The unfunded accrued liability (UAL) as of December 31, 2018 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2018 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

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

Attachment 2a

Division 13 - Non-Union

Table 10-13: Layered Amortization Schedule

Type of UAL	Date Established	Original Balance[1]	Original Amortization Period[2]	Outstanding UAL Balance[3]	Remaining Amortization Period[2]	Annual Amortization Payment
				Amounts for Fiscal Year Beginning 1/1/2020		
Initial	12/31/2015	$ 1,325,048	21	$ 1,327,167	15	$ 118,080
(Gain)/Loss	12/31/2016	14,187	19	15,177	15	1,356
Amendment	12/31/2016	1,430	19	1,530	15	132
(Gain)/Loss	12/31/2017	(28,256)	17	(30,239)	15	(2,688)
Amendment	12/31/2017	(225)	17	(236)	15	(24)
(Gain)/Loss	12/31/2018	(172,445)	15	(185,810)	15	(16,536)
Total				**$ 1,127,589**		**$ 100,320**

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

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

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

The unfunded accrued liability (UAL) as of December 31, 2018 (see Table 6) is projected to the beginning of the fiscal year for which the contributions are being calculated. This allows the 2018 valuation to take into account the expected future contributions that are based on past valuations. Each type of UAL (layer) is amortized over the appropriate period. Please see the Appendix on the MERS website for a detailed description of the amortization policy.

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

Attachment 2a

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 http://www.mersofmich.com/.

Actuarial Valuation Date:		12/31/2018
Measurement Date of the Total Pension Liability (TPL):		12/31/2018
At 12/31/2018, the following employees were covered by the benefit terms:		
Inactive employees or beneficiaries currently receiving benefits:		60
Inactive employees entitled to but not yet receiving benefits (including refunds):		10
Active employees:		30
		100
Total Pension Liability as of 12/31/2017 measurement date:	$	20,611,852
Total Pension Liability as of 12/31/2018 measurement date:	$	21,177,750
Service Cost for the year ending on the 12/31/2018 measurement date:	$	171,169
Change in the Total Pension Liability due to:		
- Benefit changes[1]:	$	(4,124)
- Differences between expected and actual experience[2]:	$	173,510
- Changes in assumptions[2]:	$	0

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

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

Average expected remaining service lives of all employees (active and inactive):		2
Covered employee payroll: (Needed for Required Supplementary Information)	$	1,327,718

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 12/31/2018:	$ 2,272,310	$ -	$ (1,934,776)

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.

Attachment 2a

GASB 68 Information

This page is for those municipalities who need to "roll-forward" their total pension liability due to the timing of completion of the actuarial valuation in relation to their fiscal year-end.

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

Actuarial Valuation Date:	12/31/2018
Measurement Date of the Total Pension Liability (TPL):	12/31/2019

At 12/31/2018, the following employees were covered by the benefit terms:

Inactive employees or beneficiaries currently receiving benefits:	60
Inactive employees entitled to but not yet receiving benefits (including refunds):	10
Active employees:	30
	100

Total Pension Liability as of 12/31/2018 measurement date:	$	20,983,501
Total Pension Liability as of 12/31/2019 measurement date:	$	21,604,631
Service Cost for the year ending on the 12/31/2019 measurement date:	$	173,797

Change in the Total Pension Liability due to:

- Benefit changes[1]:	$	(3,059)
- Differences between expected and actual experience[2]:	$	214,243
- Changes in assumptions[2]:	$	0

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

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

Average expected remaining service lives of all employees (active and inactive):		2
Covered employee payroll: (Needed for Required Supplementary Information)	$	1,327,718

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 12/31/2019:	$ 2,275,499	$ -	$ (1,941,566)

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.

Attachment 2a

Benefit Provision History

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

01 - Gnrl & Slrd

4/1/2018	Participant Contribution Rate 3%
4/1/2017	Participant Contribution Rate 2.5%
12/1/2016	Service Credit Purchase Estimates - Yes
4/1/2016	Participant Contribution Rate 1.5%
1/1/2016	DC Adoption Date 01-01-2016
4/1/2011	Member Contribution Rate 0.00%
12/1/2010	Exclude Temporary Employees requiring less than 6 months
9/1/2007	Member Contribution Rate 2.00%
1/1/2007	Flexible E 1% COLA Adopted (01/01/2007)
1/1/2006	E 2% COLA Adopted (01/01/2006)
1/1/2005	E 2% COLA Adopted (01/01/2005)
1/1/2004	E 2% COLA Adopted (01/01/2004)
1/1/2003	E 2% COLA Adopted (01/01/2003)
1/1/2002	E 2% COLA Adopted (01/01/2002)
1/1/2001	E 2% COLA Adopted (01/01/2001)
7/1/2000	Benefit B-4 (80% max)
7/1/2000	Member Contribution Rate 4.36%
1/1/2000	Flexible E 2% COLA Adopted (01/01/2000)
1/1/2000	E2 2.5% COLA for future retirees (03/10/1997)
1/1/1999	E2 1.9% COLA for future retirees (03/10/1997)
1/1/1998	E2 2.5% COLA for future retirees (03/10/1997)
1/1/1997	Flexible E 2% COLA Adopted (01/01/1997)
2/15/1996	Day of work defined as 8 Hours a Day for All employees.
1/1/1995	E 2% COLA Adopted (01/01/1995)
4/1/1994	Benefit B-3 (80% max)
1/1/1991	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/1991	Benefit F55 (With 25 Years of Service)
1/1/1990	E 2% COLA Adopted (01/01/1990)
1/1/1989	E 2% COLA Adopted (01/01/1989)
4/1/1988	Benefit B-2
1/1/1988	E 2% COLA Adopted (01/01/1988)
3/1/1982	Member Contribution Rate 2.00%
4/1/1976	Benefit C-1 (Old)
4/1/1976	Member Contribution Rate 5.00%
1/26/1971	Covered by Act 88
7/1/1963	Benefit FAC-5 (5 Year Final Average Compensation)
7/1/1963	10 Year Vesting
7/1/1963	Benefit C (Old)
7/1/1963	Member Contribution Rate 3.00% Under $4,200.00 - Then 5.00%
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years
	Fiscal Month - January

Attachment 2a

12 - General & Slrd aftr 04/01/13

4/1/2018	Participant Contribution Rate 3%
4/1/2017	Participant Contribution Rate 2.5%
12/1/2016	Service Credit Purchase Estimates - Yes
4/1/2016	Participant Contribution Rate 1.5%
1/1/2016	DC Adoption Date 01-01-2016
4/1/2013	Benefit FAC-3 (3 Year Final Average Compensation)
4/1/2013	10 Year Vesting
4/1/2013	Exclude Temporary Employees requiring less than 12 months
4/1/2013	Day of work defined as 8 Hours a Day for All employees.
4/1/2013	Benefit B-2
4/1/2013	Benefit F55 (With 30 Years of Service)
4/1/2013	Member Contribution Rate 0.00%
4/1/2013	E2 2.5% COLA for future retirees
1/26/1971	Covered by Act 88
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years
	Fiscal Month - January

13 - Non-Union

1/1/2018	Participant Contribution Rate 3%
1/1/2017	Participant Contribution Rate 2.5%
12/1/2016	Service Credit Purchase Estimates - Yes
1/1/2015	Benefit FAC-3 (3 Year Final Average Compensation)
1/1/2015	10 Year Vesting
1/1/2015	Exclude Temporary Employees requiring less than 6 months
1/1/2015	Day of work defined as 8 Hours a Day for All employees.
1/1/2015	Benefit B-4 (80% max)
1/1/2015	Benefit F55 (With 25 Years of Service)
1/1/2015	Participant Contribution Rate 0%
1/1/2015	E2 2.5% COLA for future retirees (1/1/2015)
12/1/2014	DC Adoption Date 12-01-2014
1/26/1971	Covered by Act 88
	Defined Benefit Normal Retirement Age - 60
	Early Reduced (.5%) at Age 50 with 25 Years or Age 55 with 15 Years
	Fiscal Month - January

Attachment 2a

Plan Provisions, Actuarial Assumptions, and Actuarial Funding Method

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

Increase in Final Average Compensation

Division	FAC Increase Assumption
All Divisions	3.00%

Withdrawal Rate Scaling Factor

Division	Withdrawal Rate Scaling Factor
All Divisions	100%

Miscellaneous and Technical Assumptions

Loads – None.

Amortization Policy for Closed Divisions

Closed Division	Amortization Option
01 - Gnrl & Slrd	Non-Accelerated Amortization
13 - Non-Union	Accelerated to 5-Year Amortization

Please see Appendix on MERS website for a detailed description of the amortization options available for closed divisions within an open municipality.

Attachment 29

Risk Commentary

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

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

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

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

Attachment 2a

PLAN MATURITY MEASURES

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

1.	Ratio of the market value of assets to total payroll	7.0
2.	Ratio of actuarial accrued liability to payroll	16.4
3.	Ratio of actives to retirees and beneficiaries	0.5
4.	Ratio of market value of assets to benefit payments	6.7
5.	Ratio of net cash flow to market value of assets (boy)	-1.5%

RATIO OF MARKET VALUE OF ASSETS TO TOTAL PAYROLL

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

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

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

RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

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

RATIO OF MARKET VALUE OF ASSETS TO BENEFIT PAYMENTS

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

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

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

Attachment 2a

State Reporting

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

Form 5572 Line Reference	Description	Result
10	**Membership as of December 31, 2018**	
11	Indicate number of active members	30
12	Indicate number of inactive members	6
13	Indicate number of retirees and beneficiaries	60
14	**Investment Performance for Calendar Year Ending December 31, 2018[1]**	
15	Enter actual rate of return - prior 1-year period	-3.64%
16	Enter actual rate of return - prior 5-year period	4.94%
17	Enter actual rate of return - prior 10-year period	8.25%
18	**Actuarial Assumptions**	
19	Actuarial assumed rate of investment return[2]	7.75%
20	Amortization method utilized for funding the system's unfunded actuarial accrued liability, if any	Level Percent
21	Amortization period utilized for funding the system's unfunded actuarial accrued liability, if any[3]	20
22	Is each division within the system closed to new employees?[4]	Yes
23	**Uniform Assumptions**	
24	Enter retirement pension system's actuarial value of assets using uniform assumptions	$10,112,529
25	Enter retirement pension system's actuarial accrued liabilities using uniform assumptions	23,450,060
27	Actuarially Determined Contribution (ADC) using uniform assumptions, Fiscal Year Ending December 31,2019	$1,399,932

1. The Municipal Employees' Retirement System's investment performance has been provided to GRS from MERS Investment Staff and included here for reporting purposes. This investment performance figures reported are net of fees on a rolling calendar-year basis for the previous 1-, 5-, and 10-year periods as required under PA 530.
2. Net of administrative and investment expenses.
3. Populated with the longest amortization period remaining in the amortization schedule, across all divisions in the plan. This is when each division and the plan in total is expected to reach 100% funded if all assumptions are met.
4. If all divisions within the employer are closed, "yes." If at least one division is open (including shadow divisions) indicate "no."

Attachment 2c

2019 Activity for DB Plan

CCRC
Retirement Expense - Defined Benefit
12/31/2019

Employee Contributions

	Division 1	Division 12 Employer	Division 13	Subtotal	Employer Voluntary	Total	3.00% **Division 1 EE**	3.00% **Division 12 EE**	3.00% **Division 13 EE**	Grand Total
Jan	67,967.00	173.00	9,971.00	78,111.00	-	78,111.00	4,291.70	302.85	404.40	83,109.95
Feb	67,967.00	173.00	9,971.00	78,111.00	200,000.00	278,111.00	3,357.33	274.92	280.82	282,024.07
Mar	67,967.00	173.00	9,971.00	78,111.00	22,122.86	100,233.86	2,714.58	204.01	281.02	103,433.47
April	67,967.00	173.00	9,971.00	78,111.00	-	78,111.00	2,343.68	190.34	289.22	80,934.24
May	67,967.00	173.00	9,971.00	78,111.00		78,111.00	2,370.06	186.72	281.02	80,948.80
June	67,967.00	173.00	9,971.00	78,111.00		78,111.00	2,383.53	187.17	277.42	80,959.12
July	67,967.00	173.00	9,971.00	78,111.00	2,000.00	80,111.00	2,457.57	191.89	280.62	83,041.08
August	67,967.00	173.00	9,971.00	78,111.00	9,315.59	87,426.59	3,661.36	283.39	412.52	91,783.86
Sept	67,967.00	173.00	9,971.00	78,111.00	30,143.50	108,254.50	2,473.19	186.72	288.08	111,202.49
Oct	67,967.00	173.00	9,971.00	78,111.00		78,111.00	2,342.76	186.72	279.88	80,920.36
Nov	67,967.00	173.00	9,971.00	78,111.00		78,111.00	2,597.97	200.38	278.68	81,188.03
Dec	67,967.00	173.00	9,971.00	78,111.00	14,331.00	92,442.00	3,503.00	222.19	427.74	96,594.93
	815,604.00	2,076.00	119,652.00	937,332.00	277,912.95	1,215,244.95	34,496.73	2,617.30	3,781.42	1,256,140.40

Note: Scheduled from monthly invoice/statement to assist in note disclosure for pension contributions.

Attachment 2d.

MERS®
Municipal Employees' Retirement System
1134 Municipal Way
Lansing, MI 48917
(800) 767-6377

Dana Stempky
Cheboygan County Road Commission
5302 S Straits Hwy
Indian River, MI 49749

Statement of Fiduciary Net Position
For the Year Ending 12/31/2019

Customer Number: 160101

Reserve for Employee Contributions

Bargaining Unit	Balance as of 12/31/2018	Invoiced & Other Contributions	Transfers	EE Refunds	Interest on EE Balance	Balance as of 12/31/2019
16010101	$368,533.90	$34,496.73	$0.00	$0.00	$5,859.68	$408,890.31
16010112	$7,306.62	$2,617.30	$0.00	$0.00	$116.17	$10,040.09
16010113	$92,622.35	$3,781.42	($6,973.35)	$0.00	$1,361.81	$90,792.23
Total	$468,462.87	$40,895.45	($6,973.35)	$0.00	$7,337.66	$509,722.63

Reserve for Employer Contributions and Benefit Payments

Bargaining Unit	Balance as of 12/31/2018	Invoiced & Other Contributions	Transfers & Fees	Benefits Paid	Net Investment Income	Admin Expenses	Balance as of 12/31/2019
16010101	$7,455,908.47	$982,394.98	$0.00	($1,243,295.00)	$1,048,928.38	($18,177.49)	$8,225,759.34
16010112	$99,175.10	$88,137.43	$0.00	$0.00	$23,277.90	($419.13)	$210,171.30
16010113	$1,208,756.21	$144,712.54	$6,973.35	($119,558.05)	$177,256.72	($3,075.23)	$1,415,065.54
Total	$8,763,839.78	$1,215,244.95	$6,973.35	($1,362,853.05)	$1,249,463.00	($21,671.85)	$9,850,996.18

Combined Reserves

	Balance as of 12/31/2018	Invoiced & Other Contributions	Transfers	Benefits Paid	Net Investment Income	Admin Expenses	Balance as of 12/31/2019
Total	$9,232,302.65	$1,256,140.40	$0.00	($1,362,853.05)	$1,256,800.66	($21,671.85)	$10,360,718.81

2019 activity

Outstanding Accounts Receivable at 12/31/2019: $0.00

Net Investment Income for 2019
$ 1,235,128.81

Contributions and Net Investment Income was used on the projected flow of assets for 2019 numbers

Attachment 4a

DAVID D. BROWN
CHAIRMAN

DAVID F. BRANDT
VICE-CHAIRMAN

KENNETH PAQUET
COMMISSIONER

HENRY GINOP
COMMISSIONER

RICHARD A. LAHAIE
COMMISSIONER

Cheboygan County Road Commission
5302 South Straits Highway
Indian River, Michigan 49749
Phone: (231) 238-7775
Fax: (231) 238-0830
877-257-2272

R. BRENT SHANK, P.E.
ENGINEER/MANAGER

DANA S. STEMPKY
CLERK

February 20, 2020

Regular Meeting of Cheboygan County Road Commission

February 20, 2020

MEETING called to order by Chairman David Brown.

PRESENT: D. Brown, D. Brandt, R. LaHaie, H. Ginop, Brent Shank Engineer/Manager and Dana Stempky Clerk

ABSENT: K. Paquet (excused)

MOTION by H. Ginop seconded by R. LaHaie to commit to an additional $300,000.00 minimum contribution towards the MERS, Municipal Employees Retirement System, unfunded liability for 2021 and thereafter. 4 Yeas 1 Absent (Paquet)

CARRIED

I hereby certify that the foregoing is a true and correct copy of a resolution and was adopted at a regular meeting of the Board on the twentieth (20th) day of February, 2020.

Dana S. Stempky

Dana S. Stempky, Clerk
CHEBOYGAN COUNTY ROAD COMMISSION

Attachment 4b

MOTION by K. Paquet seconded by D. Brandt to cast the vote of Burt Thompson, Antrim for CRA Board of Directors Ballot, Northern Michigan Association of Road Commissions. 5 Yeas CARRIED

Received payroll audit refund of $3,547.43, Clerk requesting to make an additional contribution to MERS.

MOTION by D. Brandt seconded by R. LaHaie to authorize Clerk to make an additional contribution to MERS with the CRASIF payroll audit refund of $3,547.43. 5 Yeas CARRIED

MOTION by D. Brandt seconded by R. LaHaie to receive and file the following: December 2019 State Maintenance. 5 Yeas CARRIED

Eng/Mgr Shank Update:

- January 22, 20120 10:00 A.M. grade inspection for South River Road Federal Aid Project
- Looked at water issue on Kate Hanson Road, creeks are high and at this point it looks like there is nothing that can be done, as the culverts are working there
- Discussion of frame work for trucks, as there are currently 5 that are in need of them. Other options are being looked into at this time.

Foremen Updates:

D. August-Winter Maintenance, patching on nice days, brush cutting areas where hitting trucks, welding on plows complete and Watson pit restoration complete.

S. Redmond-Winter Maintenance, patching, brushing, back up salt being received and welding on plows

D. Brown questioned the policy or work rules and is there a monetary amount set on an incident for damages that the safety committee gets involved. Brandt felt whether a $10 or $10,000 amount each situation is different, whether a negligent situation or not is more the issue, common sense should play a part.

Chairman D. Brown adjourned regular meeting at 9:55 A.M. being no further business to come before the Board.

David D. Brown, Chairman

Dana S. Stempky, Clerk

Attachment 4c

REGULAR MEETING OF THE CHEBOYGAN COUNTY ROAD COMMISSION FEBRUARY 3, 2020

Chairman D. Brown called the Regular Meeting of the Cheboygan County Road Commission to order at 9:00 A.M.

Clerk D. Stempky took roll call and a quorum was present

Pledge of Allegiance was recited.

PRESENT: D. Brown, D. Brandt, R. LaHaie, H. Ginop, K. Paquet, Eng/Mgr B. Shank and Clerk D. Stempky

VISITORS: S. Redmond, T. Horrocks, J. Moore, and C. Antkoviak

MOTION by K. Paquet seconded by R. LaHaie to approve minutes of last regular meeting of 1/16/2020 as mailed. 5 Yeas CARRIED

MOTION by D. Brandt seconded by H. Ginop to approve for payment current payroll voucher #20-05-$88,276.60 and accounts payable voucher #20-06-$833,463.15. 5 Yeas CARRIED

MOTION by D. Brandt seconded by K. Paquet to approve agenda as presented. 5 Yeas CARRIED

MOTION by D. Brandt seconded by R. LaHaie to sign title sheet for South River Road, Control Section Number: STL 16000, Job Number: 205301, Section 34 and 35, T37N, R1W, Benton Township and Section 1 and 2, T36N, R1W, Aloha Township, Cheboygan County and authorize Chairman D. Brown to sign the same. 5 Yeas CARRIED

MOTION by D. Brandt seconded by H. Ginop to sign title sheet for S. Straits Hwy, Pedestrian Safety Improvements, Section 24, T35N-R3W, Tuscarora Township, Control Section: 16000, Job Number: 208869 and authorize Chairman D. Brown to sign the same. 5 Yea CARRIED

MOTION by D. Brandt seconded by K Paquet to approve agreement for Black River Road Bridge over Black River, Contract No: 19-5602, Control Section MCS 16000, Job Number: 133067CON, Str# 1538, Cheboygan County. Authorize Chairman D. Brown and Engineer/Manager Shank to sign the same. 5 Yeas CARRIED

MOTION by K. Paquet seconded by H. Ginop to approve additional contribution of $300,000.00 to MERS unfunded liability for 2020. 5 Yeas CARRIED

MOTION by D. Brandt seconded by R. LaHaie to approve audit agreement with UHY LLP, CPA for Cheboygan County Road Commission year ended December 31, 2019 and authorize Clerk Stempky to sign the same. 5 Yeas CARRIED

MOTION by D. Brandt seconded by K. Paquet to receive and file the following correspondence: Township Meeting Minutes: Koehler 12/9/19, Aloha 12/9/19, Inverness 12/3/19, 12/17/19 and 1/7/20, Mackinaw 1/21/20 and 1/22/20, Grant 10/8/19, 11/12/19 and 12/10/19, Mullett 1/7/20 and Tuscarora 1/7/20; Cheboygan County Board Appointments; Notice of State Maintenance Audit Results for 2018 and Straits Council Minutes. 5 Yeas CARRIED

Attachment 6q

AGREEMENT

Between

CHEOYGAN COUNTY ROAD COMMISSION

General Unit

and

**CHEBOYGAN COUNTY ROAD COMMISSION
EMPLOYEES CHAPTER OF LOCAL NO. 1325,
AFFILIATED WITH MICHIGAN COUNCIL #25
OF THE AMERICAN FEDERATION OF STATE, COUNTY
AND MUNICIPAL EMPLOYEES, AFL-CIO (AFSCME)**

Effective April 1, 2019 through March 31, 2025

A Hachment 6a

Section 5. Life Insurance and Accidental Death and Dismemberment Insurance
During the term of this Agreement, the Employer agrees to continue to make available a group life insurance and accidental death and dismemberment insurance benefit program, approved by the Employer, in the amount of Fifteen Thousand Dollars ($15,000) for eligible full time employees who have completed the first sixty (60) days of the probationary period and who elect to participate. The required cost of providing the group life insurance and accidental death and dismemberment insurance benefit program shall be paid in full by the Employer. Employees become eligible to participate in the group benefit program in accordance with the carrier's provisions or the terms of the benefit program. Specific terms and conditions governing the group benefit issued by the insurance carrier or carriers. The Employer reserves the right to determine the method of providing the group benefit program, including the selection of any insurance carrier or carriers, provided the benefit levels remain substantially equivalent.

ARTICLE 21 - RETIREMENT

Section 1: Pension

(a) For employees hired prior to April 1, 2013 the Employer will provide MERS B-4, V-10, F-55/25, FAC-3, E-2 Retirement Program as per provisions of Public Act No. 135 of 1945 (Michigan Municipal Employees Retirement System). Integrated with the appropriate sections of the Federal Old Age and Survivors Insurance Act.

(b) For Employees hired between April 1, 2013 to March 11, 2016 the Employer will provide MERS B-2 with V-10, F55/30, FAC-3,E-2

Reduced DB Multiplier
& Early Unreduced

(c) Effective March 12, 2016 the employee contribution toward the MERS Defined Benefit (applicable to Employees covered by Article 21, Section 1 (a) and (b) above) pension plan shall be:

Starting	% Contribution
March 12, 2016	1.5%
March 12, 2017	2.5%
March 12, 2018	3.0%

(d) All new hires after March 12, 2016 shall be placed in a Defined Contribution Plan with an Employer mandatory contribution of 5% with an additional Employer contribution of up to 3% matched to an Employee's percentage voluntary contribution. Employee contributions may be in 1% increments.

Section 2: Health Insurance

(a) For employees hired before March 11, 2003, the Employer agrees to pay the medical insurance premiums for retired employees and spouse, upon retirement. The employee must have at least ten (10) years of service in the Retirement System (MERS) and must be 55 years of age in order to be eligible to receive this benefit Survivors option in force. The term "spouse" shall be defined to mean only the individual who was the spouse of the retired employee as of the date of the employee's retirement.

(b) For employees hired after March 11, 2003, the Employer agrees to contribute toward the cost of

Attachment 6a

AGREEMENT

Between

CHEBOYGAN COUNTY ROAD COMMISSION

(Supervisory Unit)

and

CHEBOYGAN COUNTY ROAD COMMISSION EMPLOYEES
CHAPTER OF LOCAL NO. 1325, SUB-LOCAL 008,
AFFILIATED WITH AMERICAN FEDERATION OF STATE, COUNTY
AND MUNICIPAL EMPLOYEES, MICHIGAN COUNCIL #25
AFL-CIO (AFSCME)

Effective: June 1, 2019 through May 31, 2025

Attachment 6a

The required cost of providing the group life insurance and accidental death and dismemberment insurance benefit program shall be paid in full by the Employer. Employees become eligible to participate in the group benefit program in accordance with the carrier's provisions or the terms of the benefit program. Specific terms and conditions governing the group benefit program are set forth in the master policy or policies governing the program or issued by the insurance carrier or carriers. The Employer reserves the right to determine the method of providing the group benefit program, including the selection of any insurance carrier or carriers, provided the benefit levels remain substantially equivalent.

Section 58: Worker's Compensation
Each employee will be covered by Workers' Compensation coverage in accordance with applicable laws.

ATRICLE 17 - RETIREMENT

Section 59: Retirement

(a) To be eligible for the retirement benefits defined herein, employees must be:
  a. At least sixty (60) years of age and have a minimum of ten (10) full years of employment to the Employer at the time of retirement, or
  b. At least fifty-five (55) years of age and have a minimum of twenty-five (25) full years of employment to the Employer at the time of retirement.

(b) Pension:
  a. Effective for those eligible employees hired prior to June 1, 2013, the Employer will put Plan B-4 into effect under the provisions of Public Act No. 135 of 1945 (Michigan Municipal Employees Retirement System), integrated with the appropriate sections of the Federal Old Age and Survivors Insurance Act. The plan will include benefit program F-55 (25 years) FAC-3 and E-2.
  b. For employees hired after June 1, 2013 the benefit will be MERS B-2 with V-10, F-55/30, FAC-3, E-2. Multiplier Reduced and Reduced early (unreduced) retirement
  c. Effective May 26, 2016 the employee contribution toward the MERS Defined Benefit (applicable to Employees covered by Article 17, Section 58 (a) and (b) above) pension plan shall be:

Starting	% Contribution
May 26, 2016	1.5%
May 26, 2017	2.5%
May 26, 2018	3.0%

  d. All new hires after May 26, 2016 shall be placed in a Defined Contribution Plan with an Employer mandatory contribution of 5% with an additional Employer contribution of up to 3% matched to an Employee's percentage voluntary contribution. Employee contributions may be in 1% increments.