

Charter Township of Ypsilanti Other Postemployment Benefits

Actuarial Valuation Report
December 31, 2017



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August 24, 2018

Ms. Karen Wallin
Human Resources Department
Charter Township of Ypsilanti
7200 South Huron River Drive
Ypsilanti, Michigan 48197-7099

Dear Ms. Wallin:

Submitted in this report are the results of the Actuarial Valuation of the assets and benefit values associated with the Other Postemployment Benefits of the Charter Township of Ypsilanti. The date of the valuation was December 31, 2017, from which the Actuarially Determined Contribution was developed for the fiscal years ending December 31, 2019 and December 31, 2020. This report was prepared at the request of the Township.

The purposes of the valuation are to measure the plan's funding progress and to determine the employer contribution rate for the fiscal years ending December 31, 2019 and December 31, 2020. Determinations of the financial results associated with the benefits described in this report in a manner other than the intended purpose may produce significantly different results. This report does not satisfy the disclosure requirements of Governmental Accounting Standards Board (GASB) Statements No. 74 and No. 75. Information related to GASB Statements No. 74 and No. 75 reporting will be provided in separate reports.

The actuarial methods and assumptions used in the actuarial valuation are summarized in Section D of this report. The actuarial assumptions have changed since the prior valuation. In particular, at the August 8, 2018 Police and Firefighters' Retirement Board Meeting, the Board adopted a 6.50% investment return assumption for the Fire OPEB fund.

This report should not be relied on for any purpose other than those described above. It was prepared at the request of the Charter Township of Ypsilanti and is intended for use by the Township and those designated or approved by the Township. This report may be provided to parties other than the Township only in its entirety and only with the permission of the Township. GRS is not responsible for unauthorized use of this report.

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; 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 valuation was based upon information, furnished by the Township, concerning retiree health benefits, individual members, and financial data. Data was checked for internal consistency, but was not audited by us. We are not responsible for the accuracy or completeness of the information provided by the Township.

To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods.

The signing individuals are independent of the plan sponsor.

Abra D. Hill and Derek Henning are Members of the American Academy of Actuaries (MAAA), and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,



Abra D. Hill ASA, MAAA



Derek Henning, ASA, MAAA



David L. Hoffman

ADH/DH/DLH:sc

C2432



EXECUTIVE SUMMARY

Executive Summary

Actuarially Determined Contribution

The Actuarially Determined Contribution (ADC) for the fiscal year ending December 31, 2019 is estimated to be \$664,540 for the General Township groups in total and \$767,327 for Fire. The ADC for the fiscal year ending December 31, 2020 is estimated to be \$644,897 for the General Township in total and \$698,644 for Fire. Actual claims and premiums paid on behalf of retirees may be treated as employer contributions in relation to the ADC. The expected claims (including the implicit subsidy) are as follows:

<u>Calendar Year</u>	<u>Fire</u>	<u>General</u>
2018	\$760,257	\$570,400
2019	837,922	637,622
2020	916,782	695,226

For additional details please see Section A of the report.

Per capita costs and illustrative rates were developed from the premiums, claims, and enrollment data provided to us. The process used to determine these per capita costs and the results of these calculations are provided in Section B.

Additional OPEB Reporting Requirements

Please note that beginning with the fiscal year ending December 31, 2017, GASB Statement No. 43 was replaced by GASB Statement No. 74. Also, beginning with the fiscal year ending December 31, 2018, GASB Statement No. 45 will be replaced by GASB Statement No. 75. Information related to GASB Statements No. 74 and No. 75 reporting will be provided in separate reports.

Liabilities and Assets

The present value of all benefits expected to be paid to current plan members as of December 31, 2017 is \$13,746,065 for the Township group and \$14,540,689 for the Fire group. The actuarial accrued liability, which is the portion of the present value of all benefits attributable to service accrued by plan members as of December 31, 2017, is \$12,767,474 for the Township group and \$13,775,660 for the Fire group. The assets currently set aside for GASB OPEB purposes as of December 31, 2017 are \$6,593,903 for the Township group and \$5,994,833 for the Fire group.

Excise Tax

The Patient Protection and Affordable Care Act includes an excise tax on high cost (Cadillac) health plans beginning in 2020. The excise tax is 40% of costs above a threshold. Possible excise taxes beginning in 2020 have not been reflected in the results presented in this report.

Actuarial Assumptions

There have been changes in actuarial assumptions since the prior valuation, as shown below:

- Lower the Investment Return Assumption from 7.00% to 6.50% (Fire group Only)
- Lower the Price Inflation Assumption from 3.00% to 2.50%.
- Lower the Wage Inflation Assumption from 3.50% to 3.00%
- Lower the Ultimate Healthcare Cost Trend from 3.50% to 3.00%
- Reset the Healthcare Cost Trend Assumption
- Update the mortality improvement scale from MP-2014 to MP-2017 and incorporate fully-generational improvements.

SECTION A

VALUATION RESULTS

Development of the Actuarially Determined Contributions – General Township For the Other Postemployment Benefits Fiscal Year Beginning January 1, 2019

Contributions for Fund Division	Development of the Actuarially Determined Contribution for January 1, 2019 - December 31, 2019							
	General Township / Board	Court 14-B	General Township	General Township	General Township	General Township	General Township	General Township
	101-102	101-136	226	230	249	266	584	TOTAL
Investment Return Rate								7.00%
Total Normal Cost	\$ 77,785	\$ 36,507	\$ 9,229	\$ 7,045	\$ 11,776	\$ 15,975	\$ 4,309	\$ 162,626
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 26 years)	\$ 344,753	\$ 59,082	\$ 11,418	\$ 22,883	\$ 25,733	\$ 24,904	\$ 13,141	\$ 501,914
Actuarially Determined Contribution (ADC)	\$ 422,538	\$ 95,589	\$ 20,647	\$ 29,928	\$ 37,509	\$ 40,879	\$ 17,450	\$ 664,540
Member Portion	0	0	0	0	0	0	0	0
Employer Portion	\$ 422,538	\$ 95,589	\$ 20,647	\$ 29,928	\$ 37,509	\$ 40,879	\$ 17,450	\$ 664,540
ARC Per Active Participant	\$ 17,606	\$ 8,690	\$ 6,882	\$ 14,964	\$ 9,377	\$ 10,220	\$ 17,450	\$ 13,562
Actuarially Determined Contribution (ADC) For Year beginning January 1, 2020	\$ 411,807	\$ 92,391	\$ 19,762	\$ 28,555	\$ 37,391	\$ 38,362	\$ 16,629	\$ 644,897
Member Portion	0	0	0	0	0	0	0	0
Employer Portion	\$ 411,807	\$ 92,391	\$ 19,762	\$ 28,555	\$ 37,391	\$ 38,362	\$ 16,629	\$ 644,897

The results on this page are calculated under the assumption that the employer funding policy is to contribute consistently an amount at least equal to the Actuarially Determined Contribution (ADC). Therefore, under this policy, the employer can assume a long-term investment return assumption. **The assumption used to calculate the liabilities shown above assumes a 7.0% investment return rate for General Township.**

The unfunded actuarial accrued liabilities were amortized as level dollar payments of over a closed period of 26 years. A 30-year amortization period for unfunded actuarial accrued liabilities is the maximum period that complies with GASB requirements.

Determination of Unfunded Actuarial Accrued Liability – General Township As of December 31, 2017

	General Township / Board	Court 14-B	General Township	General Township	General Township	General Township	General Township	General Township
	101-102	101-136	226	230	249	266	584	TOTAL
Investment Return Rate								7.00%
A. Present Value of Future Benefits								
1. Retirees and Beneficiaries	\$6,085,713	\$ 230,158	\$ 0	\$268,213	\$269,408	\$3,276	\$137,216	\$6,993,984
2. Retired Members in Deferral Period	1,804	0	0	0	59,904	90,202	0	151,910
3. Active Members	<u>3,129,461</u>	<u>1,482,900</u>	<u>349,340</u>	<u>367,991</u>	<u>417,552</u>	<u>640,183</u>	<u>212,744</u>	<u>6,600,171</u>
Total Present Value of Future Benefits	\$9,216,978	\$1,713,058	\$349,340	\$636,204	\$746,864	\$733,661	\$349,960	\$13,746,065
B. Present Value of Future Employer Normal Costs	\$ 440,789	\$ 240,193	\$ 67,158	\$ 31,375	\$ 94,400	\$84,461	\$20,215	\$ 978,591
C. Present Value of Future Contributions from Current Active Members	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$0
D. Actuarial Accrued Liability (A.-B.-C.)	\$8,776,189	\$1,472,865	\$282,182	\$604,829	\$652,464	\$649,200	\$329,745	\$12,767,474
E. Market Value of Assets	\$4,532,560	\$ 760,677	\$ 145,736	\$312,371	\$336,972	\$335,287	\$170,300	\$6,593,903
F. Unfunded Actuarial Accrued Liability (D.-E.)	\$4,243,629	\$ 712,188	\$ 136,446	\$292,458	\$315,492	\$313,913	\$159,445	\$6,173,571
G. Funded Ratio (E./D.)	51.6%	51.6%	51.6%	51.6%	51.6%	51.6%	51.6%	51.6%

The results on this page are calculated under the assumption that the employer funding policy is to contribute consistently an amount at least equal to the Actuarially Determined Contribution (ADC). Therefore, under this policy, the employer can assume a long-term investment return assumption. **The assumption used to calculate the liabilities shown above assumes a 7.0% investment return rate for General Township.**

Under the new GASB Statement No. 75, the Net OPEB Obligation (analogous to the Unfunded Actuarial Accrued Liability) will appear on the Township's balance sheet in fiscal year ending 2018.

Development of the Actuarially Determined Contributions – Fire For the Other Postemployment Benefits Fiscal Year Beginning January 1, 2019

Contributions for Fund Division	Development of the Actuarially Determined Contribution for January 1, 2019 - December 31, 2019
	Fire
Investment Return Rate	6.50%
Total Normal Cost	\$ 142,749
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 26 years)	\$ 673,128
Actuarially Determined Contribution (ADC)	\$ 815,877
Member Portion	48,550
Employer Portion	\$ 767,327
ARC Per Active Participant	\$ 45,327
Actuarially Determined Contribution (ADC) For Year beginning January 1, 2020	\$ 798,273
Member Portion	44,656
Employer Portion	\$ 753,617

The results on this page are calculated under the assumption that the employer funding policy is to contribute consistently an amount at least equal to the Actuarially Determined Contribution (ADC). Therefore, under this policy, the employer can assume a long-term investment return assumption. **The assumption used to calculate the liabilities shown above assumes a 6.50% investment return rate for Fire.**

The unfunded actuarial accrued liabilities were amortized as level dollar payments of over a closed period of 26 years. A 30-year amortization period for unfunded actuarial accrued liabilities is the maximum period that complies with GASB requirements.

Determination of Unfunded Actuarial Accrued Liability – Fire As of December 31, 2017

	Fire
Investment Return Rate	6.50%
A. Present Value of Future Benefits	
1. Retirees and Beneficiaries	\$ 9,698,266
2. Retired Members in Deferral Period	190,039
3. Active Members	<u>5,529,371</u>
Total Present Value of Future Benefits	\$15,417,676
B. Present Value of Future Employer Normal Costs	\$ 571,337
C. Present Value of Future Contributions from Current Active Members	\$311,046
D. Actuarial Accrued Liability (A.-B.-C.)	\$14,535,293
E. Market Value of Assets	\$ 5,994,833
F. Unfunded Actuarial Accrued Liability (D.-E.)	\$ 8,540,460
G. Funded Ratio (E./D.)	41.2%

The results on this page are calculated under the assumption that the employer funding policy is to contribute consistently an amount at least equal to the Actuarially Determined Contribution (ADC). Therefore, under this policy, the employer can assume a long-term investment return assumption. **The assumption used to calculate the liabilities shown above assumes a 6.50% investment return rate for Fire.**

Under the new GASB Statement No. 75, the Net OPEB Obligation (analogous to the Unfunded Actuarial Accrued Liability) will appear on the Township's balance sheet in fiscal year ending 2018.

Comments

Comment A: There have been changes in actuarial assumptions since the prior valuation, as shown below:

- Lower the Investment Return Assumption from 7.00% to 6.50% (Fire group Only)
- Lower the Price Inflation Assumption from 3.00% to 2.50%.
- Lower the Wage Inflation Assumption from 3.50% to 3.00%
- Lower the Ultimate Healthcare Cost Trend from 3.50% to 3.00%
- Reset the Healthcare Cost Trend Assumption
- Update the mortality improvement scale from MP-2014 to MP-2017 and incorporate fully-generational improvements.

Comment B: The assets are separately held for General and Fire participants:

Fire Assumed Rate of Investment Return

At the August 8, 2018 Police and Firefighters' Retirement Board Meeting, the Board amended the investment policy target allocation, rebalanced the portfolio for the Retiree Health Care fund and adopted a 6.50% investment return assumption. The rebalanced allocation of approximately 60% equity, 37% fixed income and 3% cash was recommended by the investment consultant to target the investment return assumption. Considering this Board action and our analysis, we believe 6.50% to be reasonable investment return assumption.

General Assumed Rate of Investment Return

It is our understanding that the General Township assets are invested in MERS Total Market Fund. Based on our analysis, 7.00% remains a reasonable investment return assumption.

Comment C: The market value of assets tends to be very volatile over time. The Township may wish to adopt an asset smoothing method for valuation purposes in order to reduce volatility in the funded status and ADC. In addition, contributions for small groups may fluctuate significantly due to demographic changes. Annual valuations could reduce the likelihood of large changes in contributions over time.

Comment D: The assets are separately held for Fire and General participants. For funds in the General divisions, the market value of assets are allocated by fund in proportion to the actuarial accrued liability. Different asset allocation methods would produce different results, including different ADCs. Under the pending new accounting standards, the Net OPEB Obligation (analogous to the Unfunded Actuarial Accrued Liability) will appear on the Township's balance sheet. We recommend that the Township review the allocation of assets to assure consistency with fund reporting in the government wide financials.

Comment E: The new OPEB standards (GASB Statement Nos. 74 and 75) are accounting standards only. The Township may wish to explore alternative methods for funding the OPEB. For example, the Township may not want to reflect the implicit subsidy for purposes of funding the OPEB.

Comments (Concluded)

Comment F: The expected claims and premiums attributable to retirees and covered spouses are as follows:

<u>Calendar Year</u>	<u>Fire</u>	<u>General</u>
2018	\$760,257	\$570,400
2019	837,922	637,622
2020	916,782	695,226

These amounts are net of retiree and spouse contributions and reflect the anticipated trend, demographic changes, and implicit subsidy.

Comment G: The Patient Protection and Affordable Care Act includes an excise tax for high cost (Cadillac) health plans beginning in 2020. Based on the current level of premiums, this plan is not projected to be subject to the tax during the life of the members. However, actual health care costs can be volatile and increase rapidly so a future excise tax may apply. No adjustment for the excise tax has been made in this valuation given the current premiums and trend expectations.

Comment H: At the request of the plan sponsor, valuation results have been split by Township Fund. For purposes of correlating Township Fund divisions to OPEB groups for substantive plan provisions, we used the following information:

<u>Fund</u>	<u>OPEB Group</u>
101	General Township/Board
101-136	Court
206	Fire
226	General Township
249	General Township
230	General Township
266	General Township
584	General Township

Other Observations

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

Given the Plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the Retiree Health Care funds for General and Fire earning 7.0% and 6.50%, respectively on the Market Value of Assets), it is expected that:

1. The employer normal cost is sufficient to cover the cost of benefits accruing each year;
2. The Unfunded Actuarial Accrued Liabilities (UAAL) will continue to be fully amortized; and
3. The funded status of the Retirement System will continue to increase gradually towards a 100% funded ratio.

Limitations of Funded Status Measurements

Unless otherwise indicated, a funded status measurement presented in this report is based upon the Actuarial Accrued Liability (AAL) and the Market Value of Assets (MVA). Unless otherwise indicated, with regard to any funded status measurements presented in this report:

1. The measurement is inappropriate for assessing the sufficiency of Retirement System assets to cover the estimated cost of settling the Retirement and Benefit System's benefit obligations, for example: transferring the liability to an unrelated third party in a market value type transaction.
2. The measurement is dependent upon the Actuarial Cost Method which, in combination with the Retirement System's amortization policy, affects the timing and amounts of future contributions. The amounts of future contributions will most certainly differ from those assumed in this report due to future actual experience differing from assumed experience based upon the actuarial assumptions. A funded status measurement in this report of 100% is not synonymous with no required future contributions. Even though the funded status is over 100%, the Retirement System would still require future normal cost contributions (i.e., contributions to cover the cost of active membership accruing an additional year of service credit).

Limitations of Project Scope

Actuarial standards do not require the actuary to evaluate the ability of the plan sponsor or other contributing entities to make required contributions to the plan when due. Such an evaluation was not within the scope of this project and is not within the actuary's domain of expertise. Consequently, the actuary performed no such evaluation.

Risks to Future Employer Contribution Requirements

There are ongoing risks to future employer contribution requirements to which the Plan is exposed, such as:

- Actual and Assumed Investment Rate of Return
- Actual and Assumed Mortality Rates
- Amortization Policy

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

Retiree Premium Rate Development

Initial premium rates were developed separately for each class of retirees (pre-65 and post-65). The fully-insured rates provided by Ypsilanti Township were utilized to determine the appropriate premium rates. The pre-65 fully-insured premiums are blended rates based on the combined experience of active and pre-65 retired members; therefore, there is an implicit employer subsidy for the non-Medicare eligible retirees since the average costs of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees. The true per capita cost for the pre-65 retirees is developed by adjusting the demographic differences between the active employees and retirees to reflect this implicit rate subsidy for the retirees. For the post-65 retirees, the fully-insured premium rate is used as the basis of the initial per capita cost without adjustments since the rate reflects the actual claims experience of the post-65 retiree group.

The only pre-65 plan available to current and future retirees is BCBS Flex Blue PPO. The only post-65 plan available to current and future retirees is Medicare PLUS Blue Group PPO.

Age graded and sex distinct premiums are utilized by this valuation. The premiums developed by the preceding process are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process “distributes” the average premium over all age/sex combinations and assigns a unique premium for each combination. The age/sex specific premiums more accurately reflect the health care utilization and cost at that age.

Retiree Premium Rate Development (Concluded)

The combined monthly one-person medical, dental, vision and drug premiums at select ages are shown below:

Current and Future Retirees

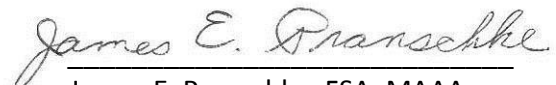
Not Eligible for Medicare		
Age	Male	Female
45	\$415.90	\$574.00
50	541.55	667.14
55	712.62	778.08
60	920.39	906.27

Eligible for Medicare		
Age	Male	Female
65	\$469.76	\$443.08
70	511.74	495.19
75	549.62	536.31

The dental and vision premium rates were not "age graded" for this valuation since these claims do not vary significantly by age. The dental rates used for this valuation were \$30.95 for the first person and \$30.83 for the second person at all ages. The vision rates used for this valuation were \$7.13 for the first person and \$7.13 for the second person for pre-65 retirees. There is no vision coverage for post-65 retirees.

Based on the guidance provided by GASB on issues related to Medicare Part D payments to State and Local Governments effective as of June 30, 2006, an employer should apply the measurement requirements of GASB Statement No. 45 to determine the actuarial accrued liabilities, the Actuarially Determined Contribution of the employer, and the annual OPEB cost without reduction for Retiree Drug Subsidy (RDS) payments. Therefore, the impact of the RDS that is part of the Medicare Prescription Drug Improvement and Modernization Act of 2003 is not reflected in this report.

James E. Pranschke is a Member of the American Academy of Actuaries (MAAA) and meets the Qualification Standards of the American Academy of Actuaries to certify the per capita retiree health care rates shown above.


James E. Pranschke, FSA, MAAA

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

Management/Non-Union/Union/14B District Court Employees Summary of Benefits as of December 31, 2017 For Employees with Retirements Before September 1, 2009

Age Retirement

The Township provides full retiree health care coverage upon retirement at age 60 with 10 or more years of service. Family coverage is included. Employees who retire from the Township at age 55 with 15 years of service may continue their health care coverage by reimbursing the cost to the Township until age 60 at which time the Township provides full coverage.

Duty and Non-Duty Disability Retirement

The Township provides full health care coverage to disability retirees at age 60 with 10 or more years of service. Family coverage is included. Prior to age 60, disability retirees may continue their health care coverage by reimbursing the cost to the Township until age 60 at which time the Township provides full coverage.

Duty and Non-Duty Death-in-Service

Surviving spouse of a death-in-service employee may elect health care coverage through COBRA.

Medicare Eligibility

Coverage supplements Medicare once retiree is eligible for Medicare. Retiree is required to enroll in Medicare Part A and Part B, when eligible. Retiree is required to pay Medicare B premiums.

Spouse and Dependent Coverage

Spouse and eligible dependents are eligible to receive 100% Township paid retiree health care coverage for the life of the retiree. Surviving spouse and eligible dependents of deceased retired members may continue their health care coverage by reimbursing the cost to the Township.

Employee/Retiree Contributions

Active employees and retired employees do not contribute toward the cost of retiree health care core benefits.

Management/Non-Union/Union/14B District Court Employees Summary of Benefits as of December 31, 2017 For Employees with Retirements Before September 1, 2009

Medical Coverage

The Township offers the following health care coverage plans:

- Blue Cross Blue Shield Flex Blue PPO
- Medicare PLUS Blue Group PPO

The Township offers a Health Reimbursement Account for each retiree with funds available to cover In-Network Deductibles, Rx co-pays and other related health care expenses. For pre-65 retirees covered under the Blue Cross Blue Shield Flex Blue PPO plan, funding for the HRA is \$3,250 with a Rx copay post deductible amount of \$1,000 for Single coverage and \$6,450 with a Rx copay post deductible amount of \$2,000 for Two-Person & Family coverage. Post-65 retirees covered under the Medicare PLUS Blue are funded at \$2,000 for Single coverage and \$4,000 for Two-Person & Family coverage.

Dental Coverage

Members and spouses retiring with retiree health care benefits are eligible for Township paid dental benefits.

Vision Coverage

Members and spouses retiring with retiree health care benefits are eligible for Township paid vision benefits.

Life Insurance

The Township shall provide life insurance in the amount of \$5,000.00 without accidental death and dismemberment for the life of the retiree.

Teamster & Non-Union Management

Summary of Benefits as of December 31, 2017

DIVISION: TMNU-1

Age Retirement

- 1) Employees who retire between January 1, 2010 and December 31, 2012 became immediately eligible for retiree health care provided they are 55 years or older and they have at least fifteen years of service and are eligible for regular pension with MERS.
- 2) Employees hired prior to January 1, 2010, will receive retiree health care at age sixty (60) with ten years of service. At age sixty (60) the Township will pay 100% of the cost for the base plan that was in effect at the time of retirement for the employees hired prior to January 1, 2007 with eligible dependents. When an employee is eligible for Medicare, the Township shall provide the BC/BS Medicare tie-in until employee's death.
- 3) Employees hired after January 1, 2010 and retired at age sixty-two (62) with fifteen (15) years of service the Township will pay 100% of the cost for the base plan that was in effect for the employee only. The cost for coverage for any dependents will be the responsibility of the retiree.
- 4) Coverage for employees who retire after December 31, 2011, will change in the future to match any changes negotiated by the union or changed by Township policy.
- 5) Employees hired after January 1, 2010 shall have coverage provided for the employee only at 100% and coverage for dependents will be the responsibility of the retiree.
- 6) Employees hired after December 31, 2013 will not be eligible for retiree health care.

Duty and Non-Duty Disability Retirement

The Township provides full health care coverage to disability retirees based on age at disability, years of service and date of hire. Family coverage may be included depending on date of hire. Prior to age 60, disability retirees may continue their health care coverage by reimbursing the cost to the Township until which time they become eligible for Township provided coverage.

Duty and Non-Duty Death-in-Service

Surviving spouse of a death-in-service employee may elect health care coverage through COBRA.

Medicare Eligibility

Coverage supplements Medicare once retiree is eligible for Medicare. Retiree is required to enroll in Medicare Part A and Part B, when eligible. Retiree is required to pay Medicare B premiums.

Teamster & Non-Union Management

Summary of Benefits as of December 31, 2017

DIVISION: TMNU-1

Spouse and Dependent Coverage

Spouse and eligible dependents may be eligible to receive Township retiree health care coverage according to language under Section "AGE RETIREMENT". Surviving spouse and eligible dependents of deceased retired members may continue their health care coverage by reimbursing the cost to the Township.

Employee/Retiree Contributions

Active employees receiving active health care insurance contribute \$150.00 per month (\$1,800/year). Health Insurance for employees that retire after December 31, 2011 will change to match that of the active employees.

Employees who retire after December 31, 2011 will contribute toward retiree healthcare at the rate of the active employees on a monthly basis (\$150.00/month).

Medical Coverage

The Township offers the following health care coverage plans:

- Blue Cross Blue Shield Flex Blue PPO
- Medicare PLUS Blue Group PPO

The Township offers a Health Reimbursement Account for each retiree with funds available to cover In-Network Deductibles, Rx co-pays and other related health care expenses. For pre-65 retirees covered under the Blue Cross Blue Shield Flex Blue PPO plan, funding for the HRA is \$3,250 with a Rx copay post deductible amount of \$1,000 for Single coverage and \$6,450 with a Rx copay post deductible amount of \$2,000 for Two-Person & Family coverage. Post-65 retirees covered under the Medicare PLUS Blue are funded at \$2,000 for Single coverage and \$4,000 for Two-Person & Family coverage.

Dental Coverage

Members retiring with retiree health care benefits are eligible for Township paid dental benefits.

Vision Coverage

Members and spouses retiring with retiree health care benefits are eligible for Township paid vision benefits.

Life Insurance

The Township shall provide life insurance in the amount of \$5,000.00 without accidental death and dismemberment for the life of the retiree.

AFSCME Township Union Employees Summary of Benefits as of December 31, 2017 DIVISION: AFSCME-2

Age Retirement

- 1) Employees who retire between August 1, 2009 and December 31, 2011 shall be immediately eligible for retiree health care provided they retire within six (6) months of their eligibility date and they are 55 years or older and they have at least fifteen years of service and are eligible for regular pension with MERS.
- 2) Employees who will retire after December 31, 2011, but were hired prior to September 1, 2009, will receive retiree health care at age sixty (60) with twelve years of service until such time the employee is Medicare eligible.
- 3) Employees hired after September 1, 2009 shall be eligible for retiree health care at age 62 following 15 years of service until such time the employee is Medicare eligible.
- 4) Coverage for employees who retire after December 31, 2011, will change in the future to match any changes negotiated by the union.
- 5) Employees who retire prior to their eligible age (60 or 62) may continue their health care coverage by reimbursing the cost to the Township until they reach their eligible age at which time the Township provides full coverage.
- 6) Employees hired after December 31, 2013 will not be eligible for retiree health care.

Duty and Non-Duty Disability Retirement

The Township provides full health care coverage to disability retirees based on age at disability, years of service and date of hire. Family coverage may be included depending on date of hire. Prior to age 60, disability retirees may continue their health care coverage by reimbursing the cost to the Township until which time they become eligible for Township provided coverage.

Duty and Non-Duty Death-in-Service

Surviving spouse of a death-in-service employee may elect health care coverage through COBRA.

Medicare Eligibility

Coverage supplements Medicare once retiree is eligible for Medicare. Retiree is required to enroll in Medicare Part A and Part B, when eligible. Retiree is required to pay Medicare B premiums.

AFSCME Township Union Employees Summary of Benefits as of December 31, 2017 DIVISION: AFSCME-2

Spouse and Dependent Coverage

Spouse and dependents may be eligible to receive Township retiree health care coverage according to language under Section "AGE RETIREMENT". Surviving spouse and eligible dependents of deceased retired members may continue their health care coverage by reimbursing the cost to the Township.

Employee/Retiree Contributions

Active employees receiving active health care insurance contribute \$150.00 per month (\$1,800/year). Health Insurance for employees that retire after December 31, 2011 will change to match that of the active employees.

Employees who retire after December 31, 2011 will contribute toward retiree healthcare at the rate of the active employees on a monthly basis (\$150.00/month).

Medical Coverage

The Township offers the following health care coverage plans:

- Blue Cross Blue Shield Flex Blue PPO
- Medicare PLUS Blue Group PPO

The Township offers a Health Reimbursement Account for each retiree with funds available to cover In-Network Deductibles, Rx co-pays and other related health care expenses. For pre-65 retirees covered under the Blue Cross Blue Shield Flex Blue PPO plan, funding for the HRA is \$3,250 with a Rx copay post deductible amount of \$1,000 for Single coverage and \$6,450 with a RX copay post deductible amount of \$2,000 for Two-Person & Family coverage. Post-65 retirees covered under the Medicare PLUS Blue are funded at \$2,000 for Single coverage and \$4,000 for Two-Person & Family coverage.

Dental Coverage

Members retiring with retiree health care benefits are eligible for Township paid dental benefits.

Vision Coverage

Members and spouses retiring with retiree health care benefits are eligible for Township paid vision benefits.

Life Insurance

The Township shall provide life insurance in the amount of \$5,000.00 without accidental death and dismemberment for the life of the retiree.

14B District Court Union Employees

Summary of Benefits as of December 31, 2017

DIVISION: COURT-3

Age Retirement

- 1) Employees who retire between August 1, 2009 and December 31, 2011 shall be immediately eligible for retiree health care provided they retire within six (6) months of their eligibility date and they are 55 years or older and they have at least fifteen years of service and are eligible for regular pension with MERS.
- 2) Employees who will retire after December 31, 2011, but were hired prior to September 1, 2009, will receive retiree health care at age sixty (60) with twelve years of service until such time the employee is Medicare eligible.
- 3) Employees hired after September 1, 2009 shall be eligible for retiree health care at age 62 following 15 years of service until such time the employee is Medicare eligible.
- 4) Coverage for employees who retire after December 31, 2011, will change in the future to match any changes negotiated by the union.
- 5) Employees who retire prior to their eligible age (60 or 62) may continue their health care coverage by reimbursing the cost to the Township until they reach their eligible age at which time the Township provides full coverage.
- 6) Employees hired after December 31, 2013 will not be eligible for retiree health care.

Duty and Non-Duty Disability Retirement

The Township provides full health care coverage to disability retirees at age 60 with 10 or more years of service. Family coverage is included. Prior to age 60, disability retirees may continue their health care coverage by reimbursing the cost to the Township until age 60 at which time the Township provides full coverage.

Duty and Non-Duty Death-in-Service

Surviving spouse of a death-in-service employee may elect health care coverage through COBRA.

Medicare Eligibility

Coverage supplements Medicare once retiree is eligible for Medicare. Retiree is required to enroll in Medicare Part A and Part B, when eligible. Retiree is required to pay Medicare B premiums.

14B District Court Union Employees Summary of Benefits as of December 31, 2017 DIVISION: COURT-3

Spouse and Dependent Coverage

Spouse and dependents may be eligible to receive Township retiree health care coverage according to language under Section "AGE REQUIREMENT". Surviving spouse and eligible dependents of deceased retired members may continue their health care coverage by reimbursing the cost to the Township.

Employee/Retiree Contributions

Active employees receiving active health care insurance contribute \$150.00 per month (\$1,800/year). Health Insurance for employees that retire after December 31, 2011 will change to match that of the active employees.

Employees who retire after December 31, 2011 will contribute toward retiree healthcare at the rate of the active employees on a monthly basis (\$150.00/month).

Medical Coverage

The Township offers the following health care coverage plans:

- Blue Cross Blue Shield Flex Blue PPO
- Medicare PLUS Blue Group PPO

The Township offers a Health Reimbursement Account for each retiree with funds available to cover In-Network Deductibles, Rx co-pays and other related health care expenses. For pre-65 retirees covered under the Blue Cross Blue Shield Flex Blue PPO plan, funding for the HRA is \$3,250 with a Rx copay post deductible amount of \$1,000 for Single coverage and \$6,450 with a Rx copay post deductible amount of \$2,000 for Two-Person & Family coverage. Post-65 retirees covered under the Medicare PLUS Blue are funded at \$2,000 for Single coverage and \$4,000 for Two-Person & Family coverage.

Dental Coverage

Members retiring with retiree health care benefits are eligible for Township paid dental benefits.

Vision Coverage

Members and spouses retiring with retiree health care benefits are eligible for Township paid vision benefits.

Life Insurance

The Township shall provide life insurance in the amount of \$5,000.00 without accidental death and dismemberment for the life of the retiree.

Township Board Employees and Certain Elected Officials Summary of Benefits as of December 31, 2017

Age Retirement

The Township provides full retiree health care coverage to elected Township Board officials and trustees upon attainment of age 55 with 12 or more years of service in the capacity of an elected official and/or trustee provided they are not covered by other health insurance. Per Resolution 2008-04, Board officials hired after February 19, 2008 are not eligible for retiree health care.

Duty and Non-Duty Disability Retirement

Township Board Members are not eligible for disability retiree health care benefits.

Duty and Non-Duty Death-in-Service

Township Board Members are not eligible for death-in-service retiree health care benefits.

Medicare Eligibility

Coverage supplements Medicare once retiree is eligible for Medicare. Retiree is required to enroll in Medicare Part A and Part B, when eligible. Retiree is required to pay Medicare B premiums.

Spouse and Dependent Coverage

Township Board Members are not eligible for spouse and dependent retiree health care benefits.

Employee/Retiree Contributions

Active employees receiving active health care insurance contribute \$150.00 per month (\$1,800/year). Health Insurance for employees that retire after December 31, 2011 will change to match that of the active employees.

Employees who retire after December 31, 2011 will contribute toward retiree healthcare at the rate of the active employees on a monthly basis (\$150.00/month).

Township Board Employees and Certain Elected Officials

Summary of Benefits as of December 31, 2017

Medical Coverage

The Township offers the following health care coverage plans:

- Blue Cross Blue Shield Flex Blue PPO
- Medicare PLUS Blue Group PPO

The Township offers a Health Reimbursement Account for each retiree with funds available to cover In-Network Deductibles, Rx co-pays and other related health care expenses. For pre-65 retirees covered under the Blue Cross Blue Shield Flex Blue PPO plan, funding for the HRA is \$3,250 with a Rx copay post deductible amount of \$1,000 for Single coverage and \$6,450 with a Rx copay post deductible amount of \$2,000 for Two-Person & Family coverage. Post-65 retirees covered under the Medicare PLUS Blue are funded at \$2,000 for Single coverage and \$4,000 for Two-Person & Family coverage.

Dental Coverage

Members retiring with retiree health care benefits are eligible for Township paid dental benefits.

Vision Coverage

Members retiring with retiree health care benefits are eligible for Township paid vision benefits.

Life Insurance

Full-time Board members who meet the retirement guidelines shall receive Life Insurance in the amount of \$5,000 without accidental death and dismemberment, as all other full-time employees.

Fire Employees

Summary of Benefits as of December 31, 2017

Age Retirement

For employees hired before January 1, 2014, the Township provides Township paid retiree health care coverage upon retirement with 25 or more years of service. Family coverage is included.

Employees hired after January 1, 2014 will not be eligible for retiree health care. Employees will contribute \$50.00 per pay period with a matching contribution from the Township Fire Fund to be applied to a Health Care Savings Program in the employee's name for future health care costs. There is a 10-year vesting requirement for purposes of retirement, on the employer contribution.

Duty and Non-Duty Disability Retirement

The Township provides Township paid health care to disability retirees with 25 or more years of service. Benefits commence immediately.

Duty and Non-Duty Death-in-Service

Surviving spouses of death-in-service members retiring after January 1, 2005 are eligible for Township paid retiree health care.

Medicare Eligibility

Coverage supplements Medicare once retiree/spouse/dependent is eligible for Medicare. Retiree/spouse/dependent is required to enroll in Medicare Part A and Part B, when eligible. Retirees who retired prior to January 1, 1989 are reimbursed the cost of Medicare Part B.

Spouse and Dependent Coverage

Spouse and eligible dependents are eligible to receive 100% Township paid retiree health care coverage for the life of the retiree. Township paid coverage continues for surviving spouse and eligible dependents less than 19 years of age of deceased retired member who retired after January 1, 2005. Surviving spouses and eligible dependents of deceased retired members retiring prior to January 1, 2005 may continue their health care coverage by reimbursing the cost to the Township.

Employee/Retiree Contributions

Active employees hired before January 1, 2014 receiving active health care insurance contribute \$150.00 per month (\$1,800/year).

Active employees hired after January 1, 2014 receiving active health care insurance contribute \$150.00 per month (\$1,800/year). In addition, if the active employee elects coverage for dependents they will be required to pay 20% of the difference between the single rate premium and elected dependent premium.

Fire Employees

Summary of Benefits as of December 31, 2017

Active employees hired prior to January 1, 2014 also contribute 4% of wage toward retiree health care core benefits. If employees elected to enter the DROP, as of January 1, 2014, they will continue to contribute 4% toward retiree health care. Retired employees do not contribute toward retiree health care core benefits.

Medical Coverage

The Township offers the following health care coverage plans:

- Blue Cross Blue Shield Flex Blue PPO
- Medicare PLUS Blue Group PPO

The Township offers a Health Reimbursement Account for each retiree with funds available to cover In-Network Deductibles, Rx co-pays and other related health care expenses. For pre-65 retirees covered under the Blue Cross Blue Shield Flex Blue PPO plan, funding for the HRA is \$3,250 with a Rx copay post deductible amount of \$1,000 for Single coverage and \$6,450 with a Rx copay post deductible amount of \$2,000 for Two-Person & Family coverage. Post-65 retirees covered under the Medicare PLUS Blue are funded at \$2,000 for Single coverage and \$4,000 for Two-Person & Family coverage.

Dental Coverage

Members and spouses retiring with retiree health care benefits are eligible for Township paid dental benefits.

Vision Coverage

Members and spouses retiring with retiree health care benefits are eligible for Township paid vision benefits.

Life Insurance

For all employees who retire on or after January 1, 1989, the Township shall provide life insurance in the amount of \$35,000.00 without accidental death and dismemberment until the employee reaches age 65. At age 65, the life insurance benefit shall be reduced to a \$5,000.00 death benefit only. For all employees who retire prior to January 1, 1989, the Township will provide life insurance in the amount of \$5,000.00 for the life of the retiree.

This is a brief summary of the Charter Township of Ypsilanti Employees Retiree Health Care Benefit Fund provisions. In the event that any description contained herein differs from the actual eligibility or benefit, the appropriate employee contract or governing document will prevail.

Statement of Market Value of Assets As of December 31, 2017

	<u>Non-Fire</u>	<u>Fire</u>	<u>Total</u>
MERS Funding Vehicle	\$ 7,064,469	\$ -	\$ 7,064,469
Cash & Short Term	0	680,864	680,864
Fixed Income	0	2,765,475	2,765,475
Equities	0	3,200,245	3,200,245
Accounts Receivable/(Payable)	(470,566)	(651,751)	(1,122,317)
Total	\$ 6,593,903	\$ 5,994,833	\$ 12,588,736

2-Year Reconciliation of Assets

	<u>Non-Fire</u>	<u>Fire</u>	<u>Total</u>
Market Value as of 12/31/2015	\$ 4,940,088	\$ 4,925,399	\$ 9,865,487
Member Contributions	0	56,710	56,710
Employer Contributions	654,245	587,148	1,241,393
Investment Return	540,315	294,507	834,822
Health Premiums/Med B Refunds	(482,107)	(606,224)	(1,088,331)
Expenses	(13,521)	(26,297)	(39,818)
Market Value as of 12/31/2016	\$ 5,639,020	\$ 5,231,243	\$ 10,870,263
Member Contributions	0	52,989	52,989
Employer Contributions	646,163	629,226	1,275,389
Investment Return	794,526	733,126	1,527,652
Health Premiums/Med B Refunds	(470,566)	(634,137)	(1,104,703)
Expenses	(15,240)	(17,614)	(32,854)
Market Value as of 12/31/2017	\$ 6,593,903	\$ 5,994,833	\$12,588,736

Active Members as of December 31, 2017 By Attained Age and Years of Service

General Township/Board Fund Division 101

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24									
25-29	1							1	\$ 36,974
30-34									
35-39									
40-44		1		2				3	186,346
45-49		1		1	1			3	157,970
50-54				2	2	1		5	276,760
55-59		1	2			2		5	257,034
60-64		1	1	2				4	222,358
65 & Over		1		2				3	179,365
Totals	1	5	3	9	3	3		24	\$ 1,316,807

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 53.8 years
Service: 16.3 years
Annual Pay: \$54,867

In addition, there were 12 members eligible for life insurance benefits.

Active Members as of December 31, 2017 By Attained Age and Years of Service

Court 14-B Fund Division 101-136

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24									
25-29									
30-34									
35-39				1				1	\$ 47,694
40-44		1						1	41,392
45-49		1			1			2	131,145
50-54	1						2	3	138,538
55-59							2	2	100,224
60-64		1						1	41,392
65 & Over							1	1	45,724
Totals	1	3		1	1		5	11	\$ 546,109

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 52.1 years
Service: 20.0 years
Annual Pay: \$49,646

In addition, there was 1 member eligible for life insurance benefits.

Active Members as of December 31, 2017 By Attained Age and Years of Service

Fire Fund Division 206

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24									
25-29									
30-34									
35-39		1		1				2	\$ 173,406
40-44			1	1				2	138,994
45-49		1		3	1			5	415,128
50-54					3			3	228,965
55-59		1			2	3		6	476,918
60-64									
65 & Over									
Totals		3	1	5	6	3		18	\$ 1,433,411

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 49.2 years
Service: 18.5 years
Annual Pay: \$79,634

In addition, there were 9 members eligible for life insurance benefits.

Active member data does not include members in the DROP.

Active Members as of December 31, 2017 By Attained Age and Years of Service

General Township Fund Division 226

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24									
25-29									
30-34									
35-39				1				1	\$ 50,128
40-44									
45-49			1					1	73,216
50-54									
55-59			1					1	47,486
60-64									
65 & Over									
Totals			2	1				3	\$ 170,830

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.7 years
Service: 15.0 years
Annual Pay: \$56,943

In addition, there was 1 member eligible for life insurance benefits.

Active Members as of December 31, 2017 By Attained Age and Years of Service

General Township Fund Division 230

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54									
55-59			1					1	\$ 54,052
60-64							1	1	53,952
65 & Over									
Totals			1				1	2	\$ 108,004

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 59.2 years
Service: 23.1 years
Annual Pay: \$54,002

In addition, there were 2 members eligible for life insurance benefits.

Active Members as of December 31, 2017 By Attained Age and Years of Service

General Township Fund Division 249

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24									
25-29	1							1	\$ 39,146
30-34									
35-39									
40-44									
45-49		1		1				2	90,605
50-54				1				1	61,609
55-59									
60-64									
65 & Over									
Totals	1	1		2				4	\$ 191,360

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 43.9 years
Service: 12.3 years
Annual Pay: \$47,840

In addition, there were 6 members eligible for life insurance benefits.

Active Members as of December 31, 2017 By Attained Age and Years of Service

General Township Fund Division 266

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54	1							1	\$ 49,000
55-59					1			1	58,364
60-64				1	1			2	147,547
65 & Over									
Totals	1			1	2			4	\$254,911

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 57.7 years
Service: 15.6 years
Annual Pay: \$63,728

Fund Division 584 – Active Members as of December 31, 2017

By Attained Age and Years of Service

General Township Fund Division 584

Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24									
25-29									
30-34									
35-39									
40-44									
45-49									
50-54									
50-55				1				1	\$ 77,467
60-64									
65 & Over									
Totals				1				1	\$77,467

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 56.5 years
Service: 15.8 years
Annual Pay: \$77,467

In addition, there was 1 additional member eligible for life insurance benefits.

Retired Members as of December 31, 2017

By Attained Age

General Township/Board 101

Attained Age	Number of Retirees		
	Male	Female	Total
Under 60	0	0	0
60-64	4	6	10
65 & Over	10	15	25
Totals	14	21	35

Court 14-B 101-136

Attained Age	Number of Retirees		
	Male	Female	Total
Under 60	0	0	0
60-64	0	1	1
65 & Over	1	0	1
Totals	1	1	2

Fire 206

Attained Age	Number of Retirees		
	Male	Female	Total
Under 60	15	1	16
60-64	5	0	5
65 & Over	22	0	22
Totals	42	1	43

General Township 226

Attained Age	Number of Retirees		
	Male	Female	Total
Under 60	0	0	0
60-64	0	0	0
65 & Over	0	0	0
Totals	0	0	0

Retired Members as of December 31, 2017 By Attained Age

General Township

230

Attained Age	Number of Retirees		
	Male	Female	Total
Under 60	0	0	0
60-64	0	0	0
65 & Over	1	0	1
Totals	1	0	1

General Township

249

Attained Age	Number of Retirees		
	Male	Female	Total
Under 60	0	0	0
60-64	1	0	1
65 & Over	1	1	2
Totals	2	1	3

General Township

266

Attained Age	Number of Retirees		
	Male	Female	Total
Under 60	0	0	0
60-64	1	0	1
65 & Over	0	1	1
Totals	1	1	2

General Township

584

Attained Age	Number of Retirees		
	Male	Female	Total
Under 60	0	0	0
60-64	0	0	0
65 & Over	1	0	1
Totals	1	0	1

Deferred Members as of December 31, 2017 By Attained Age

General Township

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	1	0	1
55-59	0	0	0
Totals	1	0	1

SECTION D

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

Valuation Methods

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

- (i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
- (ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Asset Valuation Method. Reported Market Value of Assets are used without smoothing. Assets for Fire are reported separately. Assets for the remaining Township divisions are allocated in proportion to actuarial accrued liability on the valuation date.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded Actuarial Accrued Liabilities (UAAL) were amortized by a level (principal and interest combined) dollar contribution. The UAAL were determined using the market value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment is the level dollar amount required to fully amortize the UAAL over a closed 26-year period beginning January 1, 2019. This UAAL payment reflects payments expected to be made between the valuation date and the fiscal year for which the contributions in this report have been calculated.

The salary increase assumption used in this actuarial valuation projects annual salary increases of 3.0% plus a percentage based on an age-related scale to reflect merit, longevity and promotional salary increases.

Results can be very sensitive to the medical trend assumption. At the request of the plan sponsor, no sensitivity analysis of the medical trend was performed with this valuation.

Actuarial Assumptions

All actuarial assumptions are expectations of future experience, not market measures. The rationale for the actuarial assumptions is based on the Plan's investment policy, the MERS Funding Vehicle's investment policy, capital market expectations, and demographic experience. Certain demographic assumptions were last reviewed in conjunction with the December 31, 2017 actuarial valuation of the Charter Township of Ypsilanti Police and Firefighter's Retirement System. Certain OPEB specific assumptions are reviewed and adjusted as needed based on plan experience with each valuation.

The rates of investment return (discount rate) under a Fully Funding arrangement were 7.0% per year for General Township and 6.5% per year for Fire compounded annually. The accounting standard permits an investment return assumption at such level in a pre-funded program, where the funding policy is to contribute annual amounts at least as great as the ADC. This rate consists of a real rate of return of 4.0% per year for General Township and 3.5% per year for Fire plus a long-term rate of wage inflation of 3.0% a year. Although not explicitly used, the price inflation assumption is 2.5% per year. Our understanding is that the Township intends to continue fully funding the ADC. This assumption is used to equate the value of payments due at different points in time.

Actuarial Assumptions (Continued)

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

Township Employee Salary Scale

Sample Years	% Increase in Salary at Sample Ages		
	Base (Economic)	Merit & Longevity	Increase Next Year
20	3.00%	13.00%	16.00%
25	3.00	6.80	9.80
30	3.00	3.26	6.26
35	3.00	2.05	5.05
40	3.00	1.30	4.30
45	3.00	0.81	3.81
50	3.00	0.52	3.52
55	3.00	0.30	3.30
60	3.00	0.00	3.00

Fire Employee Salary Scale

Sample Years	% Increase in Salary at Sample Ages		
	Base (Economic)	Merit & Longevity	Increase Next Year
20	3.00%	3.50%	6.50%
25	3.00	3.50	6.50
30	3.00	3.10	6.10
35	3.00	1.60	4.60
40	3.00	0.70	3.70
45	3.00	0.70	3.70
50	3.00	0.70	3.70
55	3.00	0.60	3.60
60	3.00	0.50	3.50

The number of active members is assumed to remain constant in the future.

The payroll growth rate for financing Unfunded Actuarial Accrued Liabilities was assumed to be 3.0%.

Actuarial Assumptions (Continued)

The mortality table assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. These tables were first used for the December 31, 2017 valuation.

- Pre-Retirement: RP-2014 Employee Mortality Tables.
- Healthy Post-Retirement: RP-2014 Healthy Annuitant Mortality Tables.
- Disabled Retirement: RP-2014 Disabled Mortality Tables

The tables described above were adjusted backwards to 2006 with MP-2014 scale. A base year of 2006 with future mortality improvements using scale MP-2017 was used. Additional margin for future mortality improvements are included in the projection scale.

Township Members

Sample Ages	Single Life Retirement Values					
	Actuarial Present Value of \$1 Monthly for Life		Percent Dying Next Year		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
50	\$151.14	\$155.53	0.4106%	0.2755%	34.18	36.78
55	143.71	148.74	0.5870%	0.3855%	29.45	31.86
60	134.60	140.25	0.8181%	0.5737%	24.92	27.13
65	123.56	129.76	1.1698%	0.8511%	20.64	22.61
70	110.22	116.74	1.7432%	1.3250%	16.59	18.29
75	94.48	101.21	2.7953%	2.1784%	12.83	14.27
80	77.11	83.82	4.7230%	3.7208%	9.49	10.67

Fire Members

Sample Ages	Single Life Retirement Values					
	Actuarial Present Value of \$1 Monthly for Life		Percent Dying Next Year		Future Life Expectancy (Years)	
	Men	Women	Men	Women	Men	Women
50	\$159.26	\$164.18	0.4106%	0.2755%	34.18	36.78
55	150.88	156.45	0.5870%	0.3855%	29.45	31.86
60	140.72	146.92	0.8181%	0.5737%	24.92	27.13
65	128.58	135.31	1.1698%	0.8511%	20.64	22.61
70	114.12	121.12	1.7432%	1.3250%	16.59	18.29
75	97.30	104.45	2.7953%	2.1784%	12.83	14.27
80	78.99	86.02	4.7230%	3.7208%	9.49	10.67

Actuarial Assumptions (Continued)

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

Township Employees

Retirement Ages	Percent of Eligible Active Members Retiring Within Next Year
55	20%
56	20
57	21
58	21
59	21
60	21
61	22
62	22
63	22
64	23
65 and above	100
Ref	1876

Fire Employees

Percents of Eligible Active Members Retiring within Next Year		
Years of Service	Hired before January 1, 2014	Hired on or after January 1, 2014 (For Life Insurance Benefits)
25	50 %	60 %
26	50	50
27	50	50
28	50	70
29	60	80
30 or more	100	100

100% of Township Board members were assumed to retire upon attaining age 55 with 12 or more years of service. 100% of Fire members were assumed to retire at age 60.

Actuarial Assumptions (Continued)

Rates of separation from active membership are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The withdrawal rates do not apply to members eligible to retire, and do not include separation on account of death or disability. The assumed rates of withdrawal applied in the current valuation are based on years of service for members with less than 5 years of service, and based on age for members with 5 or more years of service.

Sample rates of separation from active employment are shown below:

Service Index	Percent of Active Members Separating Within Next Year		Sample Ages	Service Index	Percent of Active Members Separating Within Next Year	
	Township				Fire	
0	19.0%		ALL	0	10.0%	
1	16.2			1	7.0	
2	13.3			2	5.0	
3	10.5			3	4.0	
4	8.6			4	3.5	
5	6.2					
10	4.8		25	5 & Over	3.5	
15	3.5		30		2.9	
20	2.9		35		1.5	
25	2.6		40		0.6	
30	2.5		45		0.5	
35	2.3		50		0.5	
40	2.3		55		0.5	
45	2.3		60		0.5	
50	2.3					
55	2.3					
Ref	473 #473x0.95		Ref		30 #54x1	

Actuarial Assumptions (Continued)

Rates of disability among active members are used to estimate the incidence of member disability in future years.

Township Members

Sample Ages	Percent Becoming Disabled Within Next Year
20	0.02%
25	0.02
30	0.02
35	0.06
40	0.06
45	0.11
50	0.24
55	0.60
60	0.60
65	0.60
Ref	#612

Fire Members

Sample Ages	Percent Becoming Disabled Within Next Year	
	Men	Women
20	0.07%	0.03%
25	0.09	0.05
30	0.10	0.07
35	0.14	0.13
40	0.21	0.19
45	0.32	0.28
50	0.52	0.45
55	0.92	0.76
60	1.53	1.10
Ref	#33	#34

Actuarial Assumptions (Concluded)

Health care trend rates used in the valuation were as shown below:

Medical and Drug Trend Rates	
Year	Valuation
2018	9.00%
2019	8.50
2020	8.00
2021	7.50
2022	7.00
2023	6.50
2024	6.00
2025	5.50
2026	5.00
2027	4.50
2028	3.75
2029 & Later	3.00

Year	Dental	Vision
2018	3.0%	3.0%
2019	3.0	3.0
2020	3.0	3.0
2021	3.0	3.0
2022 & Later	3.0	3.0

The 26-year and 25-year level dollar amortization factors used to determine the General Township ADC for fiscal years ending 2019 and 2020 are 12.23502 and 12.05687, respectively. For Fire, the amortization factors are 12.79091 and 12.59016, respectively.

Miscellaneous and Technical Assumptions

Decrement Operation:	Disability and mortality decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and actual service on the date the decrement is assumed to occur.
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Marriage Assumption:	70% of Township members and 90% of Fire members are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Medicare Coverage:	Assumed to be available for all covered employees on attainment of age 65.
Election Percentage:	It was assumed that 100% of General, Court, and Fire retirees, and 75% of Township Board retirees would choose to receive retiree health care benefits through the Township. Of those assumed to elect coverage, 70% of General and Court retirees, 0% of Township Board retirees and 90% of Fire retirees are assumed to elect two-person coverage, if eligible. For those that elect two-person coverage, it was assumed that coverage would continue to the spouse upon death of the retiree 50% of the time for General and Court spouses and 100% of the time for Fire spouses, if eligible.
Opt-Out:	General and Court retirees who retire at age 55 with 15 years of service are assumed to opt-out of coverage until age 60 for members hired before January 1, 2010 and until age 62 for members hired on or after January 1, 2010.
DROP:	For Fire DROP participants, OPEB benefits are assumed to start upon retirement at the end of the DROP period.
Liability Adjustments:	None.
Active Member Data:	For the December 31, 2017 valuation, active member service used in the valuation was calculated based on date of hire. Purchased service was reflected where reported. Payroll for DROP members was not provided. Future member contributions on DROP member pay were not reflected. Any active member contributions towards retiree health care are assumed to be non-refundable.

Miscellaneous and Technical Assumptions

- Retirees:** Retirees currently waiving coverage for payments-in-lieu are projected to receive the same flat-dollar benefit.
- Retirees eligible to receive coverage but not receiving are projected to receive retiree health care benefits through the Township in five years.
- Health Reimbursement Accounts:** Payments to retiree Health Reimbursement Accounts are reflected in the valuation. For future HRA payments, a flat-dollar \$94.83 per month per life was assumed for General retirees and \$133.27 per month per life was assumed for Fire retirees. The amount paid to the HRA for the calendar year 2017 was \$65,999 for General retirees and \$108,748 for Fire retirees.
- Health Care Savings Programs:** Contributions toward individual accounts in any Health Care Savings Programs are not reflected in the valuation.
- Access Only:** For certain individuals hired after September 1, 2009, eligible to retire from pension at age 60 with 10 years of service but for retiree health at age 60 with 12 years of service, we assumed they would retire at age 60 and 10 under the valuation. No adjustment was made for access only or delaying retirement due to recent changes.

SECTION E

ADDITIONAL DISCLOSURE INFORMATION

GASB Statements No. 74 and No. 75 are the accounting standards which replaced GASB Statements No. 43 and No. 45. A separate GASB Statements No. 74 and No. 75 report will be issued outside of this report. This section contains historical GASB Statements No. 45 and No. 45 reporting information for prior fiscal years and illustrative information for fiscal year 2017 and thereafter.

Schedule of Funding Progress

Fire

Valuation Date Dec. 31	Valuation Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Ratio of Valuation Assets to AAL (a/b)	Valuation Payroll (c)	Ratio of UAAL to Valuation Payroll ((b-a)/c)
2009	2,443,312	13,374,642	10,931,330	18.3%	2,368,795	462%
2011	2,958,728	9,631,621	6,672,893	30.7%	1,811,913	368%
2013	4,669,634	11,118,491	6,448,857	42.0%	1,556,538	414%
2015	4,925,399	11,819,527	6,894,128	41.7%	1,564,631	441%
2017	5,994,833	14,535,293	8,540,460	41.2%	1,433,411	596%

General Township/Board – 101

Valuation Date Dec. 31	Valuation Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Ratio of Valuation Assets to AAL (a/b)	Valuation Payroll (c)	Ratio of UAAL to Valuation Payroll ((b-a)/c)
2009	\$1,062,920	\$8,683,622	\$7,620,702	12.2%	\$1,973,445	386%
2011	1,804,441	6,846,292	5,041,851	26.4%	1,734,780	291%
2013	3,040,323	7,339,130	4,298,807	41.4%	1,849,663	232%
2015	3,323,322	7,469,306	4,145,984	44.5%	1,649,887	251%
2017	4,532,560	8,776,189	4,243,629	51.7%	1,316,807	322%

Court 14B – 101-136

Valuation Date Dec. 31	Valuation Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Ratio of Valuation Assets to AAL (a/b)	Valuation Payroll (c)	Ratio of UAAL to Valuation Payroll ((b-a)/c)
2009	\$139,533	\$1,139,929	\$1,000,396	12.2%	\$609,424	164%
2011	266,140	1,009,773	743,633	26.4%	619,644	120%
2013	423,357	1,021,955	598,598	41.4%	535,722	112%
2015	498,931	1,121,367	622,436	44.5%	508,699	122%
2017	760,677	1,472,865	712,188	51.7%	546,109	130%

Schedule of Funding Progress (Continued)

General Township – 226

Valuation Date Dec. 31	Valuation Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Ratio of Valuation Assets to AAL (a/b)	Valuation Payroll (c)	Ratio of UAAL to Valuation Payroll ([b-a]/c)
2009	\$139,533	\$1,139,929	\$1,000,396	12.2%	\$609,424	164%
2011	266,140	1,009,773	743,633	26.4%	619,644	120%
2013	423,357	1,021,955	598,598	41.4%	535,722	112%
2015	498,931	1,121,367	622,436	44.5%	508,699	122%
2017	760,677	1,472,865	712,188	51.7%	546,109	130%

General Township – 230

Valuation Date Dec. 31	Valuation Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Ratio of Valuation Assets to AAL (a/b)	Valuation Payroll (c)	Ratio of UAAL to Valuation Payroll ([b-a]/c)
2009	\$ 51,653	\$421,984	\$370,331	12.2%	\$256,668	144%
2011	126,680	480,641	353,961	26.4%	298,289	119%
2013	256,671	619,586	362,915	41.4%	298,539	122%
2015	297,647	668,975	371,328	44.5%	197,561	188%
2017	312,371	604,829	292,458	51.7%	108,004	271%

General Township – 249

Valuation Date Dec. 31	Valuation Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Ratio of Valuation Assets to AAL (a/b)	Valuation Payroll (c)	Ratio of UAAL to Valuation Payroll ([b-a]/c)
2009	\$ 55,014	\$449,445	\$394,431	12.2%	\$179,051	220%
2011	95,106	360,846	265,740	26.4%	177,223	150%
2013	179,345	432,926	253,581	41.4%	132,169	192%
2015	266,981	600,050	333,069	44.5%	139,380	239%
2017	336,972	652,464	315,492	51.7%	191,360	165%

Schedule of Funding Progress (Concluded)

General Township – 266

Valuation Date Dec. 31	Valuation Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Ratio of Valuation Assets to AAL (a/b)	Valuation Payroll (c)	Ratio of UAAL to Valuation Payroll ([b-a]/c)
2009	\$ 49,905	\$407,700	\$357,795	12.2%	\$236,044	152%
2011	110,395	418,853	308,458	26.4%	230,532	134%
2013	240,266	579,986	339,720	41.4%	132,698	256%
2015	354,061	795,766	441,705	44.5%	281,488	157%
2017	335,287	649,200	313,913	51.7%	254,911	123%

General Township – 584

Valuation Date Dec. 31	Valuation Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded Actuarial Accrued Liability (UAAL) (b-a)	Ratio of Valuation Assets to AAL (a/b)	Valuation Payroll (c)	Ratio of UAAL to Valuation Payroll ([b-a]/c)
2009	\$ 36,928	\$301,685	\$264,757	12.2%	\$126,412	209%
2011	69,334	263,063	193,729	26.4%	124,086	156%
2013	133,226	321,599	188,373	41.4%	124,086	152%
2015	120,577	271,002	150,425	44.5%	76,322	197%
2017	170,300	329,745	159,445	51.7%	77,467	206%

Supplementary Information

Valuation Date	December 31, 2017
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level Dollar Closed
Remaining Amortization Periods	26 Years
Asset Valuation Method	Market
Actuarial Assumptions:	
Discount Rates	7.0% per Year – General Township 7.0% per Year – Fire
Projected Salary Increases	3.0% - 16.0%
Expected Health Care Cost Trend Rate	
Medical:	9% initial down to 3.0% ultimate over 12 years
Dental:	3.0% ultimate
Vision:	3.0% ultimate

APPENDIX

GLOSSARY

Glossary

Accrued Service. The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent. A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

Actuarially Determined Contribution (ADC). The ADC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ADC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded liability.

Governmental Accounting Standards Board (GASB). GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

Medical Trend Rate (Health Care Inflation). The increase in the cost of providing health care benefits over time. Trend includes such elements as pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Glossary (Concluded)

Normal Cost. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Net OPEB Obligation (NOO). The NOO is the cumulative difference between the ADC and actual employer contributions with adjustments.

Other Postemployment Employee Benefits (OPEB). OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other health care benefits.

Reserve Account. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets. The value of current plan assets recognized for valuation purposes.