GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

CITY OF SOUTHGATE RETIREE HEALTH CARE PLAN

ACTUARIAL VALUATION REPORT

AS OF JUNE 30, 2015

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January 11, 2017

Mr. David Angileri
Finance Director
City of Southgate
Retiree Health Care Plan
14400 Dix-Toledo Road
Southgate, MI 48195

Dear Mr. Angileri:

Submitted in this report are the results of an Actuarial Valuation of the assets and liabilities associated with the employer financed retiree health benefits provided by the City of Southgate. The date of the valuation was June 30, 2015. The annual required contributions have been calculated for the fiscal years beginning July 1, 2016 and July 1, 2017.

The actuarial calculations were prepared for purposes of complying with the requirements of Statement No. 45 of the Governmental Accounting Standards Board (GASB). In addition, we have included information which may be helpful if there is a trust requiring a GASB Statement No. 43 disclosure. The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying the City of Southgate's financial reporting requirements may be significantly different than the values shown in this report. This report may be provided to parties other than the City of Southgate only in its entirety and only with the permission of the City of Southgate. GRS is not responsible for unauthorized use of this report. This report is not compliant with GASB Statements No. 74 and No. 75. A separate report that incorporates GASB Statements No. 74 and/or No. 75 will be issued at a later date once implementation guides are issued for these new standards.

The valuation was based upon information furnished by the City of Southgate concerning retiree health benefits, individual members, and plan finances. Data was checked for internal consistency, but was not audited.

To the best of our knowledge, this report is complete and accurate and was prepared in accordance with the Actuarial Standards of Practice issued by the Actuarial Standards Board and generally recognized actuarial methods.

Rebecca L. Stouffer and Mark Buis 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,

Rebecca L. Stouffer

Rebecca L. Stouffer, ASA, MAAA

Mark Buis

Mark Buis, FSA, EA, FCA, MAAA

RLS/MB:sc

Additional Disclosures Required by Actuarial Standards of Practice

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. Due to the limited scope of the actuary's assignment, the actuary did not perform an analysis of the potential range of such future measurements.

The funded ratio reported in this valuation is not appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations.

This report should not be relied on for any purpose other than the purpose described in the primary communication.

The signing actuaries are independent of the plan sponsor.

The valuation was based upon information furnished by the City of Southgate, concerning Retiree Health benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency with the last valuation, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the City of Southgate.

EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Annual Required Contribution and OPEB Cost

This report presents the Annual Required Contribution (ARC), one component of the annual Other Postemployment Benefits (OPEB) cost required to be recognized by the plan sponsor for purposes of complying with the accounting requirements of the Governmental Accounting Standards Board (GASB) Statement No. 45. In addition, the plan may need to comply with GASB Statement No. 43. Please consult with legal counsel and your auditors to determine whether you have a plan for GASB Statement No. 43 purposes.

We have calculated the ARC for the fiscal years beginning July 1, 2016 and July 1, 2017. Below is a summary of the results. In the first year GASB Statement No. 45 is adopted, the annual OPEB cost is equal to the ARC. In subsequent years, if there is a net OPEB obligation (NOO, see below), the annual OPEB cost is equal to the ARC for the fiscal year plus one year's interest on the net OPEB Obligation plus an adjustment to the ARC.

Employer contributions to an OPEB trust act to reduce the NOO. In addition, actual claims and premiums paid on behalf of retirees directly from the employer* might be treated as employer contributions in relation to the ARC and act to reduce the NOO. The ARCs and estimated retiree claims and premiums shown below include an adjustment for any implicit rate subsidy present in your pre-65 rates.

* *Premiums and claims passed through the trust in the same fiscal year might also be treated as contributions for that year. We recommend all such transactions be discussed with your accounting professional prior to their occurrence.*

Annual Required Contribution	4.00% Interest	Estimated Claims and Premiums Paid for Retirees
Fiscal Year Beginning 2016	$5,821,818	$2,869,819
Fiscal Year Beginning 2017	5,869,073	3,034,056

For additional details please see the Section titled "Valuation Results."

Additional OPEB Reporting Requirements – Net OPEB Obligation

In addition to the annual cost described on page 1, employers will have to disclose a Net OPEB Obligation (or asset). The NOO is the cumulative difference between annual OPEB cost and annual employer contributions in relation to the ARC accumulated from the implementation of GASB Statement No. 45. The NOO is zero as of the beginning of the fiscal year that GASB Statement No. 45 is implemented, unless the employer chooses to recognize a beginning balance. The requirements for determining the employer's contributions in relation to the ARC are described in paragraph 13g. of GASB Statement No. 45. Additional information required to be disclosed in the employer's financial statements is detailed in paragraphs 24 through 27 of GASB Statement No. 45.

Liabilities and Assets

1. Present Value of Future Benefit Payments	$107,210,630
2. Actuarial Accrued Liability	83,973,396
3. Plan Assets	3,886,789
4. Unfunded Actuarial Accrued Liability (3) – (2)	80,086,607
5. Funded Ratio (3)/(2)	4.6%

The Present Value of Future Benefit Payments (PVFB) is the present value of all benefits projected to be paid from the plan for past and future service to current members. The Actuarial Accrued Liability is the portion of the PVFB allocated to past service by the plan's funding method (see the Section titled "Actuarial Cost Method and Actuarial Assumptions").

SECTION A
VALUATION RESULTS

City of Southgate
Results By Division
as of June 30, 2015

	Municipal	Police/Fire	Total
A. Present Value of Future Benefits			
i) Retirees and Beneficiaries	$23,077,952	$36,857,448	$59,935,400
ii) Vested Terminated Members	0	0	0
iii) Active Members	14,899,779	32,375,451	47,275,230
Total Present Value of Future Benefits	37,977,731	69,232,899	107,210,630
B. Present Value of Future Normal Costs	5,419,920	17,817,314	23,237,234
C. Actuarial Accrued Liability (A.-B.)	32,557,811	51,415,585	83,973,396
D. Actuarial Value of Assets	2,494,510	1,392,279	3,886,789
E. Unfunded Actuarial Accrued Liability (C.-D.)	30,063,301	50,023,306	80,086,607
F. Funded Ratio (D./C.)	7.7%	2.7%	4.6%
G. Fiscal Year Beginning July 1, 2016			
i) Employer Normal Cost	$ 574,541	$ 1,231,154	$ 1,805,695
ii) Amortization of UAAL*	2,121,408	1,894,715	4,016,123
Annual Required Contribution (ARC)	**$ 2,695,949**	**$ 3,125,869**	**$ 5,821,818**
H. Fiscal Year Beginning July 1, 2017**			
Annual Required Contribution (ARC)	**$ 2,694,711**	**$ 3,174,362**	**$ 5,869,073**

** Unfunded Accrued Actuarial Liability.*

*** For illustrative purposes only. New GASB standards apply effective for fiscal years beginning July 1, 2017 and July 1, 2018.*

The Unfunded Actuarial Accrued Liability (UAAL) is not booked as an expense all in one year and does not appear in the Employer's Statement of Net Assets. Nevertheless, it is reported in the Notes to the Financial Statements and in the Required Supplementary Information. These are information sections within the employer's financial statements.

COMMENTS

COMMENT A: As a matter of course, liabilities and the resulting ARCs will change from one valuation to the next. The net impact for the 2015 valuation was an increase in liability for all groups and a decrease/increase in resulting ARC for the Municipal group and Police/Fire group respectively. These changes are primarily due to the following factors:

- Decreasing the assumed rate of return from 5.50% to 4.00%;
- Updating the mortality assumptions;
- Adjusting the load on liabilities to account for future excise taxes under the PPACA 'Cadillac Plan' provisions;
- Lowering the ultimate health care trend assumption; and
- Developing the General and Police/Fire per capita costs separately while reflecting actual health care experience (lower than anticipated for some segments General (all ages) and Police/Fire (post 65) and higher for other segments Police/Fire (pre 65)).

COMMENT B: One of the key assumptions used in any valuation of the cost of postemployment benefits is the rate of return on the assets that will be used to pay plan benefits. Higher assumed investment returns will result in a lower ARC. Lower returns will tend to increase the computed ARC. We have calculated the liability and the resulting ARC using an assumed annual rate of investment return of 4.00%, which may be appropriate to develop the liabilities of the plan in the case that the plan sponsor chooses not to pre-fund a portion of the ARC. We understand from the plan sponsor that this contribution and investment policy is in place.

COMMENT C: Based on the number of plan members as of this valuation, the plan sponsor is required by GASB to perform actuarial valuations at least biennially unless there are significant changes in the OPEB. It is our understanding that the City will need to comply with GASB Statement No. 74 reporting effective with the fiscal year ending June 30, 2017. Please verify the next required valuation with the auditor.

COMMENT D: The unfunded actuarial accrued liabilities were amortized as a level dollar amount for Municipal members over a closed period of 22 years and as a level percent of payroll for Police/Fire members over a rolling period of 30 years for the fiscal year beginning July 1, 2016. A 30-year amortization period for unfunded actuarial accrued liabilities is the maximum period that complies with the current GASB requirements. Future GASB reports separate the accounting of OPEB benefits from the funding of such benefits. The new GASB Statement Nos. 74 and 75 do not address the funding of OPEB benefits. The City may wish to develop an OPEB funding policy if one does not already exist.

COMMENT E: The "Cadillac" tax is a 40% excise tax paid by the coverage provider (employer and/or insurer) on the value of health plan costs in excess of certain thresholds. The thresholds are $10,200 for one-person coverage or $27,500 for family coverage in 2020. Many plans are below the thresholds today, but are likely to exceed them in the next decade. The thresholds will be indexed at CPI-U, which is lower than the medical inflation rates affecting the cost of the plans. There is considerable uncertainty about how the tax would be applied, and considerable latitude in grouping of participants for tax purposes. Combining early retiree and Medicare eligible (post-65) retiree costs are allowed and can keep plans under the thresholds for a longer period of time. For Municipal members, liabilities have been loaded 2.5% for future retirees and 4.5% for current retirees, and for Police and Fire members, liabilities have been loaded 3.5% for future retirees and 5.5% for current retirees to reflect expected future excise tax liability due to projected "Cadillac Plan" status. As additional guidance on the legislation is issued, we will review and monitor the impact.

COMMENT F: For this valuation, certain assumptions were updated including: the assumed rate of investment return (lowering from 5.5% to 4.0%), the mortality assumption, the ultimate health trend assumption, and other demographic assumptions. These changes increased the actuarial accrued liabilities by approximately $14,100,000. The primary source of the increase was the change to the assumed rate of investment return.

COMMENT G: GASB issued Statement Nos. 74 and 75 for OPEB valuations similar to the pension standards GASB Statement Nos. 67 and 68. GASB Statement No. 74 for the plan OPEB disclosures is effective for fiscal years beginning after June 15, 2016. GASB Statement No. 75 for employer OPEB disclosures is effective for employer fiscal years beginning after June 15, 2017. The GASB has not yet issued implementation guides for these new standards. These guides will provide additional clarification related to the implementation of Statement Nos. 74 and 75. Our understanding of the application of the recent GASB Statements is stated below, however GRS consultants are not auditors and we recommend consultation with your auditors for final determination of which standards will be applicable. The City currently is using a pay-as-you-go funding policy; however, has assets set aside in a qualified trust. As a result, the City will need to comply with both GASB Statement Nos. 74 and 75. The information necessary for GASB Statement No. 74 for the June 30, 2017 fiscal year end will be provided at a later date, following the availability of the necessary information and the end of the fiscal year. The basis for the GASB Statement No. 74 information will be this June 30, 2015 valuation with roll-forward techniques applied.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

RETIREE PREMIUM RATE DEVELOPMENT

Initial premium rates were developed for the two classes of retirees (pre-65 and post-65). The 6/1/2016 BCBS pre-65, 1/1/2016 BCBS Medicare Advantage Post-65, 8/1/2016 BCN, and 1/1/2016 HAP fully-insured medical rates provided by the City of Southgate were utilized to determine the appropriate premium rates. The BCBS pre-65 fully-insured medical 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 BCBS 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. The fully-insured HAP medical rates are unblended rates, and thus do not have an implicit employer subsidy. For the post-65 retirees, the fully-insured medical premium rates are used as the basis of the initial per capita cost without adjustments since the rate reflects the demographics of the post-65 retiree group.

Since the self-insured drug claims data from Medtipster was not credible enough to develop per capita costs due to having less than 3 years of claims data, the fully-insured equivalent premium rates provided by the City were utilized to determine the appropriate premium rates. The premiums for the next valuation should be development based on the plans actual experience.

Several of the post-65 suffixes are Medicare Advantage programs. In a Medicare Advantage Program, the liability is based on the difference between the present value of future claims minus the present value of future reimbursements from CMS. Each of these items will experience future growth under arguably differing forces. Recently announced changes to the Medicare Advantage Program will most likely result in decreases in the reimbursements from CMS within the next few years. This, in turn, will cause the net employer cost to trend upward at a rate above usual market trends for healthcare costs. When the plan is insured, this effect is buried in the rates being charged by the insurer. To account for this expectation, we have adjusted the Medicare rates to account for the expected CMS reimbursement lagging behind medical increases. This adjustment will be revisited at the time of the next valuation.

RETIREE PREMIUM RATE DEVELOPMENT (CONTINUED)

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.

The combined monthly one-person medical and drug premiums at select ages are shown below. Note that we assumed that everyone with medical coverage had the same members covered under the drug plan.

Municipal

For Those Not Eligible for Medicare (Pre-65)				
	Future Retirees		Current Retirees	
Age	Male	Female	Male	Female
40	$ 366.24	$ 595.12	$ 388.06	$ 630.56
50	593.68	731.35	629.03	774.91
60	1,008.98	993.49	1,069.07	1,052.67
64	1,226.94	1,157.90	1,300.02	1,226.86

For Those Eligible for Medicare (Post-65)				
	Future Retirees		Current Retirees	
Age	Male	Female	Male	Female
65	$ 379.96	$ 358.38	$ 543.59	$ 512.71
75	444.55	433.79	636.00	620.59
85	470.09	475.63	672.53	680.45

Police/Fire

For Those Not Eligible for Medicare (Pre-65)				
	Future Retirees		Current Retirees	
Age	Male	Female	Male	Female
40	$ 393.75	$ 639.81	$ 522.29	$ 848.69
50	638.26	786.27	846.63	1,042.97
60	1,084.74	1,068.10	1,438.89	1,416.81
64	1,319.08	1,244.85	1,749.73	1,651.27

For Those Eligible for Medicare (Post-65)				
	Future Retirees		Current Retirees	
Age	Male	Female	Male	Female
65	$ 417.46	$ 393.74	$ 543.34	$ 512.48
75	488.42	$ 476.59	$ 635.71	$ 620.31
85	516.48	$ 522.56	$ 672.22	$ 680.14

RETIREE PREMIUM RATE DEVELOPMENT (CONCLUDED)

We have not "age graded" the dental premium rates for this valuation, since dental claims do not vary significantly by age. The monthly per member dental premium used in this valuation is $38.99 for current Police and Fire retirees, $31.60 for their spouses, $27.04 for current Municipal retirees and $21.83 for their spouses. The monthly per member dental premium used in this valuation is $32.82 for future Police and Fire retirees, $26.25 for their spouses, $25.08 for future Municipal retirees and $20.36 for their spouses.

Life insurance benefits were valued using premium rates provided by the City. These monthly rates were $0.53/$1,000 for Municipal and Police/Fire retirees and $1.195/$1,000 for Police/Fire spouses. Future retirements after 7/1/2013 (for Municipal) and 7/1/2015 (for Police/Fire) will not be eligible for life insurance.

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

James E. Pranschke, FSA, MAAA

SECTION C

SUMMARY OF BENEFITS

SUMMARY OF THE BENEFIT PROVISIONS FOR THE RETIREE HEALTH CARE PLAN
MUNICIPAL EMPLOYEES HIRED PRIOR TO JULY 1, 2008

Leaving Employment as a Result of	Eligibility for Pension Benefit	Eligibility for Retiree Health Benefit (if different from pension benefit)	When do retiree health benefits commence?	Coverage Provided by Employer: Retiree	Coverage Provided by Employer: Spouse	Retiree Health Care Provider(s)	Type of Insurance	Retiree Share of Cost for: Retiree	Retiree Share of Cost for: Spouse (while Retiree is alive)	Retiree Share of Cost for: Spouse (after Retiree's death until re-marriage)
Normal Retirement (Unreduced pension benefits)	Age 50 with 25 or more years of service Age 60 with 10 or more years of service Sum of age plus years of service equals 80 or more	Same as pension	Immediately	Medical Prescription Dental Life Insurance	Medical Prescription Dental	BCBS, HAP Caremark Delta Dental	Fully-Insured Self-Insured Fully-Insured	0% 0% Amount over $500 Not Eligible^	0% 0% Amount over $500 Not Eligible	0% 0% Amount over $500 Not Eligible
Deferred Vested Termination	10 or more years of service	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible
Non-Duty Disability	10 or more years of service	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible
Duty Disability	No age or service requirements Must be in receipt of worker's compensation	Same as pension	Immediately	Medical Prescription Dental Life Insurance	Medical Prescription Dental	BCBS, HAP Caremark Delta Dental	Fully-Insured Self-Insured Fully-Insured	0% 0% Amount over $500 0$^	0% 0% Amount over $500 Not Eligible	0% 0% Amount over $500 Not Eligible
Non-Duty Death-in-Service	15 or more years of service Age 60 with 10 or more years of service	Not Eligible	Not Eligible		Not Eligible	Not Eligible	Not Eligible			Not Eligible
Duty Death-in-Service	No age or service requirements Must be in receipt of worker's compensation	Not Eligible	Not Eligible		Not Eligible	Not Eligible	Not Eligible			Not Eligible

^ For certain existing retirees, the City pays for $15,000 of life insurance coverage for retirees. Retiree life insurance is no longer provided for those retiring after 7/1/2013.

Other Provisions

Those who choose to opt-out of retiree health care receive no incentive from the City.
If a member retires and receives a pension, but does not meet the retiree health care provisions stated above, the retiree may not purchase retiree health care through the City.
Retirees pay for Medicare Part A and/or Part B premiums with no reimbursement from the City. Retirees who are Medicare eligible are provided either a Medicare Advantage Plan or complementary coverage by the City.
Retiree Health Savings Account set up for employees hired after July 1, 2008. These new employees will not receive Health or Dental Insurance at retirement.

Summary of the Benefit Provisions for the Retiree Health Care Plan
Police/Fire

Leaving Employment as a Result of	Eligibility for Pension Benefit	Eligibility for Retiree Health Benefit (if different from pension benefit)	When do retiree health benefits commence?	Coverage Provided by Employer: Retiree	Coverage Provided by Employer: Spouse/ Dependent*	Retiree Health Care Provider(s)	Type of Insurance	Retiree Share of Cost for: Retiree	Retiree Share of Cost for: Spouse (while Retiree is alive)	Retiree Share of Cost for: Spouse (after Retiree's death until re-marriage)
Normal Retirement (Unreduced pension benefits)	Age 50 with 25 or more years of service Age 60 regardless of service	Age 50 with 25 or more years of service Age 60 with 10 or more years of service	Immediately	Medical Prescription Dental Life Insurance	Medical Prescription Dental Life Insurance	BCBS, HAP Caremark Delta Dental	Fully-Insured Self-Insured Fully-Insured	0% 0% Amount over $500 Not Eligible^	0% 0% Amount over $500 Not Eligible^	0% 0% Amount over $500 Not Eligible^
Deferred Vested Termination	10 or more years of service	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible
Non-Duty Disability	Payable upon total and permanent disability of a member with 5 or more years of service	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible	Not Eligible
Duty Disability	Payable upon total and permanent disability of a member in the line of duty	Same as pension	Immediately	Medical Prescription Dental Life Insurance	Medical Prescription Dental Life Insurance	BCBS, HAP Caremark Delta Dental	Fully-Insured Self-Insured Fully-Insured	0% 0% Not Eligible^ 0$^	0% 0% Not Eligible^ 0$^	0% 0% Not Eligible^ 0$^
Non-Duty Death-in-Service	Payable to a surviving spouse, if any, upon the death of a member with 10 or more years of service	Not Eligible	Not Eligible		Not Eligible	Not Eligible	Not Eligible			Not Eligible
Duty Death-in-Service	Payable upon the expiration of worker's compensation to the survivors of a member who died in the line of duty	Not Eligible	Not Eligible		Not Eligible	Not Eligible	Not Eligible			Not Eligible

*** Dependents under the age of 19 or dependents up to the age of 25 if a full time college student and covered under HAP insurance.**

^ For certain retirees, the City pays for $10,000 of life insurance coverage for retirees and $10,000 of life insurance coverage for spouses - beneficiary retiree only. Retiree life insurance for spouses is no longer provided for those retiring after 7/1/2013. Retiree life insurance is no longer provided for those retiring after 7/1/2015.

Other Provisions

Those who choose to opt-out of retiree health care receive no incentive from the City. Currently there is 1 retiree opting-out of retiree health care.

If a member retires and receives a pension, but does not meet the retiree health care provisions stated above, the retiree may not purchase retiree health care through the City.

Members who retire after January 1, 2014 are required to enroll in Medicare Parts A and B; the retiree is responsible for premiums. The City will provide Supplemental Coverage.

SECTION D
SUMMARY OF PARTICIPANT DATA

City of Southgate
Total Active Members as of June 30, 2015
by Age and Years of Service

Age	Years of Service to Valuation Date							Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.
20-24	1							1
25-29	8	3						11
30-34	7	1	4					12
35-39	1	3	7	5				16
40-44		1	8	11	2			22
45-49		1	7	12	7			27
50-54			4	2	3	2		11
55-59			1	3	1	1		6
60-64				1				1
65 & Over					1			1
Totals	**17**	**9**	**31**	**34**	**14**	**3**		**108**

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

Age:	41.8	years
Service:	13.7	years

City of Southgate - Municipal
Active Members as of June 30, 2015
by Age and Years of Service

	Years of Service to Valuation Date							Totals
Age	**0-4**	**5-9**	**10-14**	**15-19**	**20-24**	**25-29**	**30 Plus**	**No.**
20-24								
25-29								
30-34			2					2
35-39			4	2				6
40-44			3	3				6
45-49		1	5	9	1			16
50-54			3	2	2	1		8
55-59			1	3	1			5
60-64				1				1
65 & Over					1			1
Totals		**1**	**18**	**20**	**5**	**1**		**45**

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

Age:	46.6	years
Service:	15.8	years

City of Southgate - Police/Fire
Active Members as of June 30, 2015
by Age and Years of Service

Age	Years of Service to Valuation Date							Totals
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.
20-24	1							1
25-29	8	3						11
30-34	7	1	2					10
35-39	1	3	3	3				10
40-44		1	5	8	2			16
45-49			2	3	6			11
50-54			1		1	1		3
55-59						1		1
60-64								
65 & Over								
Totals	**17**	**8**	**13**	**14**	**9**	**2**		**63**

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

Age:	38.4	years
Service:	12.1	years

CITY OF SOUTHGATE
TOTAL INACTIVE MEMBERS AS OF JUNE 30, 2015
BY AGE

Number of Retiree and Beneficiary Contracts

	Opt-Out/ Ineligible	One-Person Coverage	Two-Person Coverage*	Total
Male	5	38	69	112
Female	12	35	20	67
Total	17	73	89	179

** Includes family coverage.*

	Current Retirees		
	Number of Those Covered		
Age	Municipal	Police/Fire	Total
0-44			
45-49	2	5	7
50-54	6	8	14
55-59	4	12	16
60-64	19	12	31
65-69	13	13	26
70-74	14	18	32
75-79	9	9	18
80-84	2	1	3
85-89	5	7	12
90-94	3		3
95 +			
Totals	77	85	162

There are 0 terminated members eligible for deferred plan benefits.

SECTION E

ACTUARIAL COST METHOD AND ACTUARIAL ASSUMPTIONS

ACTUARIAL METHODS FOR
CITY OF SOUTHGATE
AS OF JUNE 30, 2015

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.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded actuarial accrued liabilities (UAAL) (full funding credit if assets exceed liabilities) were amortized as a level percent of payroll if the divisions are open to new hires and as a level dollar if the divisions are closed to new hires. The UAAL was determined using the actuarial value of assets and actuarial accrued liability calculated as of the valuation date and projected to the beginning of the fiscal year at the assumed rate of investment return.

Actuarial Value Assets. The Actuarial Value of Assets is set equal to the reported market value of assets.

Amortization Factors: The following amortization factors were used in developing the Annual Required Contribution for the fiscal years shown:

	Fiscal Year Beginning July 01,	
4.00% Interest	**2016**	**2017**
Municipal (Level Dollar)	14.7382	14.3079
Police/Fire (Level Percent of Pay)	27.4576	27.4576

ACTUARIAL ASSUMPTIONS FOR CITY OF SOUTHGATE AS OF JUNE 30, 2015

Assumption Rationale:

Municipal Members: Demographic assumptions were selected or affirmed for use in an experience study dated February 12, 2014 covering the 5-year period ending June 30, 2012.

Police and Fire Members: Demographic assumptions were selected or affirmed for use in an experience study dated September 9, 2016 covering the 5-year period ending June 30, 2014.

Other Assumptions were applied to both groups: Economic assumptions (price and base wage assumption) and Mortality assumptions based upon general conditions discussed in the September 9, 2016 report.

The assumed rate of investment return assumption: was requested for use by the City and satisfies the GASB Statement Nos. 43 and 45 requirements for assets held in a qualified trust with benefits funded on a pay-as-you-go basis.

The rate of investment return was 4.00% a year, compounded annually net after investment expenses.

Rates of price inflation are not specifically used for this valuation. A rate of price inflation of 2.75% was assumed.

ACTUARIAL ASSUMPTIONS FOR CITY OF SOUTHGATE AS OF JUNE 30, 2015 (CONTINUED)

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

Sample Ages	% Increase in Salary at Sample Ages: Merit and Seniority – Municipal	Merit and Seniority – Police/Fire	Base (Economic)	Increase Next Year – Municipal	Increase Next Year – Police/Fire
20	7.60%	2.88%	3.50%	11.10%	6.38%
25	6.80%	2.34%	3.50%	10.30%	5.84%
30	4.00%	2.01%	3.50%	7.50%	5.51%
35	2.84%	1.78%	3.50%	6.34%	5.28%
40	1.92%	1.60%	3.50%	5.42%	5.10%
45	1.32%	1.26%	3.50%	4.82%	4.76%
50	0.88%	0.85%	3.50%	4.38%	4.35%
55	0.48%	0.50%	3.50%	3.98%	4.00%
60	0.00%	0.12%	3.50%	3.50%	3.62%
Ref	444	458	0.035		

The payroll growth rate for financing Unfunded Actuarial Accrued Liabilities for open divisions was assumed to be 3.50% per year.

ACTUARIAL ASSUMPTIONS FOR CITY OF SOUTHGATE AS OF JUNE 30, 2015 (CONTINUED)

The rates of mortality used for individual members are in accordance with the following tables.

The same mortality tables are used for Municipal plan members and Police and Fire plan members. The **Post-Retirement Mortality** is the RP-2014 Healthy Annuitant Generational Mortality Tables, with blue collar adjustments and extended via cubic spline. The **Pre-Retirement Mortality** is the RP-2014 Employee Generational Mortality Tables, with blue collar adjustments and extended via cubic spline. The **Post-Retirement Disabled Mortality** is the RP-2014 Disabled Mortality Tables, with blue collar adjustments and extended via cubic spline. All tables are adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 is utilized with future mortality improvements assumed each year using scale MP-2015.

Sample Attained Ages	Healthy Pre-Retirement Future Life Expectancy (Years)*		Healthy Post-Retirement Future Life Expectancy (Years)*		Disabled Retirement Future Life Expectancy (Years)*	
	Men	Women	Men	Women	Men	Women
55	30.20	35.42	29.00	31.93	21.82	25.66
60	25.37	30.42	24.45	27.19	18.79	22.06
65	20.83	25.51	20.12	22.61	15.81	18.47
70	16.64	20.74	16.07	18.26	12.88	14.96
75	12.83	16.20	12.39	14.27	10.17	11.77
80	9.45	11.95	9.21	10.75	7.77	9.04

** Based on retirements in 2015. Retirements in future years will reflect projected improvements in life expectancy.*

Retirement Rates

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

Year Eligible to Retire	Municipal Percent
1	50%
2	30%
3	30%
4	30%
5	30%
6	30%
7	30%
8	30%
9	100%

Age	Percent
65	100%

Retirement Ages	Percent of Eligible Active Members Retiring within Next Year
	Police/Fire
50	50%
51	35
52	30
53	25
54	25
55	25
56	25
57	20
58	20
59	30
60	100
Ref	557

ACTUARIAL ASSUMPTIONS FOR CITY OF SOUTHGATE AS OF JUNE 30, 2015 (CONTINUED)

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Sample Ages	Service Index	Percent of Active Members Separating within Next Year: Municipal Males	Municipal Females	Police/Fire Males	Police/Fire Females
ALL	0	10.00%	10.00%	12.50%	12.50%
	1	8.00	8.00	8.50	8.50
	2	6.00	6.00	5.00	5.00
	3	4.00	4.00	3.00	3.00
	4	3.00	3.00	2.50	2.50
25	5 & Over	5.00	5.00	1.62	1.62
30		4.50	4.50	1.40	1.40
35		3.55	3.55	0.83	0.83
40		1.45	1.45	0.32	0.32
45		0.75	0.75	0.18	0.18
50		0.75	0.75	0.18	0.18
55		0.75	0.75	0.18	0.18
60		0.75	0.75	0.18	0.18
65		0.75	0.75	0.18	0.18
Ref		14 #55xl	14 #55xl	146 #237xl	146 #237xl

ACTUARIAL ASSUMPTIONS FOR CITY OF SOUTHGATE AS OF JUNE 30, 2015 (CONTINUED)

Disability Rates

Disability rates are used in the valuation to estimate the incidence of member disability in future years.

The assumed rates of disablement at various ages are shown below:

	Percent Becoming Disabled within Next Year			
Sample	Municipal		Police/Fire	
Ages	Males	Females	Males	Females
20	0.08%	0.10%	0.06%	0.06%
25	0.08	0.10	0.07	0.07
30	0.08	0.10	0.10	0.10
35	0.08	0.10	0.13	0.13
40	0.20	0.36	0.19	0.19
45	0.26	0.41	0.29	0.29
50	0.49	0.57	0.48	0.48
55	0.89	0.77	0.82	0.82
Ref	#9x1	#10x1	#256x1.25	#256x1.25

10% of the disabilities are assumed to be non-duty and 90% of the disabilities are assumed to be duty related for the Police/Fire plan and 100% are assumed to be non-duty related for the Municipal plan.

ACTUARIAL ASSUMPTIONS FOR CITY OF SOUTHGATE AS OF JUNE 30, 2015 (CONTINUED)

Health care cost trend rates are displayed in the following table:

Year After Valuation	Health Care Trend Inflation Rates	
	Medical/Drug	Dental
1	9.00%	3.50%
2	8.25	3.50
3	7.50	3.50
4	6.75	3.50
5	6.25	3.50
6	5.75	3.50
7	5.25	3.50
8	4.75	3.50
9	4.25	3.50
10	3.50	3.50
11	3.50	3.50
12	3.50	3.50
13	3.50	3.50
14	3.50	3.50
15	3.50	3.50
16 +	3.50	3.50

ACTUARIAL ASSUMPTIONS FOR CITY OF SOUTHGATE AS OF JUNE 30, 2015 (CONCLUDED)

Administrative Expenses No explicit assumption has been made for administrative expenses.

Decrement Operation Disability and mortality decrements do not operate during the first 5 years of service. Disability also does not operate during retirement eligibility.

Decrement Timing Decrements of all types are assumed to occur mid-year.

Eligibility Testing Eligibility for benefits is determined using the age nearest birthday and service nearest whole year on the valuation date.

Incidence of Contributions Contributions are assumed to be received continuously throughout the year.

Marriage Assumption 100% of males and 100% of females are assumed to be married at time of decrement. 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 future Municipal retirees and Police/Fire retirees on attainment of age 65. Disabled retirees were assumed to be eligible for Medicare coverage at age 65.

Life Insurance The premiums were valued as provided by the City.

Health Care Coverage at Retirement The table below shows the assumed portion of future retirees electing one-person or two-person/family coverage, or opting-out of coverage entirely.

		Two-Person/Family		
	One-Person	Electing	Continuing	Opt-Out
Municipal				
Male	40%	60%	100%	0%
Female	40%	60%	100%	0%
Police/Fire				
Male	20%	80%	100%	0%
Female	20%	80%	100%	0%

APPENDIX A
OVERVIEW

GASB BACKGROUND

The purpose of this valuation is to provide information on the cost associated with providing postemployment benefits other than pensions, or OPEB, to current and former employees. The information is designed to assist you in complying with Governmental Accounting Standards Board (GASB) Statements No. 43 and No. 45. OPEB benefits are most often associated with postemployment health care, but cover almost any benefit not provided through a pension plan, including life insurance, dental and vision benefits. It is important to note that OPEB benefits, by definition, do not include benefits *currently* being provided to active employees – however, this report includes the liabilities for benefits expected to be paid to current active employees in the future when they retire.

GASB Statements No. 43 and No. 45 were released in the spring of 2004. GASB Statement No. 43 covers the accounting rules for OPEB *plans* while GASB Statement No. 45 describes the rules for *employers* sponsoring OPEB plans. Your auditor can assist you in determining which statements apply to your particular situation.

The specific items required to be disclosed on an OPEB sponsor's financial statements are described in detail in GASB Statements No. 43 and No. 45.

GASB Statement No. 45

Among the requirements of GASB Statement No. 45 are recognition each year of an expense called the Annual OPEB Cost, and the accumulation of a liability to be disclosed on the employer's Statement of Net Assets called the Net OPEB Obligation (NOO).

The fundamental items required to determine the Annual OPEB Cost and the NOO are:

- the Annual Required Contribution (ARC)
- the Employer's Contributions in relation to the ARC

Although GASB does not require OPEB contributions, it has chosen to call the base component of the annual OPEB cost the Annual Required Contribution. The ARC is provided in this report.

Paragraph 13g. of GASB Statement No. 45 states:

> "An employer has made a contribution in relation to the ARC if the employer has:
>
> 1. made payments of benefits directly to or on behalf of a retiree or beneficiary,
> 2. made premium payments to an insurer, or
> 3. irrevocably transferred assets to a trust, or equivalent arrangement in which Plan assets are dedicated to providing benefits to retirees and their beneficiaries in accordance with the terms of the Plan and are legally protected from creditors of the employer(s) or plan administrator."

For each fiscal year shown in this report, we have provided the ARC and the estimated benefits and/or premiums (based on valuation assumptions).

The NOO is the cumulative difference between the Annual OPEB Cost each year and the Employer's Contribution in relation to the ARC. The Annual OPEB Cost for a year is equal to:

- the ARC, plus
- interest on the prior year's NOO, plus
- amortization of the prior year's NOO.

The Annual OPEB Cost and NOO are generally developed by the plan sponsor's auditor based on information contained herein and elsewhere.

GASB Statement No. 43

If the plan has assets for GASB Statement No. 43 purposes, then certain additional information useful in complying with the Statement is contained in this report.

OPEB Pre-Funding

Many employers fund retiree health care benefits using the pay-as-you-go (or cash disbursement) method. Under this method, the employer's annual contribution is equal to the actual disbursements during the year for OPEB for retired employees. This method of funding will result in increasing contributions over time. First, per capita cash disbursements will tend to increase from year to year as the cost of health care services, or the utilization of these services, increases. Second, the number of retired members is likely to increase for years to come. The more retirees, the greater the disbursements as a percentage of employee payroll.

A retiree health care plan is similar to a defined benefit pension plan in that promises are made to employees to provide them with a benefit payable at some future date. For defined benefit pension plan sponsors, a common funding objective is to contribute to a fund, annual amounts which will i) remain level as a percentage of active member payroll, and ii) when combined with present assets and future investment return be sufficient to meet the financial obligations of the plan to current and future retirees.

The GASB statements are not funding requirements. They are accounting standards that require plan sponsors to calculate the annual expense associated with OPEB using certain methods.

The ultimate determination as to the level of pre-funding will be the result of decisions made in an attempt to support benefit security for members and the fiscal management needs of the employer.

APPENDIX B

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.

GLOSSARY

Annual Required Contribution (ARC). The ARC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ARC 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 actuarial accrued 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.

Implicit Rate Subsidy. It is common practice for employers to allow retirees to continue in the employer's group health insurance plan (which also covers active employees), often charging the retiree some portion of the premium charged for active employees. Under the theory that retirees have higher utilization of services, the difference between the true cost of providing retiree coverage and what the retiree is being charged is known as the implicit rate subsidy.

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.

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.

Other Postemployment Benefits (OPEB). OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance, dental, vision, prescription drugs, life insurance 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 actuarial accrued liability."

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