Gabriel Roeder Smith & Company
Consultants & Actuaries

CITY OF ST. CLAIR SHORES
POLICE AND FIRE RETIREMENT SYSTEM

66TH ANNUAL ACTUARIAL VALUATION REPORT
JUNE 30, 2015

CONTENTS

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December 17, 2015

The Retirement Board
City of St. Clair Shores Police and
Fire Retirement System
27600 Jefferson Circle Drive
St. Clair Shores, Michigan 48081-9971

Dear Board Members:

The results of the June 30, 2015 Annual Actuarial Valuation of the City of St. Clair Shores Police and Fire Retirement System, which is based upon Act 345 of the Public Acts of 1937, as amended are presented in this report.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the System's funding progress as of June 30, 2015, and to determine the employer contribution rate for the fiscal year ending June 30, 2017. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The findings in this report are based on data and other information through June 30, 2015. 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 scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

The valuation was based upon information furnished by the Plan Administrator, concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

In addition, this report was prepared using certain assumptions approved by the Board as described in the section of this report entitled Valuation Methods and Assumptions.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the City of St. Clair Shores Police and Fire Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices and the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Mark Buis and Rebecca L. Stouffer 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. The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation report with the Board of Trustees and answer any questions pertaining to the valuation.

Respectfully submitted,

Mark Buis

Mark Buis, FSA, EA, MAAA

Rebecca L. Stouffer

Rebecca L. Stouffer, ASA, MAAA

MB/RLS:mrb

SECTION A

VALUATION RESULTS

FUNDING OBJECTIVE

The funding objective of the Retirement System is to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year to year and will not have to be increased for future generations of citizens.

CONTRIBUTION RATES

The Retirement System is supported by member contributions, City's contributions and investment income from Retirement System assets.

Contributions which satisfy the funding objective are determined by the annual actuarial valuation and are sufficient to:

(1) cover the actuarial costs allocated to the current year by the actuarial cost methods described in Section C (the normal cost); and

(2) finance over a period of future years the actuarial cost not covered by present assets and anticipated future normal costs (unfunded actuarial accrued liability).

Contribution requirements for the fiscal year beginning July 1, 2016 are shown on page A-2.

The Board of Trustees of the City of St. Clair Shores Police and Fire Retirement System confirms that the System provides for payment of the required employer contribution as described in Section 20m of Michigan Public Act No. 728.

City's Computed Contributions

	Contributions Expressed as Percents of Annual Pay	
Valuation Date June 30	**2015**	**2014**
Contributions for Fiscal Year Beginning July 1	**2016**	**2015**
NORMAL COST		
Age and service pensions	21.11%	16.72%
Death before retirement pensions	0.34%	0.38%
Disability pensions	0.96%	0.89%
Total	22.41%	17.99%
MEMBERS' CONTRIBUTIONS		
Gross contributions*	4.61%	4.40%
Less prospective refunds	0.26%	0.25%
Available for pensions	4.35%	4.15%
CITY'S NORMAL COST	18.06%	13.84%
AMORTIZATION UNFUNDED ACTUARIAL ACCRUED LIABILITIES#	30.18%	33.92%
ASSETS IN EXCESS OF ACCRUED LIABILITIES#	NONE	NONE
TOTAL CITY CONTRIBUTIONS@- %	48.24%	47.76%
- $	$5,603,001	$5,136,032

* *Weighted average.*

\# *Unfunded accrued liabilities were amortized as a level percent of payroll over a period of 24 years. Assets in excess of accrued liabilities were amortized as a level percent of payroll over a period of 10 years and applied as a credit to the computed normal cost contribution.*

@ *All fiscal year calculations are based on the valuation payroll of $10,636,062 for the period July 1, 2014– June 30, 2015, assumed to increase at a rate of 4.5% each year. No adjustments have been made to reflect agreements which may limit pay increases over the next year. To the extent that actual pays are less (greater) than projected, application of the rate shown will produce dollar contributions less than (greater than) the amount illustrated above. Any shortfall (excess) will manifest as an increase (decrease) in future contribution rates.*

Overall contribution rates increased slightly from last year. Normal cost rates increased primarily due to updated mortality tables, while the amortization of unfunded liability decreased due to benefit changes and favorable asset returns over the last five years. Please see additional Comments on page A-8 which includes a reconciliation of contribution rates.

DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY

	June 30, 2015	June 30, 2014
A. Accrued Liability		
1. For retirees and beneficiaries	$ 105,988,711	$ 103,931,310
2. For vested terminated members	429,827	548,371
3. For present active members		
a. Value of expected future benefit payments	71,094,556	66,224,395
b. Value of future normal costs	21,799,247	17,916,066
c. Active member accrued liability: (a) - (b)	49,295,309	48,308,329
4. Total accrued liability	155,713,847	152,788,010
B. Present Assets (Funding Value)	96,946,709	92,913,702
C. Unfunded Accrued Liability: (A.4) - (B)	58,767,138	59,874,308
D. Funding Ratio: (B) / (A.4)	62.3%	60.8%
E. Funding Ratio: Market Value Basis	64.0%	66.1%

DEVELOPMENT OF FUNDING VALUE OF ASSETS

Year Ended June 30:	2014	2015	2016	2017	2018	2019
A. Funding Value Beginning of Year	$ 88,557,717	$ 92,913,702				
B. Market Value End of Year	101,022,075	99,696,472				
C. Market Value Beginning of Year	89,417,393	101,022,075				
D. Non-Investment Net Cash Flow	(4,922,543)	(4,575,259)				
E. Investment Income						
E1. Market Total: B - C - D	16,527,225	3,249,656				
E2. Amount for Immediate Recognition (7.5%)	6,457,233	6,796,955				
E3. Amount for Phased-In Recognition: E1-E2	10,069,992	(3,547,299)				
F. Phased-In Recognition of Investment Income						
F1. Current Year: 0.20 x E3	2,013,998	(709,460)				
F2. First Prior Year	631,047	2,013,998	$ (709,460)			
F3. Second Prior Year	(1,716,488)	631,047	2,013,998	$ (709,460)		
F4. Third Prior Year	1,592,212	(1,716,488)	631,047	2,013,998	$ (709,460)	
F5. Fourth Prior Year	300,526	1,592,214	(1,716,488)	631,047	2,014,000	$(709,459)
F6. Total Recognized Investment Gain(Loss)	2,821,295	1,811,311	219,097	1,935,585	1,304,540	(709,459)
G. Funding Value End of Year: A + D + E2 + F5	92,913,702	96,946,709				
H. Difference between Market & Funding Value	8,108,373	2,749,763				
I. Recognized Rate of Return - Funding Value	10.78%	9.50%				
J. Recognized Rate of Return - Market Value	19.01%	3.29%				

The Funding Value of Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased-in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than market value. The Funding Value of Assets is unbiased with respect to Market Value. At any time it may be either greater or less than Market Value. If actual and assumed rates of investment income are exactly equal for 4 consecutive years, the Funding Value will become equal to Market Value.

DERIVATION OF EXPERIENCE GAIN (LOSS)

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is hoped that gains and losses will cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

(1)	UAAL* at start of year	$ 59,874,308
(2)	Total normal cost	1,918,802
(3)	Actual contributions for pensions	5,451,150
(4)	Interest accrual	4,358,110
(5)	Expected UAAL* before changes	60,700,070
(6)	Change from amendments	(889,287)
(7)	Change in asset smoothing methodology	0
(8)	Change from assumption and actuarial cost method revisions	(190,703)
(9)	Expected UAAL* after changes	59,620,080
(10)	Actual UAAL*	58,767,138
(11)	Gain (loss) (9) - (10)	852,942
(12)	Gain (loss) as percent of actuarial accrued liabilities at start of year ($152,788,010)	0.6%

* *Unfunded actuarial accrued liabilities.*

Valuation Date	Experience Gain (Loss) as % of Beginning Accrued Liability
6-30-06	0.2 %
6-30-07	2.6
6-30-08	(3.0)
6-30-09	(7.5)
6-30-10	(1.0)
6-30-11	(6.4)
6-30-12	(8.0)
6-30-13	(4.4)
6-30-14	0.7
6-30-15	0.6

In financing the actuarial accrued liabilities, the valuation assets of $96,946,709 were distributed as shown below.

Reserves for	Present Valuation Assets Applied to Member Actuarial Accrued Liability	Retired Life Actuarial Liabilities	Contingency Reserve	Totals
Employees' Contributions	$ 5,183,198			$ 5,183,198
Employer Contributions	(15,367,692)	$20,005,268		4,637,576
Retired Benefit Payments		85,983,443		85,983,443
Excess Earnings Reserve	1,142,492			1,142,492
Totals	**$ (9,042,002)**	**$105,988,711**	**none**	**$96,946,709**

Assets were applied against actuarial accrued liabilities in determining unfunded actuarial accrued liabilities as follows:

	Retired Lives	Active Members	Total
Computed Actuarial Accrued Liabilities	$105,988,711	$49,725,136	$155,713,847
Applied Assets	105,988,711	(9,042,002)	96,946,709
Unfunded Actuarial Accrued Liabilities	$ none	$58,767,138	$ 58,767,138

COMPARATIVE SCHEDULE

Valuation Date	Actuarial Accrued Liabilities & Reserves	Accrued Assets	% Funded	Unfunded Actuarial Accrued Liabilities & Reserves: Dollars	Amortiz. Period	% of Payroll	City's Contrib. Rate@
12/31/90	$ 48,040,951	$ 50,278,560	104.7 %	$ (2,237,609)	25	- %	16.48 %#
12/31/91	48,748,361	52,659,040	108.0	(3,910,679)	24	-	17.01 #
06/30/93	55,877,762	59,442,762	106.4	(3,565,000)	23	-	16.19 *#
06/30/94	57,929,114	63,101,209	108.9	(5,172,095)	22	-	15.05 #
06/30/95	61,692,487	66,621,054	108.0	(4,928,567)	21	-	15.71 *
06/30/96	66,563,082	71,692,536	107.7	(5,129,454)	20	-	16.51 #
06/30/97	69,290,760	79,687,515	115.0	(10,396,755)	19	-	12.61
06/30/98	74,132,345	91,138,639	122.9	(17,006,294)	10	-	0.00 *#
06/30/99	77,538,939	101,745,561	131.2	(24,206,622)	10	-	0.00 #
06/30/00	81,816,157	110,243,719	134.7	(28,427,562)	10	-	0.00 #
06/30/01	86,607,994	113,344,804	130.9	(26,736,810)	10	-	0.00 #
06/30/02	90,182,317	108,832,118	120.7	(18,649,801)	10	-	0.00 #
06/30/03	93,967,332	101,683,192	108.2	(7,715,860)	10	-	8.73 #
06/30/04	98,335,479	94,640,250	96.2	3,695,229	25	38	20.45 *
06/30/05	104,248,328	90,853,624	87.2	13,394,704	25	130	25.88 *
06/30/06	107,602,157	93,730,948	87.1	13,871,209	25	130	25.84
06/30/07	111,001,598	99,906,347	90.0	11,095,251	25	104	24.30 #
06/30/08	117,284,024	105,559,450	90.0	11,724,574	25	109	24.90 #
06/30/09	125,940,115	103,972,349	82.6	21,967,766	30	191	29.52 *
06/30/10	129,441,265	102,981,697	79.6	26,459,568	29	248	30.57 #
06/30/11	139,365,119	101,229,663	72.6	38,135,456	28	337	31.73 #
06/30/12	145,517,428	94,147,081	64.7	51,370,347	27	532	42.81
06/30/13	148,187,126	88,557,717	59.8	59,629,409	26	599	47.25
06/30/14	152,788,010	92,913,702	60.8	59,874,308	25	595	47.76
06/30/15	155,713,847	96,946,709	62.3	58,767,138	24	553	48.24 *#

* *Revised actuarial assumptions and/or methods.*

\# *Retirement System amended.*

@ *Excluding contributions for Health Insurance and Medicare premiums after valuation date 12-31-86.*

The ratio of Valuation Assets to Actuarial Accrued Liabilities is a traditional measure of a system's funding progress. Except in years when the system is amended or actuarial assumptions are revised, this ratio can be expected to increase gradually toward 100%.

The Ratio of Unfunded Actuarial Accrued Liabilities to Valuation Payroll is another relative index of condition. Actuarial unfunded liabilities represent debt, while active member payroll represents the system's capacity to collect contributions to pay toward debt. The lower the ratio, the greater the financial strength and vice-versa.

COMMENTS

ACTUARIAL EXPERIENCE: The System encountered more favorable actuarial experience than expected for the valuation year resulting in an experience gain of $852,942. The gain was primarily attributable to recognized investment income that was more than assumed, offset by less retiree deaths than expected. The overall experience gain reduced the required contribution for the year beginning July 1, 2016 from what it otherwise would have been.

As of June 30, 2015 there are $2.7 million of unrecognized investment gains that will be gradually recognized over the next four years. Recognition of these gains will put downward pressure on required contributions over the next several years.

Since the completion of the June 30, 2014 valuation, a limited scope experience study was performed. As a result of this study, updates to the mortality table and other technical assumptions are reflected in the June 30, 2015 valuation results. For a detailed description of the Valuation Assumptions and Methods utilized please see Section C. The employer contribution as of June 30, 2015 (covering fiscal year July 1, 2016 – June 30, 2017) would have been 45.06% of payroll, if prepared using the mortality assumptions in effect for the June 30, 2014 valuation.

CONTRIBUTION RECONCILIATION: See below for a reconciliation of the employer contribution rate developed in the June 30, 2015 valuation as compared to the employer contribution rate developed in the June 30, 2014 valuation.

Employer Contribution as of June 30, 2014 (Covering Fiscal Year: July 1, 2015 – June 30, 2016)	47.76%
Impact on Contribution as a Result of:	
Changes to Benefits:	(1.67%)
Changes to Assumptions and/or Methods	3.18%
Investment and Demographic Experience:	(1.03%)
Employer Contribution as of June 30, 2015 (Covering Fiscal Year: July 1, 2016 – June 30, 2017)	48.24%

COMMENTS (CONTINUED)

PLAN AMENDMENTS: There were changes to plan provisions since the previous valuation as listed below:

1. For Police hired after 8/11/15:
   a. Multiplier is 2.25% for the first 25 years and 1.0% over 26 through 30 years.
   b. Calculated on base wage only.
2. For Fire hired after 7/1/15:
   a. Multiplier is 2.0% for the first 25 years and 1.0% thereafter with a 70% of FAC maximum.
   b. Calculated on base wage only.
3. For all Fire:
   a. Member contributions are changed to 4.5%. Those contributions made after 7/1/15 are non-refundable.
4. For all Police:
   a. Member contributions are changed to 4.5%. Those contributions made after 8/11/15 are non-refundable.

ACTUARIAL METHODS AND ASSUMPTIONS: We issued our report on the Retirement System's experience for the 5-year period ending June 30, 2014 on July 20, 2015. In that report, we recommended several changes in assumptions and methods which were considered by the Retirement Board. We have reflected the recommendations that were adopted by the Retirement Board in this valuation report. This change includes:

- Updated Pre- and Post-Retirement mortality tables to allow for longevity improvements.

CERTIFICATION: To the best of our knowledge and belief, the valuation is complete and accurate and was made in accordance with generally recognized actuarial methods. The actuarial assumptions summarized in Section C are in the aggregate a reasonable representation of the past and anticipated future experience of the System.

COMMENTS (CONCLUDED)

OTHER OBSERVATIONS:

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

Given the plan’s contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.5% on the actuarial value of assets), it is expected that:

1) employer normal cost amounts as a percentage of payroll will remain approximately level year to year;
2) the unfunded actuarial accrued liability will be fully amortized after 24 years, and
3) the funded status of the plan will 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 and the actuarial value of assets. Unless otherwise indicated, with regards to any funded status measurements presented in this report:

1) The measurement is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan’s benefit obligations.
2) The measurement is inappropriate for assessing the need for or the amount of future employer contributions.
3) The measurement would produce a different result if the market value of assets were used instead of the actuarial value of assets, unless the market value of assets is used in the measurement.
4) The funding level of the plan on a Market Value basis is 64.0%, as of June 30, 2015.

SECTION B

VALUATION DATA

BRIEF SUMMARY OF ACT 345 BENEFIT PROVISIONS
(JUNE 30, 2015)

SERVICE RETIREMENT

The benefit amounts attributable to regular retirements and the conditions under which such benefits may be paid are described in tabular form on page B-2.

DEFERRED RETIREMENT

Eligibility - 10 or more years of service, payable to member or eligible surviving spouse.

Annual Amount - Computed as service retirement but based upon service, FAC and benefit in effect at termination. Benefit begins at date retirement would have occurred had member remained in employment. Benefit to eligible surviving spouse actuarially reduced in accordance with an Option I election.

DEATH AFTER RETIREMENT SURVIVOR'S PENSION

Eligibility - Payable to a surviving spouse, if any, upon the death of a retired member who is receiving a regular straight life pension.

Annual Amount - Spouse's pension equals 60% of the regular straight life pension the deceased retirant was receiving.

NON-DUTY DEATH-IN-SERVICE SURVIVOR'S PENSIONS

Eligibility - Payable to a surviving spouse, if any, upon the death of a member with 10 or more years of service.

Annual Amount - Accrued straight life pension actuarially reduced in accordance with an Option I election.

DUTY DEATH-IN-SERVICE SURVIVOR'S PENSIONS

Eligibility - Payable upon the expiration of worker's compensation to the survivors of a member who died in the line of duty.

Annual Amount - Same amount that was paid by worker's compensation.

NON-DUTY DISABILITY

Eligibility - Payable upon the total and permanent disability of a member with 5 or more years of service.

Annual Amount - To age 55: 1.5% of FAC times years of service. At age 55: Computed like Service Retirement Pension.

DUTY DISABILITY

Eligibility - Payable upon the total and permanent disability of a member in the line of duty.

Annual Amount - To Age 55: 50% of FAC. At Age 55: Computed like Service Retirement Pension with service credit from date of disability to age 55.

BRIEF SUMMARY OF ACT 345 BENEFIT PROVISIONS - (CONCLUDED)
(JUNE 30, 2015)

Group	Eligibility					Benefit Formula					FAC Years (Final Average Compensation)	Maximum Benefit (% of FAC)	Base Wages	Member Contribution Rate	Annuity Withdrawal
	Age	Service		Age	Service	Multiplier x Service			Multiplier x Service						
Fire AR4	60	10	or	-	25	2.80%	first 25	+	1.00%	over 25	3 out of last 10	70%	Yes	5.00%	w/o Reduction
Fire Hired Before 1/1/2010	60	10	or	-	25	2.80%	first 25	+	1.00%	over 25	3 out of last 10	70%	No	4.50%	w/o Reduction**
Fire Hired After 1/1/2010	50	25	or	60	10	2.25%	first 25	+	1.00%	over 25	3 out of last 10	70%	No	4.50%	with Reduction**
Fire Hired After 7/1/2015	50	25	or	60	10	2.00%	first 25	+	1.00%	over 25	3 out of last 10	70%	Yes	4.50%	No
Police AR4	60	10	or	-	25	2.80%	first 25	+	1.00%	over 25	3 out of last 10	70%	Yes	5.00%	w/o Reduction
Police Command Hired Before 4/22/2011	60	10	or	-	25	2.80%	first 25	+	1.00%	over 25	3 out of last 10	75%	No	6.00%	w/o Reduction
Police Command Hired After 4/22/2011	60	10	or	-	25	2.25%	first 25	+	1.00%	over 25	3 out of last 10	70%	No	5.00%	with Reduction
Police Hired Before 1/1/2011	60	10	or	-	25	2.80%	first 25	+	1.00%	over 25	3 out of last 10	75%	No	4.50%	w/o Reduction*
Police Hired After 1/1/2011	60	10	or	-	25	2.25%	first 25	+	1.00%	over 25	3 out of last 10	70%	No	4.50%	with Reduction*
Police Hired After 8/11/2015	60	10	or	-	25	2.25%	first 25	+	1.00%	26 - 30	3 out of last 10	-	Yes	4.50%	No

* *Contributions made after 8/11/2015 are non-refundable.*
** *Contributions made after 7/1/2015 are non-refundable.*

POST-RETIREMENT INCREASE (Compounded)

Group	Effective Date	First Increase		Second Increase		Third Increase		Fourth Increase		Fifth Increase		Sixth Increase	
		Earliest Date After Retirement	Percent	Years After First	Percent	Years After Second	Percent	Years After Third	Percent	Years After Fourth	Percent	Years After Fifth	Percent
Fire	07/01/94	Age 60 or 5 yrs	5.0%	5	5.0%								
Fire	07/01/00	Age 60 or 5 yrs	5.0%	5	5.0%	5	5.0%						
Fire	07/01/08	Age 60 or 3 yrs	2.5%	2	2.5%	2	2.5%	3	2.5%	2	2.5%	3	2.5%
Fire AR4	07/01/94	Age 60 or 5 yrs	5.0%	5	5.0%								
Fire AR4	07/01/00	Age 60 or 3 yrs	2.5%	2	5.0%	2	2.5%	3	5.0%				
Fire AR4	03/19/07	Age 60 or 3 yrs	2.5%	2	2.5%	2	2.5%	3	2.5%	2	2.5%	3	2.5%
Police	07/01/95	Age 60 or 5 yrs	5.0%	5	5.0%								
Police	07/01/01	Age 60 or 5 yrs	5.0%	5	5.0%	5	5.0%						
Police	04/07/08	Age 60 or 3 yrs	2.5%	2	2.5%	2	2.5%	3	2.5%	2	2.5%	3	2.5%
Police AR4	07/01/96	Age 60 or 5 yrs	5.0%	5	5.0%								
Police AR4	07/01/00	Age 60 or 3 yrs	2.5%	2	5.0%	2	2.5%	3	5.0%				
Police AR4	03/19/07	Age 60 or 3 yrs	2.5%	2	2.5%	2	2.5%	3	2.5%	2	2.5%	3	2.5%
Police Command	07/01/96	Age 60 or 5 yrs	5.0%	5	5.0%								
Police Command	07/01/00	Age 60 or 3 yrs	2.5%	2	5.0%	2	2.5%	3	5.0%				
Police Command	03/19/07	Age 60 or 3 yrs	2.5%	2	2.5%	2	2.5%	3	2.5%	2	2.5%	3	2.5%

SUMMARY OF CURRENT ASSET INFORMATION FURNISHED FOR VALUATION

BALANCE SHEET

Current Assets		Reserves for	
Cash & Equivalents	$ 3,560,144	Employees' Contributions	$ 5,183,198
Receivables & Accruals	1,364,231	Employer Contributions	7,387,339
Bonds	23,323,613	Retired Benefit Payments	85,983,443
Common Stocks	57,194,733	Excess Earnings Reserve	1,142,492
Other Equities (ADR & Closed End Funds)	0		
Foreign Stocks	15,231,391		
Stock Mutual	0		
Real Estate	0		
Mortgages	0		
Other Assets (Securities lending)	0		
Amount due to Broker	(977,640)		
Total Current Assets	99,696,472	Total Reserves	99,696,472
Market Adjustment*	(2,749,763)	Market Adjustment*	(2,749,763)
Total Valuation Assets	$ 96,946,709	Total Valuation Assets	$ 96,946,709

* *See page A-4 for derivation of the market adjustment.*

REVENUES AND EXPENDITURES

	2015
Balance July 1, 2014	$92,913,702
Revenues	
Employees' Contributions	493,061
Employer Contributions	4,958,089
Medicare Reimbursement#	235,761
Recognized Net Investment Income for Valuation Purposes	8,608,266
Expenditures	
Benefit Payments	9,741,209
Medicare Payments#	235,761
Refund of Member Contributions	285,200
Balance June 30	$ 96,946,709

\# *Medicare payments to retirees are paid monthly by the custodian from Retirement System assets. At the end of each quarter, these amounts are reimbursed to the System by the City.*

RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS
COMPARATIVE STATEMENT

Year Ended	Added No.	Added Annual Pensions*	Removed No.	Removed Annual Pensions	End of Year No.	End of Year Annual Pensions Dollars	End of Year Annual Pensions Average	Present Value of Pensions	No. Active Per Retired	Pensions as a % of Pay
12/31/86	10	$ 249,692	2	$ 33,540	69	$ 1,220,175	$17,684	$ 13,596,631	2.0	22.9 %
12/31/87	9	266,349	1	3,000	77	1,483,524	19,267	16,630,723	1.8	25.3
12/31/88	10	289,473	1	11,510	86	1,761,487	20,482	19,739,811	1.6	30.0
12/31/89	10	280,390	2	28,664	94	2,013,213	21,417	22,414,969	1.4	37.1
12/31/90	13	317,193	2	39,083	105	2,291,323	21,822	25,575,508	1.3	35.5
12/31/91	9	227,823	3	41,903	111	2,477,243	22,318	27,476,856	1.2	41.8
06/30/93	19	645,713	4	63,001	126	3,059,955	24,285	34,013,466	1.0	50.7
06/30/94	5	240,063			131	3,300,018	25,191	36,004,097	1.0	52.1
06/30/95	12	310,528	6	72,195	137	3,538,351	25,827	38,275,321	0.9	50.8
06/30/96	5	218,810	2	60,982	140	3,696,179	26,401	41,070,046	0.9	51.9
06/30/97	8	263,580	3	39,650	145	3,908,161	26,953	42,664,623	0.9	50.7
06/30/98	3	113,305	4	57,891	144	3,963,575	27,525	43,132,825	0.9	49.0
06/30/99	5	184,089	3	73,575	146	4,074,089	27,905	43,562,686	0.9	48.3
06/30/00	8	210,945	6	63,777	148	4,221,257	28,522	45,621,123	1.0	46.0
06/30/01	11	561,909	1	31,905	158	4,751,261	30,071	51,576,330	0.9	50.8
06/30/02	7	382,191	1	25,921	164	5,107,531	31,143	55,538,402	0.9	53.4
06/30/03	11	542,341	6	125,964	169	5,523,908	32,686	60,372,325	0.8	58.8
06/30/04	5	270,095	4	62,801	170	5,731,202	33,713	62,257,626	0.8	59.2
06/30/05	3	208,628	4	74,027	169	5,865,803	34,709	63,269,802	0.8	56.9
06/30/06	1	159,216	1	23,281	169	6,001,738	35,513	63,705,139	0.8	56.2
06/30/07	9	457,887	4	173,043	174	6,286,582	36,130	66,195,952	0.8	58.8
06/30/08	11	541,013	10	205,207	175	6,622,388	37,842	70,074,164	0.7	61.3
06/30/09	2	70,988	2	62,270	175	6,631,106	37,892	69,744,638	0.8	57.6
06/30/10	14	903,334	8	194,140	181	7,340,300	40,554	74,174,079	0.7	68.9
06/30/11	3	189,988	2	54,426	182	7,475,862	41,076	76,305,408	0.7	66.1
06/30/12	23	1,587,008	5	59,572	200	9,003,298	45,016	97,569,177	0.6	93.2
06/30/13	8	370,387	6	171,451	202	9,202,234	45,556	98,403,589	0.6	92.4
06/30/14	9	613,570	6	145,681	205	9,670,123	47,171	103,931,310	0.6	96.1
06/30/15	2	112,315	4	54,849	203	9,727,589	47,919	105,988,711	0.6	91.5

* *Includes cost-of-living increases for ongoing retirees.*

RETIRANTS AND BENEFICIARIES JUNE 30, 2015
TABULATED BY TYPE OF PENSIONS BEING PAID

Type of Pensions Being Paid	No.	Annual Pensions
Age and Service Pensions		
Regular pensions - benefit terminating at death of retirant	31	$ 1,312,992
Regular pension - automatic benefit to spouse of deceased retirant	120	7,453,465
Option I pension - joint and survivor benefit	2	60,515
Survivor beneficiary of deceased retirant	33	605,867
Other - benefit being paid to an ex-spouse	10	127,225
Total Age and Service Pensions	196	9,560,064
Casualty Pensions		
Duty disability	3	63,016
Non-duty death pension to widow	4	104,509
Total Casualty Pensions	7	167,525
Total Pensions Being Paid	**203**	**$9,727,589**

RETIRANTS AND BENEFICIARIES JUNE 30, 2015
TABULATED BY ATTAINED AGE

	Retirants		Beneficiaries		Other *		Totals	
Attained Age	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions
40 - 44			1	$ 43,829	1	$17,851	2	$ 61,680
45 - 49	3	$ 218,363					3	218,363
50 - 54	22	1,637,279	1	36,775	1	8,463	24	1,682,517
55 - 59	16	1,421,574					16	1,421,574
60 - 64	26	1,797,161	1	12,927	2	49,206	29	1,859,294
65 - 69	23	1,339,796	2	83,081	3	19,348	28	1,442,225
70 - 74	29	1,320,602	7	134,827	2	19,054	38	1,474,483
75 - 79	21	689,223	9	155,084	1	13,303	31	857,610
80 - 84	12	357,607	10	161,470			22	519,077
85 - 89	1	27,789	4	49,375			5	77,164
90 - 94	3	80,594	2	33,008			5	113,602
Totals	**156**	**$8,889,988**	**37**	**$710,376**	**10**	**$127,225**	**203**	**$9,727,589**

* *Other – Benefits being paid to an ex-spouse.*

COMPARATIVE SCHEDULES

Active Members in Valuation

Year Ended	Active Members	Valuation Payroll	Average Pay	Average % Incr.	Average Age	Average Service
12/31/91	132	$ 5,927,498	$44,905	(4.1) %	40.0 yrs	13.9 yrs
06/30/93	130	6,029,505	46,381	3.3	38.1	12.1
06/30/94	130	6,335,138	48,732	5.1	38.0	12.0
06/30/95	126	6,970,235	55,319	13.5	38.0	12.1
06/30/96	132	7,115,881	53,908	(2.6)	37.6	11.6
06/30/97	135	7,715,637	57,153	6.0	37.8	11.3
06/30/98	135	8,088,601	59,916	4.8	38.4	11.9
06/30/99	138	8,426,850	61,064	1.9	38.5	12.0
06/30/00	141	9,169,906	65,035	6.5	38.8	12.1
06/30/01	139	9,353,854	67,294	3.5	38.4	11.5
06/30/02	143	9,566,435	66,898	(0.6)	37.8	11.0
06/30/03	133	9,387,845	70,585	5.5	38.2	11.4
06/30/04	130	9,687,275	74,518	5.6	38.9	12.1
06/30/05	129	10,307,055	79,900	7.2	39.4	12.7
06/30/06	134	10,675,665	79,669	(0.3)	39.7	13.0
06/30/07	134	10,684,097	79,732	0.1	40.0	13.5
06/30/08	127	10,802,446	85,059	6.7	40.5	14.1
06/30/09	134	11,507,841	85,879	1.0	40.7	14.4
06/30/10	128	10,654,588	83,239	(3.1)	40.2	14.1
06/30/11	130	11,313,370	87,026	4.5	40.5	14.5
06/30/12	129	9,660,548	74,888	(13.9)	38.1	12.3
06/30/13	130	9,955,027	76,577	2.3	38.4	12.5
06/30/14	128	10,066,742	78,646	2.7	38.2	12.4
06/30/15	130	10,636,062	81,816	4.0	38.8	13.0

Active Members Added to and Removed from Rolls

Year Ended	Number Added During Year A	Number Added During Year E	Normal Retirement A	Normal Retirement E	Disability Retirement A	Disability Retirement E	Died in Service A	Died in Service E	Withdrawal Vested A	Withdrawal Other A	Withdrawal Total A	Withdrawal Total E	Active Members End of Year
06/30/08	1	8	5	2.1	0	0.3	1	0.2	0	2	2	1.9	127
06/30/09	7	0	0	2.8	0	0.3	0	0.2	0	0	0	1.6	134
06/30/10	5	11	9	5.8	0	0.3	0	0.1	1	1	2	1.8	128
06/30/11	4	2	2	2.0	0	0.3	0	0.1	0	0	0	2.0	130
06/30/12	20	21	20	3.6	0	0.3	0	0.1	0	1	1	1.9	129
06/30/13	6	5	3	1.7	0	0.2	1	0.1	0	1	1	2.8	130
06/30/14	6	8	7	3.3	0	0.2	0	0.1	0	1	1	2.6	128
06/30/15	4	2	0	1.1	0	0.3	0	0.1	1	1	2	2.4	130

A represents actual number.
E represents expected number.

ACTIVE MEMBERS JUNE 30, 2015
BY AGE AND YEARS OF SERVICE

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	2							2	$ 48,379
25-29	14	7						21	1,369,148
30-34	8	12	3					23	1,658,307
35-39	3	7	11	4				25	1,977,847
40-44		1	4	9	6			20	1,825,899
45-49			1	4	20	1		26	2,450,854
50-54				3	6	2		11	1,123,919
55-59				1		1		2	181,709
Totals	**27**	**27**	**19**	**21**	**32**	**4**		**130**	**$10,636,062**

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

Age: 38.8 years.

Service: 13.0 years.

Annual Pay: $81,816.

INACTIVE VESTED MEMBERS JUNE 30, 2015
TABULATED BY ATTAINED AGE

Attained Age	No.	Estimated Deferred Annual Pensions
43	1	$ 47,998
Totals	**1**	**$ 47,998**

Average Age Now: 43.9 years.

SECTION C

VALUATION METHODS AND ASSUMPTIONS

ACTUARIAL COST METHOD

Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an individual entry-age normal cost method having the following characteristics:

- The annual normal costs for each individual active member, payable from the date of employment to the date of retirement, are sufficient to accumulate the value of the portion of the member's benefit at the time of retirement, death or disability.

- Each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

Unfunded actuarial accrued liabilities were amortized by level (principal and interest combined) percent-of-payroll contributions over a period of 24 years and added to the computed normal cost contribution. Assets in excess of actuarial accrued liabilities were amortized by level (principal & interest combined) percent-of-payroll contributions over a period of 10 years and applied as a credit to the computed normal cost contribution. This unfunded actuarial accrued liability payment reflects any payments expected to be made between the valuation date and the date contributions determined by this report are scheduled to begin.

The valuation assets used for funding purposes is derived as follows: prior year valuation assets are increased by contribution and expected investment income and reduced by refunds, benefit payments and expenses. To this amount is added 20% of the difference between expected and actual investment income for each of the previous five years. During periods when investment performance exceeds the assumed rate, actuarial value of assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, actuarial value of assets will tend to be greater than market value.

Excess Earnings Reserve. An amount equal to the market value of the Excess Earnings Reserve is added to the liabilities to assure proper allocation of assets to liabilities.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

The contribution requirements and benefit values of the System are calculated by applying actuarial assumptions to the benefit provisions and people information furnished, using the actuarial cost method described on the previous page.

The principal areas of financial risk which require assumptions about future experiences are:

- long-term rates of investment return to be generated by the assets of the System
- patterns of pay increases to members
- rates of mortality among members, retirants and beneficiaries
- rates of withdrawal of active members (without entitlement to a retirement benefit)
- rates of disability among members
- the age patterns of actual retirements

The monetary effect of each assumption is calculated for as long as a present covered person survives - - - a period of time which can be as long as a century.

Actual experience of the System will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

From time-to-time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations).

The actuarial assumptions are based upon experience studies dated September 18, 2008 and July 20, 2015.

VALUATION ASSUMPTIONS

The rate of investment return was 7.5% (net of expenses) a year, compounded annually. This assumption is used to make money payable at one point in time equal in value to an amount of money payable at another point in time. The assumed real rate of return (the net return in excess of the wage inflation rate) was 3.0%. Economic experience during the last 5 years has been as follows:

	Year Ending					5-Year
	6/30/15	6/30/14	6/30/13	6/30/12	6/30/11	Average
1) Nominal rate of return#	9.5%	10.8%	0.3%	0.2%	2.1%	4.6%
2) Increase in CPI	0.1	2.1	1.8	1.7	3.6	1.9%
3) Average salary increase*	6.0	6.7	4.4	(2.0)	6.1	4.2%
4) Real return:						
- investment purposes	9.4	8.7	(1.5)	(1.6)	(1.5)	2.7%
- funding purposes	3.5	4.1	(4.1)	2.2	(4.0)	0.4%
- assumption	3.0	3.0	3.0	3.0	3.0	3.0%

\# *The nominal rate of return was computed using the approximate formula: i = I divided by 1/2 (A+B-I), where I is realized investment income net of expenses, A is the beginning of year asset value and B is the end of year asset value.*

* *Based on members who were active both at the beginning and end of the year.*

A price inflation of approximately 3.0% was assumed. This assumption is not explicitly utilized in the calculation of valuation results.

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 benefit amounts will be based.

SAMPLE SALARY ADJUSTMENT FACTORS USED TO PROJECT CURRENT SALARIES

Sample	Percent Increase in Salary During Next Year	
Ages	Base	Promotion & Seniority
20	4.5 %	3.0 %
25	4.5	3.0
30	4.5	2.6
35	4.5	1.1
40	4.5	0.2
45	4.5	0.2
50	4.5	0.2
55	4.5	0.1
60	4.5	0.0

If the number of active members remains constant, then the total active member payroll will increase 4.5% annually, the base portion of the individual salary increase assumptions. The base salary increase assumption of 4.5% was first used for the June 30, 1999 valuation.

The mortality tables used were as follows:

Post-Retirement Mortality: The RP-2014 Healthy Annuitant Generational Mortality Tables, with blue collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 with future mortality improvements assumed each year using scale MP-2015.

Pre-Retirement Mortality: RP-2014 Employee Generational Mortality Tables, with blue collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 with future mortality improvements assumed each year using scale MP-2015.

Post-Retirement Disabled Mortality: The RP-2014 Disabled Mortality Tables, with blue collar adjustments and extended via cubic spline. This table is adjusted backwards to 2006 with the MP-2014 scale. A base year of 2006 with future mortality improvements assumed each year using scale MP-2015.

These tables were first used for the June 30, 2015 valuation. Sample values for Post-Retirement Mortality follow:

	Single Life Retirement Values			
Sample	Present Value of $1 Monthly for Life*		Future Life Expectancy (Years)*	
Ages	Men	Women	Men	Women
45	$149.05	$152.29	38.81	41.92
50	143.38	147.57	33.79	36.84
55	136.37	141.62	29.00	31.93
60	127.79	134.05	24.45	27.19
65	117.10	124.28	20.12	22.61
70	104.14	112.03	16.07	18.26
75	89.27	97.63	12.39	14.27
80	73.34	81.67	9.21	10.75

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

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. For purposes of the valuation, we assume that 75% of deaths in service are duty related and 25% of deaths in service are non-duty related. No margin for future mortality improvement has been applied.

VALUATION ASSUMPTIONS (CONTINUED)

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

Retirement Ages	All Others Percent of Active Members Retiring within Next Year	Fire Hired After 1/1/2010 Percent of Active Members Retiring within Next Year
45	30 %	%
46	30	
47	30	
48	30	
49	30	
50	30	50
51	30	30
52	40	40
53	40	40
54	40	40
55	40	40
56	50	50
57	50	50
58	50	50
59	50	50
60	100	100

A member is eligible for retirement after 25 or more years of service, or after attaining age 60 with 10 years of service. Fire members hired after 1/1/2010 are eligible for retirement after attaining age 50 with 25 years of service, or after attaining age 60 with 10 years of service.

VALUATION ASSUMPTIONS (CONCLUDED)

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	Years of Service	% of Active Members Separating within Next Year
ALL	0	10.00 %
	1	7.00
	2	5.00
	3	4.00
	4	3.50
25	5 & Over	3.50
30		2.90
35		1.50
40		0.60
45		0.50
50		0.50
55		0.50
60		0.50

Rates of disability were as follows:

Sample	% of Active Members Becoming Disabled within Next Year	
Ages	Men	Women
20	0.08%	0.10%
25	0.08%	0.10%
30	0.08%	0.10%
35	0.08%	0.10%
40	0.20%	0.36%
45	0.27%	0.41%
50	0.49%	0.57%
55	0.89%	0.77%
60	1.41%	1.02%

For purposes of the valuation we assume that 75% of disabilities are duty related and 25% of disabilities are non-duty related.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS
JUNE 30, 2015

Marriage Assumption:	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing:	Middle of the valuation year.
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 service nearest whole year on the date the decrement is assumed to occur.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	All decrements the first five years of service. Only mortality operates during retirement eligibility.
Service Credit Accruals:	It is assumed that members accrue one year of service credit per year.
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.
Normal Form of Benefit:	A 60% automatic joint and survivor payment is the assumed normal form of benefit for married people.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Payroll Adjustment:	As a result of Arbitration awards certain members had reported payroll increased 2% to reflect the July 1, 2014 payroll increase, which was granted retroactively.

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.

Experience Gain (Loss). A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

GLOSSARY

Funding Value of Assets. The value of assets derived by spreading the capital value changes (unrealized and realized gains and losses) in equal dollar installments over four years. This treatment removes the timing of investment activities from the valuation process.

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.

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.

SECTION D

FINANCIAL REPORTING

NOTE: GASB Statements No. 67 and No. 68 are effective for Governmental Retirement Plans for the fiscal year beginning after June 15, 2013 (GASB Statement No. 67) and the fiscal year beginning after June 15, 2014 (GASB Statement No. 68). These statements replace GASB Statements No. 25 and No. 27.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) -- Entry Age	(3) Unfunded AAL (UAAL) (2-1)	(4) Funded Ratio (1/2)	(5) Covered Payroll	(6) UAAL as of % of Covered Payroll ((2-1)/5)
2006	$ 93,730,948	$ 107,602,157	$ 13,871,209	87.1 %	$ 10,675,665	130%
2007 #	99,906,347	111,001,598	11,095,251	90.0	10,684,097	104
2008 #	105,559,450	117,284,024	11,724,574	90.0	10,802,446	109
2009 *	103,972,349	125,940,115	21,967,766	82.6	11,507,841	191
2010 #	102,981,697	129,441,265	26,459,568	79.6	10,654,588	248
2011 #	101,229,663	139,365,119	38,135,456	72.6	11,313,370	337
2012	94,147,081	145,517,428	51,370,347	64.7	9,660,548	532
2013	88,557,717	148,187,126	59,629,409	59.8	9,955,027	599
2014	92,913,702	152,788,010	59,874,308	60.8	10,066,742	595
2015 *#	96,946,709	155,713,847	58,767,138	62.3	10,636,062	553

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Fiscal Year Ended 6/30	Valuation Year Ended 6/30	Contribution Rates as Percents of Valuation Payroll	Computed Dollar Contribution Based on Projected Valuation Payroll	Actual Required Contribution Based on Actual Payroll		Percentage Contributed
2008	2006	25.84 %	$ 2,946,876	$ 3,009,786		100%
2009	2007 #	24.30	2,773,438	2,799,831		100%
2010	2008 #	24.90	2,873,399	2,894,223		100%
2011	2009 *	29.52	3,628,981	3,452,136		95%
2012	2010 #	30.57	3,479,418	3,134,333	**	90%
2013	2011 #	31.73	3,834,745	3,199,458		83%
2014	2012	42.81	4,417,956	4,478,945		101%
2015	2013	47.25	5,024,799	4,958,089		99%
2016	2014	47.76	5,136,032	-		-
2017	2015 *#	48.24	5,603,001	-		-

\# *Retirement System amended.*

* *Revised actuarial assumptions and/or methods.*

** *Includes Funding Reserve transfer of $1,081,26 (Formerly included in FY 2010).*

REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation follows.

Valuation date	June 30, 2015
Actuarial cost method	Entry Age
Amortization method	Level percent closed
Remaining amortization period	10 years if overfunded 24 years if underfunded
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return	7.5
Projected salary increases*	4.5% - 7.5%
*Includes inflation at	4.5
Cost-of-living adjustments (Compounded)	
All Fire (effective 7/1/94), Police (effective 7/1/95), Police Command (effective 7/1/96), Police AR4 (effective 7/1/96)	5% cost-of-living increases at age 60 or 5 years after retirement, second increase of 5% five years after the first increase.
Fire (effective 7/1/00), Police (effective 7/1/01)	5% cost-of-living increases at age 60 or 5 years after retirement, second increase of 5% five years after the first increase. A third increase of 5% five years after the second increase.
Police Command (effective 7/1/00), Police AR4 (effective 7/1/00), Fire AR4 (effective 7/1/00)	2.5% cost-of-living increases at age 60 or 3 years after retirement, second increase of 5% two years after the first increase. A third increase of 2.5% two years after the second increase. A fourth increase of 5% three years after the third increase.
Fire AR4, Police AR4, and Police Command (effective 3/19/07), Police (effective 4/7/08), Fire (effective 7/1/08)	2.5% cost-of-living increases at age 60 or 3 years after retirement, second increase of 2 5% two years after the first increase. A third increase of 2.5% two years after the second increase. A fourth increase of 2.5% three years after the third increase. A fifth increase of 2.5% two years after the fourth increase. A sixth increase of 2.5% three years after the fifth increase.

REQUIRED SUPPLEMENTARY INFORMATION (CONCLUDED)

Membership of the plan consisted of the following at June 30, 2015, the date of the latest actuarial valuation:

Retirees and beneficiaries receiving benefits	203
Terminated plan members entitled to but not yet receiving benefits	1
Active plan members	130
Total	334

GRS
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December 17, 2015

Secretary of the Retirement Board
City of St. Clair Shores Police
and Fire Retirement System
27600 Jefferson Circle Drive
St. Clair Shores, Michigan 48081-9971

Re: 66th Annual Actuarial Valuation

Dear Board Members:

Please find enclosed twenty-five copies of the Sixty-sixth Annual Actuarial Valuation report for the City of St. Clair Shores Police and Fire Retirement System.

Sincerely,

Rebecca L. Stouffer

Rebecca L. Stouffer

RLS:mrb
Enclosure