

**CITY OF KALAMAZOO EMPLOYEES RETIREMENT SYSTEM
SIXTY-SECOND ANNUAL ACTUARIAL VALUATION**

DECEMBER 31, 2013

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May 13, 2014

The Retirement Investment Committee
The Board of Trustees
City of Kalamazoo Employees Retirement System
Kalamazoo, Michigan

Ladies and Gentlemen:

Submitted in this report are the results of the December 31, 2013 Actuarial Valuation of the City of Kalamazoo Employees Retirement System. This report was prepared at the request of the Retirement System. This report may be provided to parties other than the Retirement System only in its entirety and only with the permission of the System. This report should not be relied on for any other purpose.

The actuarial calculations were prepared for purposes of complying with the requirements of Statements No. 25 and No. 27 of the Governmental Accounting Standards Board (GASB) and the Michigan State Constitution. The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards and appropriate law. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying the City's financial reporting and contribution requirements may produce significantly different results.

The valuation was based upon information furnished by the City of Kalamazoo concerning Retirement System benefits, financial transactions, and individual active members, terminated members, retirees and beneficiaries. Data was checked for internal and year-to-year consistency, but was not otherwise audited by us. We are not responsible for the accuracy or completeness of the information provided by the City.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements.

To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the applicable state statutes. James D. Anderson and Curtis Powell are independent of the plan sponsor and are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries (MAAA) to render the actuarial opinion contained herein.

Respectfully submitted,



James D. Anderson, FSA, EA, MAAA



Curtis Powell, EA, MAAA

JDA/CP:ah

SECTION A
EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Computed Employer Contributions - Fiscal Year Beginning January 1, 2014.

As expected, based on last year's results, City contributions will not be required for year 2014.

The pensions provided by the City to its employees through the Retirement System are valuable financial benefits. Every year that City employees earn another year of credit toward their pensions, there is a cost associated with that credit. The City's cost of benefits accruing during the year, the City normal cost, totals \$5.6 million for fiscal year beginning January 1, 2014. Refer to page B-2 for additional information. The reason that City contributions are not currently needed to support the Retirement System is that favorable experience over decades has resulted in assets in excess of the accrued liability as of the valuation date. This overfunded liability is currently supporting the pension costs that would otherwise require City contributions. As employees accrue larger pensions by earning additional service each year, the cost of those larger pensions may use up the overfunded liability.

2013 Funding Position

This year valuation assets represent 126.8% of accrued liabilities; last year the ratio was 120.1%. The increase in funding position is the result of higher than anticipated return on assets and recognition of deferred investment gains. In addition, System assets as of December 31, 2013 include an employer contribution of \$1,811,492 to cover the cost of lump sum payments made in relation to the Early Retirement Initiative.

Contribution Requirements Longer Term

The City continues to have an overfunding credit and application of the credit brings the required contribution amount to \$0. The System calculates contributions based on a smoothed value of assets. This smoothed asset value, or actuarial value of assets, recognizes a given year's asset gain or loss over the current and subsequent four years. Looking forward from December 31, 2013, scheduled recognition of prior gains will help strengthen the overfunding credit. Future investment gains could offer additional support to the overfunding. Conversely, future investment losses would reduce the credit. Any significant losses will hasten the emergence of a City contribution requirement. Note that a prudent practice to dampen volatility in contributions when the credit disappears is to lengthen the period for amortizing overfunding credits from the current period of 10 years.

EXECUTIVE SUMMARY (CONTINUED)

We understand that certain groups have an employee contribution rate tied to the funded status of the Plan. For example, if the Plan is less than 120% funded, additional employee contributions are required. The funded percent as of December 31, 2013 is 126.8%. Please note that it is possible that the funded percent could fall below 120% at the next valuation as of December 31, 2014.

Reasons for Changes

There are three general reasons why contribution requirements change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the System. The second is a change in the valuation assumptions used to predict future occurrences and the methods used to finance the benefits. The third is the difference during the year between the System's actual experience and what the assumptions predicted, or the plan experience.

Changes in Plan Provisions

There have been no plan provision changes since the 2012 valuation.

Changes in Cost Methods and Actuarial Assumptions

There have been no changes in actuarial methods or assumptions since the 2011 valuation.

2013 Plan Experience

There was an experience gain of \$28,683,324 during 2013, primarily due to favorable asset experience. This represents 6.82% of the 2012 accrued liabilities. The effect of this gain is an increase in the overfunding credit.

EXECUTIVE SUMMARY (CONCLUDED)

Causes of the Gain

The market value of assets returned 20.23% in 2013 and the return on the (smoothed) valuation assets was 13.63%. Net investment income on the smoothed basis was greater than the long-term assumption of 7.5%, resulting in a gain of \$30,221,056. This gain was slightly offset by a loss resulting from higher than anticipated retiree survival.

Investment gain (loss)	\$30,221,056
Remaining gain (loss)	<u>(1,537,732)</u>
Gain (loss) from all causes	\$28,683,324

Conclusion

For years, the overfunded position enjoyed by the System has generated a funding credit which allowed the City to temporarily reduce (and then temporarily eliminate) annual contributions to the System trust. As of December 31, 2013, the market value of assets exceeds the smoothed value by \$62,689,628. This means there are net unrecognized gains which will be recognized over the next 4 years that will help improve the funded status of the System. To guard against undue contribution volatility, the Board may consider lengthening the amortization period for unfunded or overfunded accrued liabilities. The amortization period will be reviewed in the next experience study.

SECTION B
VALUATION RESULTS

COMPUTED CONTRIBUTIONS TO PROVIDE BENEFITS

The Retirement System is supported by contributions from the City (when required) and active members and by the investment income earned on System assets. Member contribution rates are determined by the benefit provisions of the System and are summarized in Section B of this report. The City provides an actuarially determined contribution, the remainder, if any, needed to meet the financial objective.

Member and City contributions cover both (i) normal cost, and (ii) financing of the unfunded accrued liability over a period of future years. The normal cost is the portion of System costs allocated to the current year by the valuation method described in Section D. The unfunded accrued liability is the portion of System costs not covered by present System assets and future normal costs.

For a plan that is overfunded, contribution income needs to cover the normal cost less an amortization credit on the overfunding. When a plan is extremely overfunded, the amortization credit can completely offset the normal cost, eliminating the need for employer contribution income. This can persist for years as long as investment income is sufficient to maintain the overfunding.

When contributions are once again required, we recommend one of the following procedures for determining City contributions to the Retirement System.

- (1) Contribute dollar amounts for a period which are equal to the City's percent-of-payroll contribution requirements on page B-2 multiplied by the covered active member payroll for the period. Adjustments should be made as necessary to exclude items of pay that are not covered compensation for Retirement System benefits and to include non-payroll payments that are covered compensation.
- (2) Contribute the dollar amounts on page B-2.

**COMPUTED CONTRIBUTIONS TO PROVIDE BENEFITS
EXPRESSED AS PERCENTS AND DOLLARS OF ACTIVE MEMBER PAYROLL**

Contributions for the Year Beginning January 1,	2014	2013
Normal cost of benefits		
Age & service	15.48 %	15.65 %
Disability	1.13	1.15
Pre-retirement survivor	0.47	0.47
Refunds of member contributions	0.18	0.18
Total normal cost	17.26	17.45
Administrative expense allowance	0.60	0.60
Less: Member contributions*	2.93	3.00
Employer normal cost	14.93	15.05
Unfunded actuarial accrued liabilities^	(36.70)	(26.64)
Employer Contribution Requirement@	(21.77)	(11.59)
Payroll	\$ 36,331,892	\$ 36,538,969
Recommended Employer Contribution	\$ 0	\$ 0

Contributions for the Year Beginning January 1,	2014	2013
Normal cost of benefits		
Age & service	\$ 5,849,144	\$ 5,947,083
Disability	426,973	437,006
Pre-retirement survivor	177,590	178,602
Refunds of member contributions	68,013	68,401
Total normal cost	6,521,720	6,631,092
Administrative expense allowance	226,711	228,003
Less: Member contributions*	1,107,105	1,140,016
Employer normal cost	5,641,326	5,719,079
Unfunded actuarial accrued liabilities^	(13,867,157)	(10,123,340)
Employer Contribution Requirement@	\$ (8,225,831)	\$ (4,404,261)
Payroll	\$ 36,331,892	\$ 36,538,969
Recommended Employer Contribution	\$ 0	\$ 0

* Weighted average of various contribution rates.

@ As the System cannot contribute back to the employer, no employer contribution is required.

^ Page B-4 displays the unfunded accrued liabilities (or overfunding) that are amortized by the contribution rates shown above.

HISTORY OF CITY'S CONTRIBUTION RATES

Fiscal Year	Valuation Date Dec. 31	Contribution as Percent of Valuation Payroll	Recommended	Actual
1995 *	1994	5.41 %	\$1,889,474	\$1,889,474
1996 *	1995	4.30	1,500,400	1,500,398
1997 *@	1996	2.35	840,966	841,000
1998 *	1997	0.00	0	0
1999 *	1998	0.00	0	0
2000 *@	1999	0.00	0	0
2001 *	2000	0.00	0	0
2002 *	2001	0.00	0	0
2003 *@	2002	0.00	0	0
2004 *	2003	0.00	0	0
2005 @	2004	0.00	0	0
2006 *@	2005	0.00	0	0
2007 *	2006	0.00	0	0
2008 *	2007	0.00	0	0
2009 *	2008	0.00	0	0
2010 *@	2009	0.00	0	0
2011 *@	2010	0.00	0	0
2012 *	2011	0.00	0	0
2013 *#	2012	4.99	0	1,811,492
2014	2013	0.00	0	0

* *Retirement System amended.*

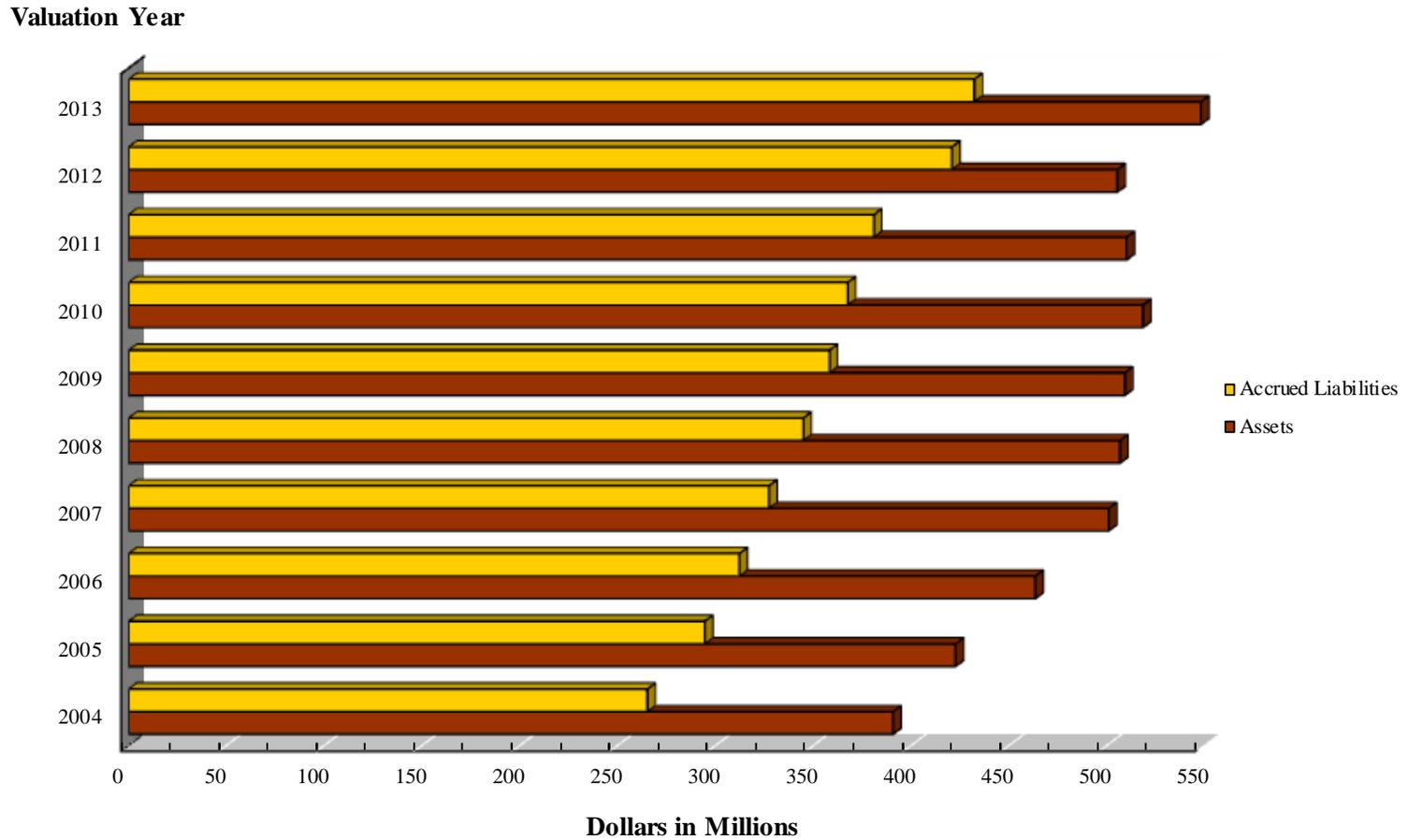
@ *Revised actuarial assumptions and/or methods.*

Employer contribution of \$1,811,492 to cover the cost of lump sum payments in relation to the Early Retirement Initiative.

UNFUNDED ACCRUED LIABILITY

	<u>Totals</u>
A. Accrued Liability	
1. For Retirees and Beneficiaries	\$325,233,541
2. For Vested Terminated Members	3,353,299
3. For Present Active Members	
a. Value of expected future benefit payments	158,659,146
b. Value of future normal costs	<u>55,097,460</u>
c. Active member liability: (a) - (b)	103,561,686
4. Total	<u>432,148,526</u>
B. Present Assets	
1. Valuation Basis	547,923,629
2. Market Basis	610,613,257
C. Unfunded Accrued Liability (Excess Assets)	
1. Valuation Basis: (A.4) - (B.1)	(115,775,103)
2. Market Basis: (A.4) - (B.2)	(178,464,731)
D. Funded percent	
1. Valuation Basis: (B.1) / (A.4)	126.8%
2. Market Basis: (B.2) / (A.4)	141.3%

ASSETS AND ACCRUED LIABILITIES



2004 assets equaled 147% of accrued liabilities.

2013 assets equaled 127% of accrued liabilities.

**DEVELOPMENT OF EXPERIENCE GAIN (LOSS)
YEAR ENDED DECEMBER 31, 2013**

Actual experience will never (except by coincidence) exactly match 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 development of the experience gain (loss) is shown below.

	Year Ending December 31	
	2013	2012
(1) UAAL* at start of year	\$(84,523,588)	\$(129,129,295)
(2) Normal cost from prior year	6,557,907	6,350,473
(3) Actual contributions**	2,921,549	1,199,113
(4) Interest accruals on (1) (2) and (3)	(6,204,549)	(9,493,849)
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	(87,091,779)	(133,471,784)
(6) Change from benefit increases	0	0
(7) Early Retirement Initiative	0	(26,998,061)
(8) Change from revised actuarial assumptions and/or methods	0	0
(9) Expected UAAL after changes: (5) + (6) + (7)	(87,091,779)	(106,473,723)
(10) Actual UAAL at end of year	(115,775,103)	(84,523,588)
(11) Gain (loss): (8) - (9)	28,683,324	(21,950,135)
(12) Gain (loss) as percent of actuarial accrued liabilities at start of year	6.82%	(7.56%)

* *Unfunded Actuarial Accrued Liabilities.*

** *The 2013 actual contribution includes a \$1,811,492 employer contribution to cover the cost of lump sum payments related to the Early Retirement Initiative.*

2013 Gain (Loss)		
Totals	Investment	Non-Investment
\$28,683,324	\$30,221,056	\$(1,537,732)

DEVELOPMENT OF VALUATION ASSETS

Year Ended December 31:	2011	2012	2013	2014	2015	2016	2017
A. Valuation Assets Beginning of Year	\$518,339,022	\$509,931,421	\$505,234,953				
B. Market Value End of Year	482,881,173	530,333,893	610,613,257				
C. Market Value Beginning of Year	511,217,114	482,881,173	530,333,893				
D. Non-Investment Net Cash Flow	(17,122,196)	(24,115,992)	(24,506,026)				
E. Investment Income							
E1. Market Total: B - C - D	(11,213,745)	71,568,712	104,785,390				
E2. Amount for Immediate Recognition (7.5%)	38,233,344	37,340,507	36,973,646				
E3. Amount for Phased-In Recognition: E1-E2	(49,447,089)	34,228,205	67,811,744				
F. Phased-In Recognition of Investment Income							
F1. Current Year: 0.2 x E3	(9,889,418)	6,845,641	13,562,349				
F2. First Prior Year	7,682,144	(9,889,418)	6,845,641	\$ 13,562,349			
F3. Second Prior Year	12,020,338	7,682,144	(9,889,418)	6,845,641	\$ 13,562,349		
F4. Third Prior Year	(34,579,690)	12,020,338	7,682,144	(9,889,418)	6,845,641	\$ 13,562,349	
F5. Fourth Prior Year	(4,752,123)	(34,579,688)	12,020,340	7,682,145	(9,889,417)	6,845,641	\$ 13,562,348
F6. Start-up Phase-In	0	0	0	0	0	0	0
F7. Total Phased-In Recognition	(29,518,749)	(17,920,983)	30,221,056	18,200,717	10,518,573	20,407,990	13,562,348
G. Valuation Assets End of Year: A + D + E2 + F7	509,931,421	505,234,953	547,923,629				
H. Difference between Market & Valuation Assets: B - G	(27,050,248)	25,098,940	62,689,628	44,488,911	33,970,338	13,562,348	0
I. Valuation Asset Recognized Rate of Return	1.71%	3.90%	13.63%				
J. Market Value Recognized Rate of Return	-2.23%	15.20%	20.23%				

The Valuation 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, Valuation Assets will tend to be greater than market value. During periods when investment performance is less than the assumed rate, Valuation Assets will tend to be greater than Market Value. The Valuation Assets are unbiased with respect to Market Value. At any time, it may be either greater or less than Market Value. If assumed rates are exactly realized for 5 consecutive years, it will become equal to Market Value.

VALUATION ASSET GROWTH HISTORY

Year	Net Contribution Income	Net Investment Return	Benefit Payments and Refunds	Year End Assets
1989	\$ 4,043,221	\$ 13,019,999	\$ 3,889,355	\$ 91,210,162
1990	4,111,620	7,931,746	4,273,712	98,979,816
1991	4,091,054	17,554,303	4,580,471	116,044,702
1992	3,750,367	15,352,600	4,855,017	130,292,652 *
1993	3,913,331	17,204,848	5,137,776	146,273,055 *
Five Year Period	19,909,593	71,063,496	22,736,331	
1994	3,265,544	16,061,927	6,052,552	159,547,974 *
1995	3,474,935	23,926,130	6,592,176	180,356,863 *
1996	3,230,350	24,892,891	7,838,253	200,641,851 *
1997	2,453,815	47,847,856	8,327,995	242,615,527 *
1998	1,748,664 @	33,752,473	9,115,891	269,000,773 *@
1998	--	--	--	267,200,773 #*
Five Year Period	14,173,308	146,481,277	37,926,867	
1999	1,474,740	45,017,668	9,993,770	303,699,411 *
2000	1,302,970	36,510,420	10,069,664	331,443,137 *
2001	1,261,691	27,898,652	11,446,161	349,157,319 *
2002	1,313,297	9,341,851	11,157,971	348,654,496 *
2003	1,314,089	23,609,527	12,390,484	361,187,628 *
Five Year Period	6,666,787	142,378,118	55,058,050	
2004	1,360,815	41,621,866	13,555,032	390,615,277 *
2005	1,232,973	44,444,158	13,726,647	422,565,761 *
2006	1,238,628	53,842,184	14,365,610	463,280,963 *
2007	1,344,408	52,089,141	15,926,268	500,788,244 *
2008	1,445,963	20,324,800	15,966,434	506,592,573 *
Five Year Period	6,622,787	212,322,149	73,539,991	
2009	1,368,975	17,762,035	16,663,174	509,060,409 *
2010	1,432,395	24,986,635	17,140,417	518,339,022 *
2011	1,268,330	8,714,595	18,390,526	509,931,421 *
2012	951,916	19,419,524	25,067,907 &	505,234,954 *
2013 \$	2,652,485	67,194,702	27,158,512 &	547,923,629 *
Five Year Period	7,674,101	138,077,491	104,420,536	

* Does not reflect future contributions to purchase service.

@ Before transfer to County.

After transfer of \$1,800,000 to County.

& Includes special distributions under the ERI.

\$ Includes a \$1,811,492 employer contribution to cover the cost of lump sum payments related to the Early Retirement Initiative.

VALUATION ASSET INVESTMENT EXPERIENCE HISTORY
(\$000 OMITTED)

Year	Assumed Net Investment Income		Net Dividends and Interest		Recognized Gains (Losses) *		Net Investment Income		Experience Gain (Loss)
	Amount	%	Amount	%	Amount	%	Amount	%	
1994	\$ 10,866	7.50 %	\$4,776	3.30 %	\$ 11,286	7.79 %	\$ 16,062	11.09 %	\$ 5,196
1995	11,849	7.50	6,177	3.91	17,749	11.23	23,926	15.14	12,077
1996	13,354	7.50	6,211	3.49	18,682	10.49	24,893	13.98	11,539
1997	14,828	7.50	6,244	3.16	41,604	21.04	47,848	24.20	33,020
1998	17,920	7.50	6,259	2.62	27,494	11.51	33,752	14.13	15,833
1999	19,721	7.50	7,844	2.98	37,173	14.14	45,018	17.12	25,297
2000	22,449	7.50	8,675	2.90	27,836	9.30	36,510	12.20	14,062
2001	24,477	7.50	5,705	1.75	22,171	6.79	27,876	8.54	3,398
2002	25,818	7.50	5,113	1.49	4,229	1.21	9,342	2.70	(16,476)
2003	25,734	7.50	5,790	1.69	17,819	5.21	23,610	6.90	(2,124)
2004	26,632	7.50	7,356	2.07	34,266	9.65	41,622	11.72	14,989
2005	28,828	7.50	15,466	4.02	28,978	7.54	44,444	11.56	15,617
2006	31,200	7.50	21,321	5.13	32,521	7.82	53,842	12.94	22,642
2007	34,199	7.50	24,659	5.41	27,430	6.02	52,089	11.42	17,890
2008	37,015	7.50	14,940	3.03	5,385	1.09	20,325	4.12	(16,690)
2009	37,421	7.50	7,655	1.53	10,107	2.03	17,762	3.56	(19,659)
2010	37,590	7.50	9,773	1.95	15,214	3.04	24,987	4.99	(12,604)
2011	38,233	7.50	9,511	1.87	(796)	(0.16)	8,715	1.71	(29,519)
2012	37,341	7.50	14,063	2.82	5,357	1.08	19,420	3.90	(17,921)
2013	36,974	7.50	13,899	2.82	53,296	10.81	67,195	13.63	30,221

* In addition to net interest and dividends.

DEVELOPMENT OF VALUATION INVESTMENT GAIN (LOSS) YEAR ENDED DECEMBER 31, 2013

The December 31, 2013 valuation assumed an average 7.5% net return on valuation assets for future years. Net investment return in excess of 7.5% represents a gain. If net investment return falls short of 7.5%, the difference between an income of 7.5% and the net return represents a loss. For the year ended December 31, 2013, the valuation anticipated investment return of \$36,973,646 (see item E2 on page B-7). Total phased-in recognition amounted to a loss of \$30,221,056 for the year (see item F7 on page B-7), resulting in a return of 13.63% on a valuation basis (see item I on page B-7).

Please note that this analysis uses asset values and investment income as defined for the actuarial valuation (dollar weighted). It is not, therefore, appropriate as a measure of manager performance.

RATES OF RETURN AND CHANGE IN PAYS AND LIABILITIES

	Year Ended December 31					5 Year Average*
	2013	2012	2011	2010	2009	
Increase in average salary#	4.6%	4.6%	3.0%	1.0%	2.5%	3.1%
Return on assets^	13.6	3.9	1.7	5.0	3.6	5.5
Liability growth	2.7	10.5	3.7	2.6	3.9	4.6

* *Compound rate of increase.*

For members employed throughout the most recent two years.

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

SECTION C

SUMMARY OF THE INFORMATION SUBMITTED FOR THE VALUATION

BRIEF SUMMARY OF BENEFIT PROVISIONS AS REPORTED FOR DECEMBER 31, 2013 VALUATION

Eligibility

Amount

REGULAR RETIREMENT (no reduction factor for age)

General: Age 57 with 25 years of service, or age 62 with 10 years of service. AFSCME members only may also retire at age 60 with 20 years of service.

Total service multiplied by:

2.1% of FAC – KMEA – effective 1/1/08
2.1% of FAC – AFSCME – effective 10/2/07
2.1% of FAC – Metro Transit
2.3% of FAC – Exempt members
2.1% of FAC – Other General members–CSO – effective 1/1/08
2.7% of FAC – Public Safety members

FAC (final average compensation) – Highest 3 consecutive years out of the last 10.

Public Safety: 25 years of service or age 50 with 10 years of service.

Maximum benefit for Public Safety members is equal to 70.2% of FAC.

EARLY RETIREMENT (age reduction factor used)

General: Age 55 with 15 years of service.

Computed as a regular retirement but reduced by 4/10 of 1% for each month and fraction of a month by which retirement precedes age 62 if less than 25 years of service or age 57 if 25 or more years of service.

Public Safety: 20 years of service.

2% of final average compensation multiplied by years of credited service.

DEFERRED RETIREMENT

10 years of service for most members, 5 years for Exempt hired before 9/1/2010, 9 years for AFSCME and 8 years for KMEA hired before 1/1/2009. Benefit begins at age 62 for General employees, and at age 50 for Public Safety employees.

General: Computed as a regular or early retirement but based upon service and final average compensation at termination date.

Public Safety: Computed as early retirement.

NON-DUTY DEATH-IN-SERVICE

10 years of service for most members, 5 years for Exempt hired before 9/1/2010, 9 years for AFSCME and 8 years for KMEA hired before 1/1/2009.

General: Computed as a regular retirement but actuarially reduced in accordance with a 100% joint and survivor election.

Public Safety: A benefit of 33-1/3% of final compensation is paid to the surviving spouse. Unmarried children under 18 years of age receive equal shares of 25% of final compensation.

DUTY DEATH-IN-SERVICE

Payable to the survivors of a member who died in the line of duty.

A benefit of 33-1/3% of final compensation is paid to the surviving spouse. Unmarried children under 18 years of age receive equal shares of 25% of final compensation. Worker's compensation payments are offset.

NON-DUTY DISABILITY

10 years of service for most members, 5 years for General Exempt hired before 9/1/2010, 9 years for AFSCME and 8 years for KMEA hired before 1/1/2009.

Computed as regular retirement. Reduced on a dollar-for-dollar basis by amount of worker's compensation, if any.

BRIEF SUMMARY OF BENEFIT PROVISIONS AS REPORTED FOR DECEMBER 31, 2013 VALUATION

Eligibility

Amount

DUTY DISABILITY

No age or service requirements.

General: Computed as regular retirement with additional service credit granted from day of actual retirement to date of voluntary retirement eligibility.

Public Safety: Computed as regular retirement. During worker's compensation period benefit cannot exceed the difference between final compensation and worker's compensation.

DEATH AFTER RETIREMENT

Spouse of Public Safety member retired on or after July 1, 1972.

50% of the regular retirement benefit the deceased retiree was receiving.

POST-RETIREMENT BENEFIT INCREASES

AFSCME members who retire on and after 10/25/1999.

1% increases compounded annually, beginning 1 year after retirement; 2% compounded annually beginning at age 75.

KMEA members.

1.5% increases compounded annually, beginning the latter of the Retirees 64th birthday and 1 year after retirement; 2% compounded annually beginning at age 75 (effective in 2002).

Transit Union members.

1% increases compounded annually, beginning 1 year after retirement; 2% compounded annually beginning at age 75.

Public Safety members who retired on and after 1/1/95 with 25 or more years of service.

2% increases compounded annually.

Exempt members.

1.5% increases compounded annually one year after retirement for members who elected to contribute by May 2006.

13TH CHECKS

Retired by 12/31/1999; retired at least 5 years; have attained age 70 prior to June 1 of the year preceding the periodic payment to be made; had at least 25 years of service with the City; ineligible for post-retirement benefit increases; pension less than \$20,000. Continuation of this program is conditional as described in the ordinance.

The periodic payment described herein shall be made in June every third year, commencing 2001; however, no payment shall be made in any year in which the fund's actuary projects (based upon a valuation of the fund as of December 31 of the prior year) the need for City contributions to the fund (for one or more actuarial groupings) within 10 years of the projection nor if the actuary recommends a contribution by the City (for one or more actuarial groupings) for that year. In the event a periodic payment is not made in a year in which it would otherwise occur (because of the actuary's projection or recommendation), then the payment shall be made in the next year in which no such actuarial projection or recommendation is made. In the event that a periodic payment is so delayed, future periodic payments shall be made every third year thereafter (so long as not prohibited by an actuarial projection or recommendation).

MEMBER CONTRIBUTIONS

AFSCME members:

1% - effective 10/2/06. If funding % goes below 120% contribution rate reverts to 2%.

Transit Union and KMEA members:

1% of AC.

Exempt members:

1.5% of AC, 3% of AC for Exempt Members hired after 6/1/2006, 3.5% for Exempt Members who signed up for the PRA by May of 2006.

Non-Sworn Public Safety members:

1% of AC.

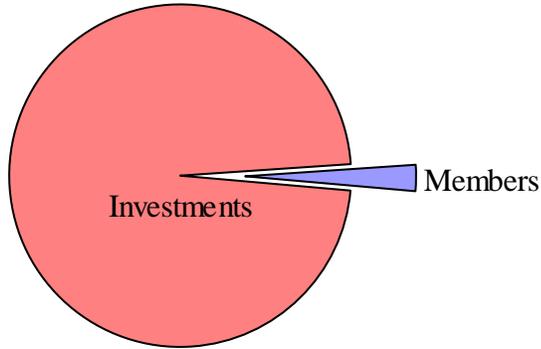
Sworn Public Safety members:

4.5% of AC. If funding % goes below 120% contribution rate reverts to 6.5%.

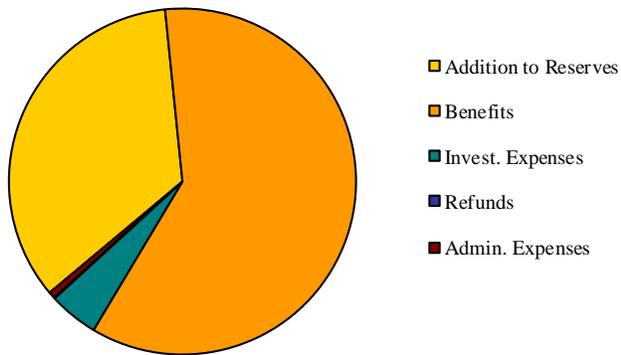
CITY CONTRIBUTIONS

Actuarially determined amounts, which, together with member contributions, are sufficient to cover both (i) normal costs of the plan, and (ii) financing of unfunded accrued benefit values over a selected period of future years.

**INCOME AND DISBURSEMENTS
DURING YEAR ENDED DECEMBER 31, 2013
(MARKET VALUE)**



Source of \$45,061,934 in Income



Application of \$45,061,934 Income

See page C-4 for more information.

REPORTED FINANCIAL INFORMATION
YEAR ENDED DECEMBER 31, 2013
MARKET VALUE

Income and Expenses

Revenues:

a. Member contributions	\$ 1,110,057	
b. Employer contributions	1,811,492	
c. Interest and dividends	15,982,726	
d. Gain on sale of investments	26,157,794	
e. Unrealized gains and losses	64,728,844	
f. Miscellaneous	<u>(135)</u>	
g. Total		\$109,790,778

Expenditures:

a. Refunds of member contributions	46,718	
b. Benefits paid	27,111,793	
c. Administrative expenses	269,064	
d. Investment expenses	<u>2,083,840</u>	
Total		<u>29,511,415</u>

Reserve Increase:

Total revenues minus total expenditures		<u><u>\$80,279,363</u></u>
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**REPORTED FINANCIAL INFORMATION
YEAR ENDED DECEMBER 31, 2013**

Assets and Reserves on Market Value Basis

Assets:		Reserve Accounts:	
a. Cash or equivalents	\$ 613,117	a. Member contributions	\$ 36,928,199
b. Receivables net of payables	(36,371)	b. Employer contributions	301,963,065
c. Stocks	430,430,678	c. Retired benefit payments	271,721,995
d. Fixed income	148,709,172		
e. Real Estate Investment Fund	<u>30,896,663</u>		
 Total	 <u><u>\$610,613,259</u></u>	 Total	 <u><u>\$610,613,259</u></u>

The value of future benefit payments to retirees and beneficiaries as of December 31, 2013 is \$325,233,541. The value of the Reserve for Retired Benefit Payments was \$271,721,995. The figures below compare the retired liabilities to the reported retiree reserve balance.

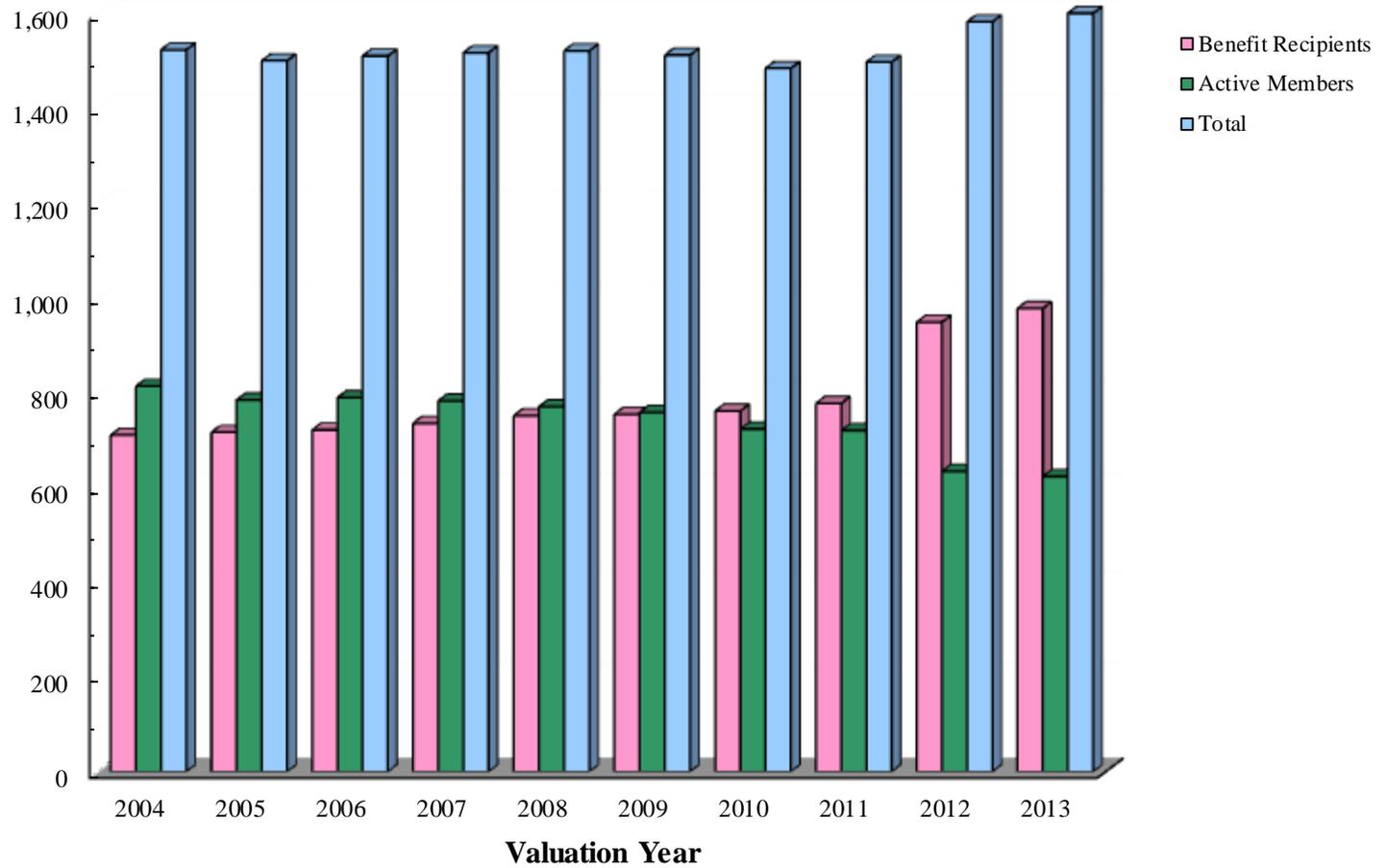
<u>Accrued Liability</u>	<u>Reported Retiree Reserve</u>	<u>Unfunded Liability (Excess Assets)</u>
\$ 325,233,541	\$ 271,721,995	\$ 53,511,546

Our valuation assumes that amounts equal to the unfunded retiree liabilities for all divisions have been transferred effective January 1, 2014 from the employer reserves to the retiree reserves, to fully fund the retiree accrued liabilities.

ACTIVE MEMBERS & BENEFIT RECIPIENTS

Active Members & Benefit Recipients

Covered Persons



**RETIREMENTS DURING 2013
TABULATED BY ANNUAL AMOUNT OF BENEFIT**

Annual Amount	Age and Service	Disability	Survivors	Totals
\$8,000 - \$9,999	1			1
12,000 - 13,999	1			1
14,000 - 15,999	1			1
16,000 - 17,999	1			1
18,000 - 19,999	1			1
22,000 - 23,999	3			3
24,000 - 25,999	2			2
28,000 - 29,999	2			2
30,000 - 31,999	2			2
34,000 - 35,999	1			1
38,000 - 39,999	1			1
40,000 - 41,999	1			1
42,000 - 43,999	1			1
44,000 - 45,999	2			2
46,000 - 47,999	1			1
50,000 - 51,999	2			2
52,000 - 53,999	1			1
54,000 - 55,999	6			6
56,000 - 57,999	1			1
58,000 - 59,999	1	1		2
62,000 - 63,999	1			1
64,000 - 65,999	2			2
72,000 - 73,999	1			1
74,000 - 75,999	1			1
78,000 - 79,999	1			1
84,000 - 85,999	1			1
90,000 - 91,999	2			2
Totals	41	1	0	42

This exhibit does not include new alternate payees due to EDRO or new beneficiaries from retirees.

**RETIREMENTS DURING 2013
TABULATED BY AGE NEAREST BIRTHDAY
AND TYPE OF RETIREMENT**

Ages	Age and Service		Disability		Survivors		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
42	1	\$ 25,950					1	\$ 25,950
43	1	31,723					1	31,723
45	1	73,845					1	73,845
46	3	200,134					3	200,134
47	2	87,705					2	87,705
48	1	55,985					1	55,985
49	1	55,934					1	55,934
50	4	149,045	1	\$ 59,417			5	208,462
51	2	98,833					2	98,833
52	5	269,621					5	269,621
54	1	50,712					1	50,712
55	3	156,521					3	156,521
56	1	28,214					1	28,214
58	5	209,315					5	209,315
61	1	19,974					1	19,974
62	2	72,980					2	72,980
63	4	139,433					4	139,433
65	1	85,546					1	85,546
66	1	74,910					1	74,910
67	1	15,690					1	15,690
Totals	41	\$ 1,902,070	1	\$ 59,417	0	\$ -	42	\$ 1,961,487

This exhibit does not include new alternate payees due to EDRO or new beneficiaries from retirees.

KMEA RETIREES AND BENEFICIARIES AS OF DECEMBER 31, 2013
TABULATED BY NEAREST AGE AND TYPE OF RETIREMENT*

Attained Age	Age and Service		Disability		Survivors		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
45 - 49	5	\$ 152,243					5	\$ 152,243
50 - 54	5	165,307	2	\$ 17,099			7	182,406
55 - 59	20	541,888	1	8,791			21	550,679
60 - 64	30	756,652					30	756,652
65 - 69	19	393,618	1	17,052	2	\$ 27,225	22	437,895
70 - 74	13	222,457					13	222,457
75 - 79	3	22,157	3	21,010	1	12,827	7	55,994
80	2	12,960					2	12,960
81	1	5,378					1	5,378
85	3	27,404					3	27,404
86	1	3,147					1	3,147
87	1	6,012					1	6,012
88	2	13,941					2	13,941
89	2	9,366					2	9,366
90 & Over	2	13,322	1	4,236			3	17,558
Totals	109	\$2,345,852	8	\$ 68,188	3	\$ 40,052	120	\$ 2,454,092

* The retired members with service in more than one group are displayed as if each person were receiving two pensions.

Average Age at Retirement: 57.3 Years.

Average Age Now: 65.9 Years.

**AFSCME/CSO RETIREES AND BENEFICIARIES AS OF
DECEMBER 31, 2013
TABULATED BY ATTAINED AGE AND TYPE OF RETIREMENT***

Attained Age	Age and Service		Disability		Survivors		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
45 - 49	4	\$ 101,424					4	\$ 101,424
50 - 54	17	505,119	3	\$ 33,667			20	538,786
55 - 59	23	695,845	5	75,739			28	771,584
60 - 64	36	866,252	8	113,182			44	979,434
65 - 69	23	462,399	2	30,024			25	492,423
70 - 74	16	180,977	3	24,339	2	\$18,878	21	224,194
75 - 79	19	204,001	3	16,955			22	220,956
80	3	33,849					3	33,849
81	4	41,850	1	5,523			5	47,373
82	5	64,232					5	64,232
83	2	11,197					2	11,197
84	3	28,824					3	28,824
85	2	22,015					2	22,015
86	3	19,052	1	6,394			4	25,446
87	2	15,131	1	13,142			3	28,273
89	1	12,999					1	12,999
90 & Over	4	18,290			1	1,363	5	19,653
Totals	167	\$3,283,456	27	\$318,965	3	\$20,241	197	\$ 3,622,662

* The retired members with service in more than one group are displayed as if each person were receiving two pensions.

Average Age at Retirement: 56.4 Years.

Average Age Now: 67.1 Years.

EXEMPT RETIREES AND BENEFICIARIES AS OF DECEMBER 31, 2013
TABULATED BY ATTAINED AGE AND TYPE OF RETIREMENT*

Attained Age	Age and Service		Disability		Survivors		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
40 - 44	2	\$ 57,674					2	\$ 57,674
50 - 54	13	523,836	1	\$ 20,230			14	544,066
55 - 59	22	1,129,668	1	44,514			23	1,174,182
60 - 64	31	940,385			2	\$ 27,666	33	968,051
65 - 69	35	1,041,617			1	3,654	36	1,045,271
70 - 74	30	626,043	1	8,141			31	634,184
75 - 79	14	233,312					14	233,312
80	4	65,226	1	10,705			5	75,931
81	1	5,836					1	5,836
82	1	6,851					1	6,851
83	4	56,081					4	56,081
84	2	23,550					2	23,550
85	5	69,740					5	69,740
86	3	39,031					3	39,031
87	1	1,465					1	1,465
88	7	99,738					7	99,738
89	3	24,306					3	24,306
90 & Over	8	61,710					8	61,710
Totals	186	\$5,006,069	4	\$83,590	3	\$31,320	193	\$ 5,120,979

* The retired members with service in more than one group are displayed as if each person were receiving two pensions.

Average Age at Retirement: 57.3 Years.

Average Age Now: 69.1 Years.

TRANSIT RETIREES AND BENEFICIARIES AS OF DECEMBER 31, 2013
TABULATED BY ATTAINED AGE AND TYPE OF RETIREMENT*

Attained Age	Age and Service		Disability		Survivors		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
40 - 44			1	\$ 13,729			1	\$ 13,729
45 - 49			2	25,195			2	25,195
50 - 54	4	\$157,849					4	157,849
55 - 59	8	213,467	4	69,266			12	282,733
60 - 64	6	118,240	4	50,510			10	168,750
65 - 69	11	206,681	2	18,918			13	225,599
70 - 74	3	63,143	2	17,802			5	80,945
75 - 79	3	14,861	2	11,393			5	26,254
81	1	6,883					1	6,883
83			1	4,580			1	4,580
84	1	5,248					1	5,248
90 & Over	1	4,327			1	\$3,537	2	7,864
Totals	38	\$790,699	18	\$211,393	1	\$3,537	57	\$ 1,005,629

* The retired members with service in more than one group are displayed as if each person were receiving two pensions.

Average Age at Retirement: 57.4 Years.

Average Age Now: 64.8 Years.

**PUBLIC SAFETY RETIREES AND BENEFICIARIES
AS OF DECEMBER 31, 2013
TABULATED BY ATTAINED AGE AND TYPE OF RETIREMENT***

Attained Age	Age and Service		Disability		Survivors		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
0 - 39					2	\$ 36,305	2	\$ 36,305
40 - 44			2	\$ 104,212			2	104,212
45 - 49	28	\$ 1,740,681	2	87,322	1	22,429	31	1,850,432
50 - 54	36	1,838,210	5	258,863			41	2,097,073
55 - 59	44	2,175,682	2	97,677	1	1,132	47	2,274,491
60 - 64	62	3,059,234	1	24,017			63	3,083,251
65 - 69	67	2,807,116	3	62,472			70	2,869,588
70 - 74	56	1,594,354	1	3,819			57	1,598,173
75 - 79	48	1,005,662	1	21,526			49	1,027,188
80	8	98,837					8	98,837
81	5	56,175	1	5,491			6	61,666
82	4	84,579	1	7,943			5	92,522
83	5	81,555					5	81,555
84	5	58,608					5	58,608
85	1	4,937					1	4,937
86			1	3,338			1	3,338
87	3	34,573					3	34,573
88	2	21,194	1	8,767			3	29,961
89	3	27,537					3	27,537
90 & Over	7	39,240					7	39,240
Totals	384	\$14,728,174	21	\$685,447	4	\$59,866	409	\$ 15,473,487

* The retired members with service in more than one group are displayed as if each person were receiving two pensions.

Average Age at Retirement: 49.2 Years.

Average Age Now: 65.6 Years.

RETIREES AND BENEFICIARIES - DECEMBER 31, 2013
TABULATED BY YEARS RETIRED - NEAREST YEAR

Years Retired	Service Retirement	Disability Retirement	Death-in-Service	Beneficiary of Retiree	Totals	Cumulative Percent
39		1		1	2	0.2%
40		2			2	0.4%
39		1	1	2	4	0.8%
38					0	0.8%
37	1			5	6	1.4%
36		2	1	2	5	1.9%
35	1			2	3	2.3%
34	6	1		2	9	3.2%
33	1			3	4	3.6%
32	5	1	1	2	9	4.5%
31	14			8	22	6.8%
30	9		1	6	16	8.4%
29	12			6	18	10.2%
28	12	1		3	16	11.9%
27	11	1		2	14	13.3%
26	10	1		2	13	14.7%
25	16	1	1	4	22	16.9%
24	12	1		3	16	18.5%
23	15	2			17	20.3%
22	14			2	16	21.9%
21	6	2		2	10	23.0%
20	20	3	1	1	25	25.5%
19	22	2	1	5	30	28.6%
18	51	3		4	58	34.5%
17	20	4		3	27	37.3%
16	23	2	1	1	27	40.1%
15	12	1		2	15	41.6%
14	17			3	20	43.6%
13	19	6	1	1	27	46.4%
12	12	5			17	48.2%
11	53	3	2	3	61	54.4%
10	16	1			17	56.1%
9	19	1		1	21	58.3%
8	15	4	1	1	21	60.5%
7	16	6			22	62.7%
6	22	2		1	25	65.3%
5	17	6		1	24	67.7%
4	18	2			20	69.8%
3	34	7	2	2	45	74.4%
2	103	3		1	107	85.3%
1	114			1	115	97.1%
Less than 1	28				28	100.0%
Totals	796	78	14	88	976	

RETIREE AND BENEFICIARY COMPARATIVE SCHEDULE[@]

Year Ended Dec. 31	Added to Rolls#		Removed from Rolls		Rolls End of Year		% Incr. in Annual Allowances	Average Allowances	Discounted Value of Allowances	
	No.	Annual Allowances*	No.	Annual Allowances	No.	Annual Allowances			Totals	Average
1994	33	\$ 586,775	19	\$ 94,056	508	\$ 5,921,666	9.1 %	\$ 11,657	\$ 63,983,893	\$ 125,953
1995	39	789,878	14	103,166	533	6,608,378	11.6	12,398	72,796,360	136,579
1996	64	1,108,952	10	53,238	587	7,664,092	16.0	13,056	84,898,479	144,631
1997	41	825,236	23	131,913	605	8,357,415	9.0	13,814	93,826,629	155,085
1998	42	782,825	25	253,483	622	8,886,757	6.3	14,287	100,635,001	161,793
1999	31	800,436	21	110,375	632	9,576,818	7.8	15,153	109,572,407	173,374
2000	33	791,069	19	149,304	646	10,218,583	6.7	15,818	120,319,918	186,254
2001	24	530,225	18	147,375	652	10,601,433	3.7	16,260	124,502,845	190,955
2002	47	1,227,293	20	191,684	679	11,637,042	9.8	17,139	136,218,282	200,616
2003	40	929,269	24	208,928	695	12,357,383	6.2	17,780	145,275,896	209,030
2004	32	841,492	18	191,402	709	13,007,473	5.3	18,346	153,594,898	216,636
2005	31	1,367,707	25	268,275	715	14,106,905	8.5	19,730	168,715,852	235,966
2006	24	697,001	19	54,017	720	14,749,889	4.6	20,486	175,276,935	243,440
2007	31	863,128	17	134,800	734	15,478,217	4.9	21,087	181,074,645	246,696
2008	35	1,051,335	19	185,258	750	16,344,294	5.6	21,792	188,654,437	251,539
2009	25	1,554,246	22	247,330	753	17,651,210	8.0	23,441	191,338,855	254,102
2010	47	458,377	40	364,571	760	17,745,016	0.5	23,349	202,420,395	266,343
2011	46	1,104,498	30	132,052	776	18,717,462	5.5	24,120	212,102,413	273,328
2012	191	7,069,939	20	139,920	947	25,647,481	37.0	27,083	300,896,407	317,736
2013	51	2,374,598	22	345,230	976	27,676,849	7.9	28,357	325,233,541	333,231

@ The retired members with service in more than one group are displayed as if each person were receiving two pensions.

* Includes post-retirement adjustments.

Includes survivors of newly deceased retirees and alternate payees under EDRO.

**RETIREES AND BENEFICIARIES DECEMBER 31, 2013
TABULATED BY TYPE OF ALLOWANCES BEING PAID***

GENERAL KMEA

Option Elected	Age & Service	Disability		Death		Totals
		Non-Duty	Duty	Non-Duty	Duty	
Regular	66	5	1	3		75
B-100% J & S	25	1				26
C-50% J & S	11					11
D-10 Year Certain	1					1
Survivor	6	1				7
Totals	109	7	1	3		120

AFSCME/CSO

Option Elected	Age & Service	Disability		Death		Totals
		Non-Duty	Duty	Non-Duty	Duty	
Regular	77	1	3	3		84
B-100% J & S	42	4	11			57
C-50% J & S	27		2			29
D-10 Year Certain	1					1
E-15 Year Certain	2		1			3
Survivor	18	3	2			23
Total	167	8	19	3		197

GENERAL EXEMPT

Option Elected	Age & Service	Disability		Death		Totals
		Non-Duty	Duty	Non-Duty	Duty	
Regular	77		1	3		81
A-Cash refund	1					1
B-100% J & S	54		1			55
C-50% J & S	37	1				38
Survivor	17	1				18
Total	186	2	2	3		193

* The retired members with service in more than one group are displayed as if each person were receiving two pensions.

RETIREES AND BENEFICIARIES DECEMBER 31, 2013
TABULATED BY TYPE OF ALLOWANCES BEING PAID*
(CONCLUDED)

METRO TRANSIT

Option Elected	Age & Service	Disability		Death		Totals
		Non-Duty	Duty	Non-Duty	Duty	
Regular	22	2	2	1		27
A-Cash refund	1					1
B-100% J & S	8	1	7			16
C-50% J & S	5	1	1			7
E-15 Year Certain			1			1
Survivor	2	2	1			5
Total	38	6	12	1		57

PUBLIC SAFETY

Option Elected	Age & Service	Disability		Death		Totals
		Non-Duty	Duty	Non-Duty	Duty	
Regular	65		6		2	73
Regular - 50% J& S	260	1	10			271
A-Cash Refund	1					1
B-100% J & S	10	1				11
E-10 Year Certain	1					
E-15 Year Certain	1		1			2
Survivor	45	2	1		2	50
Total	383	4	18		4	409

* The retired members with service in more than one group are displayed as if each person were receiving two pensions.

**TERMINATED MEMBERS WITH A DEFERRED VESTED BENEFIT
 DECEMBER 31, 2013
 TABULATED BY NEAREST AGE AND TYPE OF RETIREMENT**

Attained Age	No.	Deferred Allowances
36	1	\$ 14,621
38	1	13,417
41	1	6,840
42	4	61,792
44	1	8,953
45	2	39,183
46	3	25,721
47	2	39,866
48	1	10,483
49	1	7,907
50	2	16,389
51	3	31,701
52	1	16,873
53	4	68,065
54	2	21,050
55	2	20,319
56	2	48,659
57	2	23,589
59	2	14,193
62	2	21,367
64	1	7,448
65	1	7,223
66	1	8,420
Totals	42	\$534,079

COMPARATIVE EMPLOYEE STATISTICS BY DIVISION

Val'n Date 12/31	General KMEA Employees			AFSCME/CSO Employees			General Exempt Employees			Metro Transit Employees			Public Safety Employees		
	Avg. Age	Avg. Service	Avg. Pay	Avg. Age	Avg. Service	Avg. Pay	Avg. Age	Avg. Service	Avg. Pay	Avg. Age	Avg. Service	Avg. Pay	Avg. Age	Avg. Service	Avg. Pay
1994	39.1	9.8	\$27,921	42.0	11.1	\$33,604	#	#	#	41.5	9.4	\$27,511	38.5	13.7	\$45,674
1995	39.7	10.3	28,934	42.4	11.5	35,940	#	#	#	41.4	9.5	28,586	37.8	12.9	47,365
1996	40.1	10.9	30,466	41.1	10.1	37,781	#	#	#	42.2	9.4	30,421	37.8	12.9	48,680
1997	41.3	11.5	31,422	41.6	10.6	39,365	#	#	#	42.6	9.8	31,589	37.9	12.7	50,409
1998	42.4	12.3	33,189	42.1	11.0	40,935	#	#	#	42.3	8.8	34,632	37.2	11.7	49,501
1999	42.9	12.8	34,757	42.2	11.3	35,913	44.1	11.9	52,857	41.5	7.9	33,863	37.2	11.4	53,070
2000	42.5	12.0	34,743	42.6	11.7	38,313	44.4	12.2	54,175	41.5	7.4	34,277	37.5	11.8	55,782
2001	43.3	12.4	35,391	43.6	11.9	39,409	45.6	12.6	56,628	41.8	7.3	35,627	37.9	11.9	57,709
2002	44.4	13.5	36,759	44.5	12.9	40,126	44.5	11.6	56,058	42.9	7.6	37,654	38.4	12.6	59,344
2003	44.0	13.3	37,656	44.8	13.4	41,731	45.6	12.0	57,688	44.4	8.3	39,459	38.8	12.9	62,656
2004	45.1	14.2	39,803	45.6	14.2	43,431	47.0	13.2	59,335	44.7	8.8	39,088	38.4	12.5	64,638
2005	46.2	15.0	40,839	46.3	15.1	44,161	48.0	14.0	60,031	45.6	9.6	40,158	37.8	11.9	65,392
2006	46.7	15.1	41,617	46.7	15.5	45,231	48.6	14.1	61,289	46.3	9.9	38,818	37.5	11.4	68,764
2007	47.4	15.9	42,856	47.0	15.7	46,643	48.6	14.4	62,354	47.2	10.6	38,696	37.4	11.6	68,509
2008	47.9	15.5	43,709	47.0	15.8	48,921	48.7	14.7	64,488	48.2	11.3	40,495	38.0	12.2	73,306
2009	49.1	17.0	45,167	47.6	16.5	49,088	49.1	15.3	65,044	49.1	12.0	41,491	38.8	12.7	74,829
2010	49.8	17.3	46,733	48.3	17.3	48,007	49.6	15.4	65,761	48.1	12.1	43,619	39.4	13.2	76,677
2011	50.4	18.3	47,186	48.3	17.1	46,993	49.8	16.3	65,320	48.1	12.8	41,252	39.5	13.6	75,789
2012	45.2	10.6	43,055	43.9	11.1	44,874	48.1	12.9	63,224	45.5	8.4	41,791	37.4	11.7	74,471
2013	44.8	9.9	43,602	44.2	10.9	45,984	47.1	11.7	65,631	46.4	8.7	43,151	37.2	11.7	75,869

Included with AFSCME/CSO members.

**GENERAL KMEA MEMBERS AS OF DECEMBER 31, 2013
BY ATTAINED 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	\$ 56,048
25-29	7							7	258,393
30-34	6	2	1					9	304,514
35-39	3	1	1	2				7	294,702
40-44	4	2	5	1	2			14	646,013
45-49	4	3	3		3	2		15	705,203
50-54	5	2	3	1	4	1	1	17	807,552
55-59	4		2	1	5	1		13	598,452
63				1				1	44,783
64		1						1	32,470
67	1							1	45,263
Totals	36	11	15	6	14	4	1	87	\$3,793,393

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

Age: 44.8 years.

Service: 9.9 years.

Annual Pay: \$43,602.

AFSCME/CSO MEMBERS AS OF DECEMBER 31, 2013
BY ATTAINED 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	\$ 71,356
25-29	7	4						11	463,919
30-34	12		1					13	503,521
35-39	11	1	4	1				17	756,657
40-44	5	4	5	4	3			21	1,005,802
45-49	4	3	4	6	4			21	1,014,748
50-54	3	1	6	11	2	1		24	1,131,852
55-59	2	1	5	5	8	1		22	1,047,024
60				1				1	44,044
62					1			1	76,976
Totals	46	14	25	28	18	2		133	\$6,115,899

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

Age: 44.2 years.

Service: 10.9 years.

Annual Pay: \$45,984.

GENERAL EXEMPT MEMBERS AS OF DECEMBER 31, 2013
BY ATTAINED 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
25-29	2							2	\$ 98,724
30-34	10	1						11	599,250
35-39	4	3	4	2				13	827,865
40-44	3	4	2	2	3			14	823,158
45-49	4	3	2	1	2			12	867,283
50-54	1	2	5	8	4	3		23	1,634,336
55-59	4	2	4	6	1	1	1	19	1,214,177
60		1						1	113,867
61			2	1				3	202,641
63			1					1	88,289
65	1				1			2	159,181
Totals	29	16	20	20	11	4	1	101	\$6,628,771

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

Age: 47.1 years.

Service: 11.7 years.

Annual Pay: \$65,631.

METRO TRANSIT MEMBERS AS OF DECEMBER 31, 2013
BY ATTAINED 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	3							3	\$ 118,756
25-29	2	1						3	123,415
30-34	4		1					5	187,425
35-39	4	1	5					10	405,990
40-44	6	2	6	5				19	760,242
45-49	9	2	2	5		1		19	855,176
50-54	3	3	1	2	1			10	483,273
55-59	4	4	3	4	1			16	713,594
60	1		1					2	113,173
61	1				1			2	92,556
62					1			1	41,914
63		1						1	34,570
67	1							1	45,398
69	1							1	37,556
Totals	39	14	19	16	4	1		93	\$4,013,038

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

Age: 46.4 years.

Service: 8.7 years.

Annual Pay: \$43,151.

**PUBLIC SAFETY MEMBERS AS OF DECEMBER 31, 2013
BY ATTAINED 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	4							4	\$ 170,271
25-29	24	11						35	2,034,366
30-34	12	30	4					46	3,201,475
35-39	5	7	11	7				30	2,376,488
40-44	1	2	10	32	6			51	4,277,848
45-49		1	6	11	20			38	3,369,768
50-54					2	1		3	267,071
55-59					1			1	83,504
Totals	46	51	31	50	29	1		208	\$15,780,791

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

Age: 37.2 years.

Service: 11.7 years.

Annual Pay: \$75,869.

SECTION D

ACTUARIAL COST METHODS AND ASSUMPTIONS

VALUATION METHODS AND ASSUMPTIONS

The normal cost was computed as follows:

The series of contributions necessary to accumulate the present value at time of retirement of the portion of a member's pension attributable to service likely to be rendered after the valuation date was computed so that each contribution in the series was a constant percentage of the member's year-by-year projected covered compensation. This is the individual entry age normal actuarial cost method.

The accrued liability was computed and financed as follows:

Retirees and Beneficiaries: The discounted value of pensions likely to be paid retirees and beneficiaries was computed using the investment return and mortality assumptions. This amount was financed by applicable accrued assets.

Active and Inactive members: The discounted value of benefits likely to be paid active and inactive members on account of service rendered prior to the valuation date was computed using the assumptions outlined on the following pages. The computed amount was reduced by applicable valuation assets and the remainder (or overfunding) was financed as a level percent-of-payroll over a rolling period of 10 years.

Asset valuation method: Last year's valuation assets are increased by contributions and expected investment income on last year's valuation assets and non-investment net cash flow and reduced by refunds, benefit payments and expenses. To this amount is added the phased-in recognition of investment income. The phased-in recognition is the sum over the five years ending on the valuation date of 20% of the difference between each year's expected return and actual market return.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

TOTAL INVESTMENT RETURN. 8.0% per year compounded annually. This rate consists of a long-term rate of pay inflation of 4.0% a year (which includes price inflation of 3.0%) plus investment expenses of 0.5% plus a real rate of return of 3.5% a year. The net investment return is 7.5% per year compounded annually.

These assumptions are used to equate the value of payments due at different points in time. They were first used for the December 31, 1997 valuation. Approximate net rates of investment return, for the purpose of comparisons with assumed rates, are shown below. Actual increases in active member pays are also shown for comparative purposes.

	Year Ended December 31					5 Year Average*
	2013	2012	2011	2010	2009	
Rate of Investment Return [^]	13.6%	3.9%	1.7%	5.0%	3.6%	5.5%
Increase in Average Pay [#]	4.6	4.6	3.0	1.0	2.5	3.1
Real Rate of Return	9.0	(0.7)	(1.2)	4.0	1.0	2.4

* *Compound rate of increase.*

For members employed throughout the most recent two years.

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

These rates of return should not be used for measurement of an investment advisor's performance or for comparisons with other systems.

INVESTMENT EXPENSES. 0.50% of average valuation assets.

ADMINISTRATIVE EXPENSES. 0.60% of covered member payroll was added to the Normal Cost in anticipation of administrative expenses expected to be paid during the fiscal year.

PAY PROJECTIONS. These assumptions are used to project current pays to those upon which benefits will be based. The assumptions were first used for the December 31, 2009 valuation.

The annual rate of pay increases consists of two parts:

- (i) a long-term rate of pay inflation equal to 4.0%.
- (ii) merit and longevity increases which vary according to age or length of service. These rates are illustrated below.

Years of Service	KMEA	AFSCME	All Exempt	Non-Sworn Public Safety	Transit Union	Public Safety
1	6.0%	8.0%	6.0%	8.0%	7.0%	12.0%
2	5.0	3.0	6.0	7.0	7.0	12.0
3	4.0	3.0	0.5	6.0	0.0	8.0
4	2.0	2.0	0.5	1.5	0.0	5.0
5	1.0	2.0	0.5	1.5	0.0	5.0
6	1.0	1.0	0.3	1.5	0.0	5.0
7	1.0	0.0	0.3	1.5	0.0	5.0
8	1.0	0.0	0.3	1.5	0.0	5.0
9	0.0	0.0	0.3	1.5	0.0	1.0
10	0.0	0.0	0.3	1.5	0.0	1.0
11	0.0	0.0	0.3	0.5	0.0	1.0
12	0.0	0.0	0.3	0.5	0.0	1.0
13	0.0	0.0	0.3	0.5	0.0	0.5
14	0.0	0.0	0.3	0.5	0.0	0.5
thereafter	0.0	0.0	0.3	0.5	0.0	0.5

Actual average pays for members working both years have increased at the following rates.

	Year Ended December 31					5 Year
	2013	2012	2011	2010	2009	Average*
Average increase	4.6%	4.6%	3.0%	1.0%	2.5%	3.1%

* *Compound rate of increase.*

If the number and distribution of active members remain constant, then the total active member payroll will increase 4.0% annually for the base portion of the salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

The mortality table used was the 1994 Group Annuity Mortality Table.

Ages	Value at Retirement of \$1 Monthly for Life*		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	\$140.93	\$147.30	30.69	34.89
55	132.64	140.64	26.15	30.17
60	122.40	132.01	21.83	25.59
65	110.53	121.65	17.84	21.28
70	97.62	109.73	14.29	17.30
75	83.48	95.52	11.12	13.60
80	68.62	79.89	8.37	10.31

* *Values are before post-retirement increases are reflected.*

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. This mortality table was first used for the December 31, 2004 valuation.

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

Retirement Ages	KMEA	AFSCME	All Exempt	Non-Sworn Public Safety	Transit Union
55	2%	6%	10%	10%	10%
56	2	7	10	10	10
57	5	10	25	25	25
58	5	7	25	25	25
59	7	6	20	20	20
60	15	30	25	25	25
61	15	20	30	30	30
62	50	60	30	30	30
63	15	25	15	15	15
64	10	25	15	15	15
65	100	100	100	100	100

Years of Service	Public Safety
20	2%
21	4
22	4
23	2
24	2
25	70
26	30
27	45
28	25
29	25
30	100

Retirement probabilities were applied for General and Transit members after both attaining age 55 and completing 15 years of service, or age 62 with 10 years of service (5 years for Exempt hired before 9/1/2010, 9 years for AFSCME and 8 years for KMEA hired before 1/1/2009). AFSCME members are also considered eligible for retirement at age 60 with 20 or more years of service. Retirement probabilities were applied for Public Safety members upon completion of 20 years of service with 100% retirement probability assumed at age 60 with 10 years of service. The assumptions above were first used for the December 31, 2009 valuation.

Rates of disability were as follows:

Sample Ages	% of Active Members Becoming Disabled Within Next Year	
	Public Safety Metro Transit	KMEA Exempt
	AFSCME	CSO
20	0.19%	0.04%
25	0.23	0.04
30	0.26	0.04
35	0.33	0.04
40	0.46	0.10
45	0.63	0.13
50	1.21	0.25
55	2.36	0.45
60	0.00	0.71

The assumptions above were first used for the December 31, 2009 valuation.

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					
		KMEA	AFSCME	All Exempt	Non-Sworn Public Safety	Transit Union	Public Safety
	0	15.0%	15.0%	15.0%	6.0%	15.0%	6.0%
	1	14.0	14.0	14.0	4.0	14.0	4.0
	2	9.0	9.0	9.0	3.0	9.0	3.0
	3	8.0	8.0	8.0	2.5	8.0	2.5
	4	7.0	7.0	7.0	2.5	7.0	2.5
25	5 or Over	7.4	7.4	7.4	2.2	7.4	2.2
30		5.8	5.8	5.8	2.0	5.8	2.0
35		5.0	5.0	5.0	1.4	5.0	1.4
40		4.0	4.0	4.0	1.1	4.0	1.1
45		3.3	3.3	3.3	0.8	3.3	0.8
50		2.5	2.5	2.5	0.6	2.5	0.6
55		2.0	2.0	2.0	0.4	2.0	0.4
60		2.0	2.0	2.0	0.4	2.0	0.4

The assumptions above were first used for the December 31, 2009 valuation.

Active member group size. The number of active members was assumed to remain constant. This assumption is unchanged from previous valuations.

Timing of contribution payments. The contribution requirements in this report anticipate regular payments throughout the year. Examples would be at each payroll date or in 12 monthly installments.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

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	Was assumed to occur in the middle of the year. This means that the pays reported for the valuation are assumed to be rates of pay on the valuation date.
Decrement Timing	Decrements are assumed to occur at the middle of the fiscal 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.
Benefit Service	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation	Death-in-service decrement does not operate until member becomes vested. Withdrawal does not operate during retirement eligibility.
Normal Form of Benefit	The assumed normal form of benefit is straight life form. For public safety members, the assumed normal form of benefit is an automatic 50% Joint and Survivor form. 90% of public safety members were assumed to be married for the purposes of this benefit.
Loads	Active retirement liability reduced by 1% to account for optional form of benefit election.
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. New entrant normal cost contributions are applied to the funding of new entrant benefits.
Actuarial Equivalence Basis for Optional Forms of Payment	6.5% interest with a 95%/5% unisex blend of the 1971 Group Annuity Mortality Table female rates set back 5 years.

GLOSSARY

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”. Under the actuarial cost method used the “AAL” differs somewhat from the value of future payments based on benefits earned as of the valuation date.

ACCRUED SERVICE. The service credited under the plan which was rendered before the date of the actuarial valuation.

ACTUARIAL ASSUMPTIONS. Estimates of future plan experience with respect to rates of mortality, disability, retirement, investment income and salary increases. Decrement assumptions (rates of mortality, separation, 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 appropriate 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 normal costs to be paid in the future and the actuarial accrued liability. Sometimes referred to as the “actuarial funding method”.

ACTUARIAL EQUIVALENT. Benefits whose actuarial present values are equal.

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. Payment of an interest-bearing liability by means of periodic contributions of interest and principal, as opposed to a lump sum payment.

EXPERIENCE GAIN (LOSS). A measure of the difference between actual experience and experience anticipated by a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

NORMAL COST. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as “current service cost”. An amortization payment toward the unfunded actuarial accrued liability is in addition to the normal cost.

GLOSSARY (CONCLUDED)

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 E

GASB STATEMENT NO. 25 INFORMATION

This information is presented in draft for review by the City's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the City's financial statements.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Attained-Age (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b)-(a)]/(c)
12/31/04 @	\$390,615,277	\$265,080,190	\$ (125,535,087)	147.4%	\$41,989,819	(299.0)%
12/31/05 @ #	422,565,761	294,416,007	(128,149,754)	143.5	40,944,435	(313.0)
12/31/06 @	463,280,964	312,101,938	(151,179,026)	148.4	42,164,958	(358.5)
12/31/07 @	500,788,244	327,242,870	(173,545,374)	153.0	42,889,419	(404.6)
12/31/08 @	506,592,573	344,799,153	(161,793,420)	146.9	44,159,590	(366.4)
12/31/09 @	509,060,409	358,160,400	(150,900,009)	142.1	44,435,753	(339.6)
12/31/10 @	518,339,022	367,423,552	(150,915,470)	141.1	43,007,800	(350.9)
12/31/11 @	509,931,421	380,802,126	(129,129,295)	133.9	42,305,663	(305.2)
12/31/12	505,234,953	420,711,365	(84,523,588)	120.1	36,538,969	(231.3)
12/31/13	547,923,629	432,148,526	(115,775,103)	126.8	36,331,892	(318.7)

* Method changed to Entry Age effective 12/31/2005.

@ Plan amended.

Certain assumptions revised.

SCHEDULE OF EMPLOYER CONTRIBUTIONS

Year Ended December 31	Annual Required Contribution	Percentage Contributed
2004	\$ 0	100.00%
2005	0	100.00
2006	0	100.00
2007	0	100.00
2008	0	100.00
2009	0	100.00
2010	0	100.00
2011	0	100.00
2012	0	100.00
2013	0	100.00

Actuarial cost method

Individual Entry-Age Normal Cost

Amortization method

Level Percent-of-Payroll, 10-year period
(closed until 2002, then open)

Asset valuation method

Market Value with 5-year smoothing of
appreciation and depreciation

Principal actuarial assumptions (last revised for the
12/31/99 valuation):

- Net Investment Return* 7.5%
- Projected Salary Increases* 4.0% to 12.0%
- Cost-of-Living Adjustments
 - 2% per year – Public Safety members who retired 1995 and after.
 - 1% per year pre-age 75; 2% per year from age 75 – AFSCME and Transit Union members who retire after 10/24/99.
 - 1.5% per year after attaining age 64 – KMEA members who retire after 1999 (1.5% per year from retirement; 2.0% per year after attaining age 75 if member retired after 2001).
 - 1.5% per year – Exempt members who signed up for the RPA.

* Includes pay inflation at 4.0%.

May 13, 2014

Mr. Thomas C. Skrobola
Director of Management Services/CFO
City of Kalamazoo
241 West South Street
Kalamazoo, Michigan 49007-4796

Dear Tom:

Please find enclosed 35 copies of the Sixty-Second Annual Actuarial Valuation of the City of Kalamazoo Employees Retirement System.

Sincerely,

A handwritten signature in cursive script, appearing to read "Curtis Powell".

Curtis Powell, EA, MAAA

CP:ah
Enclosures

cc: Abraham & Gaffney (1 report copy)
Attn: Aaron Stevens