

***City of Livonia
Employees Retirement System***

Actuarial Valuation as of November 30, 2012

Table of Contents

Section One: Valuation Summary

Valuation Summary.....	1
------------------------	---

Section Two: Actuarial Calculations – Funding

Computed Contribution Rates.....	4
----------------------------------	---

Unfunded Actuarial Accrued Liability.....	7
---	---

Section Three: Retirement System Benefit Provisions

Benefit Provision Summary	9
---------------------------------	---

Section Four: Actuarial Assumptions and Methods

Actuarial Assumptions	14
-----------------------------	----

Actuarial Methods	18
-------------------------	----

Section Five: Valuation Data

Asset Summary.....	19
--------------------	----

Participant Summary	22
---------------------------	----

Section Six: Accounting Disclosures

Information for GASB Statements No. 25 and No. 27.....	29
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Section One:
Valuation Summary



Purpose of Valuation

The purpose of the annual actuarial valuation of the City of Livonia Retirement System as of November 30, 2012 is to:

- ❖ Compute the present value of future benefits likely to be paid on behalf of current retired and active members of the Retirement System,
- ❖ Compute the City's recommended contribution rate for the Fiscal Year beginning December 1, 2013.

Funding Value of Assets

A smoothed market value of assets was used for the November 30, 2012, valuation. This method, which is unchanged from prior years, spreads the difference between actual and expected investment return over five years.

City's Computed Contribution Rate

The City's contribution rate for the fiscal year beginning December 1, 2013 has been computed to be 45.75% of active member payroll for the General division, 23.71% of active member payroll for the Police division, and 50.70% of active member payroll for the Fire division. These contribution rates were computed using the aggregate actuarial cost method, the same method as used in last year's valuation. This method is appropriate for retirement systems which are closed to new hires.

The aggregate method produces a contribution rate for the City which, together with current assets, investment earnings and future member contributions, can be expected to accumulate to the value of the benefits payable at retirement.

The actuarial accrued liability under this method is defined to be the current actuarial value of assets.

Retirement System Experience

The overall experience of the Retirement System during the year ended November 30, 2012 was less favorable than expected based upon the long-term assumptions. The primary source of the unfavorable experience was the recognized rate of return on the smoothed funding value of assets. The rate of return on the market value of assets was greater than assumed. However this gain is spread over 5 years and combined with the phase in of experience from the prior 4 years to produce the smoothed funding value of assets.

There were 16 new retirees during the year compared with 22 last year. Twenty-three retirees were removed (the same number as last year).

The number of active members decreased to 155 from 171 last year. The active member payroll decreased to \$11,282,045 from \$12,455,231 last year.

Benefit Provision Changes

There were no changes in benefit provisions for this valuation.

Assumption and Method Changes

There were no changes in assumptions and methods for this valuation.

Participant Data

	<u>11/30/2012</u>	<u>11/30/2011</u>
Active Members		
- General	56	57
- Police	65	72
- Fire	<u>34</u>	<u>42</u>
Total	155	171
Active Member Payroll		
- General	\$3,219,057	\$3,312,926
- Police	5,138,874	5,541,907
- Fire	<u>2,924,114</u>	<u>3,600,398</u>
Total	\$11,282,045	\$12,455,231
Retirees and Beneficiaries		
- General	307	319
- Police	152	145
- Fire	<u>108</u>	<u>103</u>
Total	567*	567**
Annual Pensions		
- General	\$6,007,699	\$6,067,483
- Police	5,391,591	5,011,573
- Fire	<u>3,537,217</u>	<u>3,194,367</u>
Total	\$14,936,507	\$14,273,423

*Includes 15 alternate payees receiving \$183,494 under eligible domestic relations orders.

**Includes 14 alternate payees receiving \$160,691 under eligible domestic relations orders.

Financial Data

	<u>11/30/2012</u>	<u>11/30/2011</u>
Market Value of Assets	\$194,608,266	\$184,073,635
Smoothed Valuation Assets	\$186,244,955	\$194,514,611

Conclusion

The Retirement System is being financed in accordance with a sound funding policy based on the aggregate actuarial cost method. The accrued funding condition of the Retirement System is good. Continuation of this condition is dependent upon future experience and receipt of contributions as required.



Section Two:

***Actuarial Calculations –
Funding***



Recommended City Contribution Rate for Fiscal Year beginning December 1, 2013

The City's computed contribution rate for the year beginning December 1, 2013 has been computed to be 45.75% of payroll for the General division, 23.71% for the Police division and 50.70% for the Fire division.

	<u>General</u>	<u>Police</u>	<u>Fire</u>	<u>Totals</u>
1. Actuarial Present Value of all Future Benefits				
Active Members:				
Regular Retirement	\$18,109,159	\$31,684,799	\$16,998,194	\$66,792,152
Pre-Retirement death	510,846	529,959	377,366	1,418,171
Disability	262,325	1,405,972	846,599	2,514,896
Withdrawal	568,271	968,919	99,898	1,637,088
Inactive Members	1,606,397	104,539	654,779	2,365,715
Retirees and Beneficiaries	<u>51,740,282</u>	<u>53,817,118</u>	<u>32,765,023</u>	<u>138,322,423</u>
Total	72,797,280	88,511,306	51,741,859	213,050,445
2. Smoothed Valuation Assets	64,206,711	80,073,252	41,964,992	186,244,955
3. Present Value of Future Member Contributions	499,162	1,106,844	578,153	2,184,159
4. Unfunded Present Value of Benefits: 1. – 2. – 3.	8,091,407	7,331,210	9,198,714	24,621,331
5. Present Value of Future Pay	\$17,687,862	\$30,924,818	\$18,143,064	\$66,755,744
6. City Contribution as a percent of Payroll: 4. / 5.	45.75%	23.71%	50.70%	36.88%
7. City Contribution – Dollars Based on Valuation Payroll	\$1,472,719	\$1,177,465*	\$1,482,526	\$4,132,710

*Dollar amount is net of additional contribution paid by LLSA members when City's contribution rate exceeds 4.18% of Police payroll, per LLSA contract.

Computed Normal Cost Contribution Rates as of November 30, 2012

Based on Entry Age Actuarial Cost Method

For Illustration Purposes Only

The normal cost contribution rate based on the entry age actuarial cost method is shown for illustration purposes only and for comparison to prior years' normal costs. Last year the computed entry age normal cost for the City was 12.93% for General members, 17.47% for Police members and 16.68% for Fire members.

The aggregate cost method used to compute the City's recommended contribution rate shown on page 4 is the appropriate method for a plan closed to new hires.

	<u>General</u>	<u>Percent of Payroll</u>	
		<u>Police</u>	<u>Fire</u>
Normal Cost			
Regular Retirement	12.43%	16.07%	16.89%
Pre-Retirement Death	0.63	0.51	0.65
Disability	0.66	1.95	2.13
Withdrawal	<u>2.50</u>	<u>2.36</u>	<u>0.69</u>
Total Normal Cost	16.22	20.89	20.36
Member portion*	2.82	3.58	3.19
City's Entry Age Normal Cost	13.40%	17.31%	17.17%

*Weighted average.

Recommended and Actual City Contributions

Valuation Date Nov. 30	Fiscal Year Ending Nov. 30	Recommended % of Payroll Contributions (Excluding Health after 1991)			Computed Dollar Contributions
		General	Police	Fire	
1990@	1992	13.32%	10.00%	23.38%	\$3,504,711
1991	1993	12.36	9.64	21.53	3,393,951
1992#	1994	11.29	8.98	19.93	3,037,008
1993	1995	10.20	9.67	18.81	3,083,273
1994	1996	10.71	8.68	18.40	3,029,447
1995#	1997	9.59	9.29	19.15	0
1995@	1997	10.78	10.56	20.73	3,505,876
1996#	1998	10.53	11.62	20.14	2,798,760
1997#	1999	1.48	10.90	22.32	0
1997@&	1999	0.00	1.71	19.06	1,919,594
1998#	2000	0.00	4.42	18.79	837,116
1999#@	2001	0.00	1.15	15.20	645,335
2000	2002	0.00	0.00	9.73	417,464
2001#	2003	0.00	0.00	9.50	392,639
2002	2004	0.00	0.00	12.70	0
2003	2005	0.00	0.00	0.00	0
2004	2006	0.00	0.00	0.00	0
2005	2007	0.00	0.00	0.00	0
2006	2008	0.00	0.00	0.00	0
2007#	2009	0.00	0.00	0.00	0
2008#	2010	0.00	0.00	0.00	0
2009@	2011	0.00	0.00	0.00	0
2010#	2012	8.98	3.55	7.49	829,363
2011	2013	28.42	12.10	19.81	2,307,296
2012	2014	45.75	23.71	50.70	4,132,710

After changes in benefit provisions.

@ After changes in actuarial assumptions or methods.

& After removal of contribution for post-retirement health insurance benefits.

Note: Results prior to 2003 are based on reports provided by previous actuarial firm.

History of Assets and Accrued Liabilities

Valuation Date	Valuation Assets	Actuarial Accrued Liabilities#	Funded Ratio	Unfunded Actuarial Accrued Liabilities
1993	\$132,136	\$122,975	107.4%	\$ (9,161)
1994	140,037	130,496	107.3	(9,541)
1995	152,456	142,053	107.3	(10,403)
1996	167,361	151,870	110.2	(15,491)
1997	168,884	148,806	113.5	(20,078)
1998	177,035	151,085	117.2	(25,950)
1999	184,782	149,052	124.0	(35,730)
2000	192,477	148,670	129.5	(43,807)
2001	200,937	151,438	132.7	(49,499)
2002	199,627	159,272	125.3	(40,355)
2003	203,505	159,900	127.3	(43,605)
2004	199,578	164,378	121.4	(35,200)
2005	200,005	167,226	119.6	(32,779)
2006	205,101	169,506	121.0	(35,595)
2007	215,675	173,486	124.3	(42,189)
2008	210,519	179,096	117.5	(31,423)
2009	207,959	190,134	109.4	(17,925)
2010	203,934	195,105	104.5	(8,829)
2011	194,515	196,420	99.0	1,905
2012	186,245	200,224	93.0	13,979

Results shown throughout this report, for years prior to 2003, were prepared by the previous actuarial firm.

Based on entry age actuarial accrued liability for comparison to prior years. The entry age accrued liability has not been used to compute contribution requirements after the 1998 valuation. Under the aggregate cost method used to compute contributions beginning in 1999, the accrued liability is defined to be equal to the accrued assets.

The ratio of valuation assets plus future employee contributions to the total present value of future benefits was 88.4% as of November 30, 2012. This is a decrease from 94.0% in the prior year.

Comment and Conclusion

Comment: The overall experience of the Retirement System during the year ended November 30, 2012 was less favorable than what was expected based on the long-term assumptions. Although the rate of return on the market value of assets was greater than assumed, the recognized nominal rate of return based on the funding value of assets, 3.1%, was less than the 8.0% assumed. The funding value of assets includes carry-forwards of experience gains (losses) from the prior 4 years. The funding value of assets was less than the market value of assets as of November 30, 2012 by \$8.4 million.

The increase in the City's computed contribution rates reflects this experience and the decrease in the active member payroll to \$11,282,045 from \$12,455,231 last year.

Conclusion: The Retirement System is being financed in accordance with a sound funding policy based on the aggregate actuarial cost method. The accrued funding condition of the Retirement System is good. Continuation of this condition is dependent upon future experience and receipt of contributions as required.

Section Three:

***Retirement System
Benefit Provisions***



Benefit Provision Summary

Membership Requirements

Membership includes all persons in the classified and unclassified service of the City who perform services on a permanent part-time or full-time basis. New employees do not become members in this Retirement System.

Voluntary Retirement Eligibility

General Members: 30 years of service regardless of age, or age 55 with 10 years of service. Permanent part-time General members need only 10 calendar years of membership instead of 10 years of credited service.

Police Officers,
Sergeants &
Lieutenants: 25 years of service regardless of age, or age 52 with 10 years of service. (Age 50 with 10 years but less than 25 years of service early retirement with reduced benefit benefit reduced ½% per month below age 52).

Police Chief,
Deputy Chief &
Captains: 27 years of service regardless of age, or age 50 with 10 years of service. (Age 48 with 10 years but less than 27 years of service early retirement with reduced benefit - benefit reduced 1/2% per month below age 50).

Fire Members: 27 years of service regardless of age, or age 52 with 10 years of service (age 50 with 10 years of service early retirement with reduced benefit – benefit reduced ½% per month below age 52).

Normal Pension Amount

General Members: 2.5% of the member's average final compensation (AFC) times years of credited service (maximum is 75% of AFC).

Police Officers,
Sergeants &
Lieutenants: 2.8% of the member's average final compensation (AFC) times the first 24 years of credited service, plus 7.8% of AFC for the 25th year of credited service (maximum is 75% of AFC).

Police Chief,
Deputy Chief &
Captains: 2.8% of the member's average final compensation (AFC) times years of credited service (maximum is 75% of AFC).

Fire Members: 2.8% of the member's average final compensation (AFC) times years of credited service (maximum is 75% of AFC).

Average Final Compensation

The average of the highest annual compensations received during any 3 years of service contained within the 10 years of service immediately preceding retirement, including base salary, longevity, shift differential, paid time off, holiday pay, and payment of accumulated vacation time up to the limits established by the respective bargaining agreements. In addition, merit pay is included for Police members and Paramedic/EMT or ALS bonuses are included for firefighters.

Deferred Pension (Vesting)

Eligibility: Termination of City employment, other than by death or disability, prior to attaining voluntary retirement age but after completing at least 10 full years of credited service.

Amount: A monthly pension, payable beginning at voluntary retirement age (or early retirement age with a reduced benefit), computed in the same manner as a Normal Pension but based on credited service and AFC at time of termination of City employment.

Disability Retirement

Eligibility: Termination of City employment by reason of total and permanent disability after completing at least 10 full years of credited service, except that in the event of a duty disability the 10 year service requirement is waived.

Amount: (1) Disability incurred after age 55: A monthly pension computed in the same manner as a Normal Pension but based on credited service and AFC at the time of termination. (2) Disability incurred before age 55: A monthly pension computed in the same manner as a Normal Pension but based on AFC at time of termination and the credited service the member would have completed had employment continued until age 55, provided that in the event of a duty disability the pension payable to age 55 shall not be less than 75% of AFC. Worker’s compensation benefits are deducted. For non-duty disability cases, the following limitations apply:

Actual Years of Service	Maximum Total Years Used to Compute Benefit	Maximum Benefit As a Percent of AFC
10-15	20	50.0%
16-20	25	62.5
over 20	30- or actual service if greater	75.0

Non-Duty Death

Eligibility: Death after completing 10 years of credited service, but before termination of City employment. If member had not attained age 55 at the time of death, the death benefit shall commence at the time they would have attained voluntary retirement age. Member must either: (1) have elected Option A and named a beneficiary, or (2) leave a surviving spouse in the event Option A was not elected.

Amount: Monthly pension the beneficiary would have received had the member retired the day before death (notwithstanding that he might not have attained his voluntary retirement age) and elected the 100% joint and survivor Option A.

Duty Death

Eligibility: Death from causes arising solely and exclusively out of and in the course of a member's City employment.

Amount: Surviving spouse, or unmarried children under age 18 (if no surviving spouse), or dependent parents (if no surviving spouse or children) shall receive a monthly pension equal to the pension payable if the member had become duty disabled, elected the 100% survivor option and subsequently died. The option factor for children or parents is assumed to equal 80%. The benefit shall continue until: (a) death in the case of the widow, (b) death, marriage, adoption or attainment of age 18 in the case of the children. Worker's compensation benefits are deducted.

Employee Contributions

General - Local 1917	3.66% of compensation.
- Others	3.10% of compensation.
Police - LPOA	2.55% of compensation.
- LLSA	6.25% of compensation (eff. 8/24/2010)
	7.30% of compensation when City contribution rate exceeds 4.18%
Police Chief, Deputy Chief and Captains	5.21% of compensation.
Fire	3.56% of compensation.

Upon voluntary, mandatory or disability retirement (or early or deferred retirement, in the case of General members), a member may withdraw his accumulated contributions with interest and receive an actuarially reduced lifetime benefit.

Cost-of-Living Allowance

An additional cost-of-living allowance will be paid to all retirees. The monthly amount is determined as follows:

(1) Members retired before December 1, 1979:

- (a) \$20 per month for one year period commencing one year after retirement.
- (b) \$40 per month for one year period commencing two years after retirement.
- (c) \$40 per month for one year period commencing three years after retirement.
- (d) \$60 per month for one year period commencing four years after retirement.
- (e) \$80 per month commencing five years after retirement.

(2) Members retiring on or after December 1, 1979 and before December 1, 1986:

- (a) \$20 per month for one year period commencing one year after retirement.
- (b) \$40 per month for one year period commencing two years after retirement.
- (c) \$60 per month for one year period commencing three years after retirement.
- (d) \$80 per month commencing four years after retirement.

(3) Members retiring on or after December 1, 1986:

- (a) \$20 per month for one year period commencing one year after retirement.
- (b) \$40 per month for one year period commencing two years after retirement.
- (c) \$60 per month for one year period commencing three years after retirement.
- (d) \$80 per month for one year period commencing four years after retirement.
- (e) \$100 per month for one year period commencing five years after retirement.
- (f) \$120 per month commencing six years after retirement.

(4) General members (excluding District Court) retiring on or after December 1, 2007:

- (a) \$25 per month for one year period commencing one year after retirement.
- (b) \$50 per month for one year period commencing two years after retirement.
- (c) \$75 per month for one year period commencing three years after retirement.
- (d) \$100 per month for one year period commencing four years after retirement.
- (e) \$125 per month for one year period commencing five years after retirement.
- (f) \$150 per month for one year period commencing six years after retirement.
- (g) \$175 per month for one year period commencing seven years after retirement.
- (h) \$200 per month for one year period commencing eight years after retirement.
- (i) \$225 per month for one year period commencing nine years after retirement.
- (j) \$250 per month commencing ten years after retirement.

(5) Fire and Police members (excluding dispatchers) retiring on or after December 1, 2006 (March 20, 2006 for Fire) and before December 1, 2008:

- (a) \$20 per month for one year period commencing one year after retirement.
- (b) \$40 per month for one year period commencing two years after retirement.
- (c) \$60 per month for one year period commencing three years after retirement.
- (d) \$80 per month for one year period commencing four years after retirement.
- (e) \$100 per month for one year period commencing five years after retirement.
- (f) \$120 per month for one year period commencing six years after retirement.
- (g) \$140 per month for one year period commencing seven years after retirement.
- (h) \$160 per month for one year period commencing eight years after retirement.
- (i) \$180 per month for one year period commencing nine years after retirement.
- (j) \$200 per month commencing ten years after retirement

(6) Police and Fire members retiring on or after December 1, 2008:

- (a) \$25 per month for one year period commencing one year after retirement.
- (b) \$50 per month for one year period commencing two years after retirement.
- (c) \$75 per month for one year period commencing three years after retirement.
- (d) \$100 per month for one year period commencing four years after retirement.
- (e) \$125 per month for one year period commencing five years after retirement.
- (f) \$150 per month for one year period commencing six years after retirement.
- (g) \$175 per month for one year period commencing seven years after retirement.
- (h) \$200 per month for one year period commencing eight years after retirement.
- (i) \$225 per month for one year period commencing nine years after retirement.
- (j) \$250 per month commencing ten years after retirement

For Police retirees retiring before December 1, 1991 and for Fire retirees retiring before December 1, 1993 the maximum increase is \$80 per month.

Section Four:

***Actuarial Assumptions
And Methods***



Actuarial Assumptions

Economic Assumptions

- (i) Interest Rate 8.0% (net of expenses)

- (ii) Salary Increases
 - Across-the-Board 4.0%
 - Merit and Longevity Age-related rates

Sample Annual Rates of Salary Increase

Age	Across-the-Board	Merit and Longevity	Total
20	4.0%	7.92%	11.92%
25	4.0	5.75	9.75
30	4.0	3.98	7.98
35	4.0	2.89	6.89
40	4.0	2.10	6.10
45	4.0	1.48	5.48
50	4.0	0.96	4.96
55	4.0	0.53	4.53
60	4.0	0.15	4.15
65	4.0	0.00	4.00

Demographic Assumptions

(i) Mortality

1983 Group Annuity Mortality Table

Sample Ages	Value of \$1 Monthly for Life		Future Life Expectancy (Years)	
	Men	Women	Men	Women
50	\$136.10	\$139.31	29.20	34.93
55	128.65	132.91	24.84	30.25
60	119.09	124.55	20.66	25.69
65	107.54	114.36	16.71	21.30
70	94.37	102.55	13.20	17.15
75	79.75	89.28	10.15	13.39
80	64.49	74.88	7.66	10.22

(ii) Rates of Disability

Sample Ages	Percent Becoming Disabled Within Next Year	
	General	Police-Fire
20	0.02%	0.07%
25	0.04	0.12
30	0.07	0.24
35	0.11	0.40
40	0.16	0.55
45	0.20	0.71
50	0.25	0.87
55	0.30	1.03

(iii) Termination of Employment

Service related rates for first 5 years of employment. Age related rates after first 5 years of employment

Sample Ages	Years of Service	% of Active Members Separating Within Next Year		
		General	Police	Fire
All	0	12.00%	13.00%	9.00%
	1	9.50	6.00	6.00
	2	8.50	5.50	5.55
	3	7.50	5.00	4.00
	4	4.00	3.50	3.00
25	5 & Over	4.00	3.50	1.62
30		3.50	3.02	1.40
35		3.25	2.25	0.83
40		2.00	1.44	0.32
45		1.25	0.80	0.18
50		1.25	0.50	0.18
55		0.75	0.50	0.18
60	0.50	0.50	0.18	

(iv) Retirement Rates

**Percent of Active Members Retiring within Year
Following Attainment of Indicated Retirement Age or Service**

Retirement Ages	Age Based			Service Based		
	General	Police	Fire	Service	Police	Fire
46	-%	50%	-%	25	50%	
47	45	25	-	26	50	
48	45	25	-	27	50	50%
49	45	25	-	28	50	50
50	45	40	-	29	50	50
51	45	40	-	30 & up	100	100
52	45	25	50			
53	45	25	50			
54	45	25	50			
55	45	25	50			
56	45	25	50			
57	20	25	50			
58	20	25	50			
59	10	25	50			
60	10	100	100			
61	25	100	100			
62	20	100	100			
63	20	100	100			
64	20	100	100			
65	15	100	100			
66	20	100	100			
67	20	100	100			
68	40	100	100			
69 & Up	100	100	100			

Actuarial Method Used for the Valuation

Aggregate Cost Method. This method spreads the unfunded present value of future benefits as of the valuation date over the expected future working lifetimes of the remaining active members. Characteristics of this method are as follows:

- ❖ The aggregate annual normal costs payable from the valuation date to the group's projected dates of retirement, disability or death are expected to accumulate to the actuarial present value of the group's benefit at date of retirement, disability or death.

- ❖ By definition, the accrued liability is equal to the actuarial funding value of assets.



Section Five:
Valuation Data



Summary of Asset Information Submitted for the Valuation

Statement of Assets

As of November 30, 2012, the market value of Retirement System assets was reported to be \$194,608,266.

Revenues and Expenses for the Year Ended November 30, 2012

(a) Revenues	
(i) Member Contributions	\$ 450,828
(ii) Employer Contributions	747,119
(iii) Investment Income (Net of Expenses)	24,592,352
(iv) Other income	<u>0</u>
(v) Total Income	25,790,299
b. Expenses	
(i) Pensions	14,401,321
(ii) Refunds and annuity withdrawal	769,725
(iii) Non-Investment Expenses	<u>84,622</u>
(iv) Total Expenses	\$15,255,668

Investment Allocation

The reported asset allocation at market value was as follows:

a. Cash and Short Term	
(i) Cash (incl. Checking/Savings Accounts)	\$ 86,997
(ii) Accruals and Receivables	1,246,849
(iii) Money Market Funds	0
(iv) Treasury Bills	0
(v) Short Term Investments	2,211,931
b. Fixed Income	
(i) U.S. Government/Agency Bond	2,914,967
(ii) Corporate Bonds	20,918,364
(iii) Asset Backed Securities	5,096,086
(iv) Municipal Obligations	449,032
(v) Mortgage Backed Securities	10,156,113
(vi) Collateralized Mortgage Obligations	10,466,960
(vii) Fixed Income mutual funds	15,813,264
(viii) Other: Foreign Bonds & Notes	4,032,296
c. Equities	
(i) Common Stock	80,371,868
(ii) Closely held equity	0
(iii) Open End mutual funds	22,760,166
(iii) Other: Foreign	2,689,425
American Depository Receipts	5,597,876
General Growth RTS	7,450,000
d. Real Estate:	
(i) Real estate investment funds	2,609,950
e. Other Assets:	3,621,946
f. Less accounts payable	4,089,877
g. Total Market Value of Assets as of November 30, 2012	\$194,608,266

Funding Value of Assets

	Year Ended 11/30/2011	Year Ended 11/30/2012
A. Funding Value Beginning of Year	\$203,934,398	\$194,514,611
B. Market Value End of Year	184,073,635	194,608,266
C. Market Value Beginning of Year	188,479,015	184,073,635
D. Non-Investment Income Net Cash Flow	(14,274,773)	(14,057,721)
E. Investment Income		
E1. Market Total B-C-D	9,869,393	24,592,352
E2. Amount for Immediate Recognition	15,743,761	14,998,860
E3. Amount for Phased-In Recognition E1 – E2	(5,874,368)	9,593,492
F. Phased-In Recognition of Investment Income		
F1. From the Current Year 0.20 x E3	(1,174,874)	1,918,698
F2. First Prior Year	484,231	(1,174,874)
F3. Second Prior Year	4,707,986	484,231
F4. Third Prior Year	(15,146,836)	4,707,986
F5. Fourth Prior Year	240,718	(15,146,836)
F6. Total Recognized Investment Gain	(10,888,775)	(9,210,795)
G. Gross Funding Value end of Year A + D + E2 + F6	194,514,611	186,244,955
H. Health Insurance Reserve	0	0
I. Net Funding Value	194,514,611	186,244,955
J. Difference Between Market and Funding Value	(10,440,976)	8,363,311
K. Market Rate of Return	5.1%	12.5%
L. Recognized Rate of Return	2.5%	3.1%

Reported Reserve Balances

	<u>11/30/2011</u>	<u>11/30/2012</u>
Reserve for Employees' Contributions	\$8,378,484	\$8,855,523
Reserve for Employer Contributions	118,056,351	132,417,830
Reserve for Retired Benefit Payments	57,638,800	53,334,913
Reserve for Health Insurance	<u>0</u>	<u>0</u>
Total	\$184,073,635	\$194,608,266

Participant Summary

Retirees and Beneficiaries Included in the Valuation

There were 567 retirees and beneficiaries included in the valuation, with annual pensions totaling \$14,936,507. There were 23 new retirees and 6 new survivor beneficiaries added during the year and 23 were removed. One new alternate payee was added and no alternate payees were removed.

Pensions Being Paid

Valuation Date	No.	Annual Pensions	% of Active Payroll	Average Pension	Discounted Value of Pensions	
					Total	Average
1985	248	\$2,438,598	16.0%	\$9,833	\$26,147,989	\$105,435
1986	285	3,045,379	18.0	10,686	32,753,337	114,924
1987	298	3,360,383	18.8	11,276	35,993,277	120,783
1988	308	3,586,869	18.3	11,646	37,993,837	123,357
1989	331	4,122,475	19.8	12,455	43,437,508	131,231
1990	344	4,426,535	19.8	12,868	43,526,995	126,532
1991	362	4,941,277	21.6	13,650	48,403,086	133,710
1992	388	5,487,251	23.0	14,142	52,852,822	136,219
1993	396	5,795,349	24.1	14,635	56,746,560	143,299
1994	416	6,466,603	25.3	15,545	63,150,428	151,804
1995	433	6,915,782	27.1	15,972	66,978,476	154,685
1996	450	7,503,958	26.8	16,675	72,267,650	160,595
1997	468	8,030,733	39.0	17,161	76,656,612	163,796
1998	483	8,444,938	40.9	17,484	80,195,707	166,037
1999	493	8,948,784	47.9	18,152	84,683,874	171,773
2000	502	9,357,146	54.6	18,640	88,078,816	175,456
2001	515	9,671,679	57.8	18,780	90,253,559	175,250
2002	519	9,961,049	57.6	19,193	92,404,782	178,044
2003	524	10,308,740	60.3	19,673	95,345,963	181,958
2004	538	10,967,097	68.2	20,385	101,737,860	189,104
2005	536	11,135,810	70.1	20,776	102,438,312	191,116
2006	542	11,462,445	71.0	21,148	104,737,223	193,242
2007	547	11,812,063	75.4	21,594	107,405,977	196,355
2008	546	11,981,932	74.6	21,945	107,771,201	197,383
2009	546	12,170,553	76.8	22,290	110,805,883	202,941
2010	562	13,369,294	96.9	23,789	122,739,076	218,397
2011	567	14,273,423	114.6	25,174	129,949,005	229,187
2012	567	14,936,507	132.4	26,343	138,322,423	243,955

Retirees and Beneficiaries - November 30, 2012

Attained Age	General		Police		Fire		Totals	
	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions	No.	Annual Pensions
40-44		\$ -	2	\$122,428		\$ -	2	\$122,428
45-49			18	926,035			18	926,035
50-54	3	92,897	24	1,254,421	10	546,108	37	1,893,426
55-59	27	828,424	8	302,128	14	734,055	49	1,864,607
60-64	47	1,227,277	14	415,962	14	629,440	75	2,272,679
65-69	47	1,147,571	24	759,946	18	602,307	89	2,509,824
70-74	37	628,275	31	899,436	11	274,941	79	1,802,652
75-79	41	694,383	17	454,585	10	207,623	68	1,356,591
80-84	51	839,671	9	218,943	19	339,205	79	1,397,819
85-89	34	381,388	5	37,707	11	186,582	50	605,677
90-94	17	139,839			1	16,956	18	156,795
95-99	3	27,974					3	27,974
Totals	307	\$6,007,699	152	\$5,391,591	108	\$3,537,217	567	\$14,936,507

There were 21 inactive vested members with estimated annual benefits of \$268,097 included in the valuation.

**Inactive Vested Members -
November 30, 2012**

Attained Age	General		Police		Fire		Totals	
	No.	Estimated Annual Pensions	No.	Estimated Annual Pensions	No.	Estimated Annual Pensions	No.	Estimated Annual Pensions
40-44		\$ -		\$ -	1	\$37,974	1	\$37,974
45-49	3	20,506		-		-	3	20,506
50-54	11	120,400			1	24,674	12	145,074
55-59	1	17,935	1	5,822			2	23,757
60-64	1	30,986					1	30,986
70-74			1	7,000			1	7,000
95-99	1	2,800					1	2,800
Totals	17	\$192,627	2	\$12,822	2	\$62,648	21	\$268,097

**Total Active Members - November 30, 2012
Age and Service Distribution**

Attained Age					Totals	
	10-14	15-19	20-24	25-29	No.	Payroll
35-39	4	8			12	\$945,501
40-44	1	32	7		40	3,084,568
45-49		10	36	8	54	4,048,684
50-54	2	6	11	11	30	2,088,834
55-59		1	8	4	13	793,252
60-64		2	3		5	262,954
65-69			1		1	58,252
Total	7	59	66	23	155	\$11,282,045

Group Averages:

Age: 47.8 years
Service: 21.1 years
Annual Pay: \$72,787

**General Active Members - November 30, 2012
Age and Service Distribution**

Attained Age					Totals	
	10-14	15-19	20-24	25-29	No.	Payroll
40-44		3	0		3	\$154,833
45-49		2	9	6	17	961,612
50-54		3	6	9	18	1,084,112
55-59		1	7	4	12	697,294
60-64		2	3		5	262,954
65-69			1		1	58,252
Total		11	26	19	56	\$3,219,057

Group Averages:

Age: 52.6 years
 Service: 23.3 years
 Annual Pay: \$57,483

**Police Active Members - November 30, 2012
Age and Service Distribution**

Attained Age					Totals	
	10-14	15-19	20-24	25-29	No.	Payroll
35-39	4	7			11	\$864,885
40-44		18	6		24	1,875,075
45-49		3	18	2	23	1,843,075
50-54	2	1	4		7	555,839
Total	6	29	28	2	65	\$5,138,874

Group Averages:

Age: 44.5 years
 Service: 19.9 years
 Annual Pay: \$79,060

**Fire Active Members - November 30, 2012
Age and Service Distribution**

Attained Age					Totals	
	10-14	15-19	20-24	25-29	No.	Payroll
35-39		1			1	\$80,616
40-44	1	11	1		13	1,054,665
45-49		5	9		14	1,243,997
50-54		2	1	2	5	448,878
55-59			1		1	95,958
Total	1	19	12	2	34	\$2,924,114

Group Averages:

Age: 46.2 years
 Service: 19.7 years
 Annual Pay: \$86,003

Active Members – Three Year Comparison

	November 30,		
	2012	2011	2010
Active Members	155	171	192
Average Age (yrs.)	47.8	47.1	46.5
Average Service (yrs.)	21.1	20.5	20.1
Average Pay	\$72,787	\$72,838	\$71,874

Active Members by Division – November 30, 2012

Valuation Division	No.	Annual Payroll	Average Age	Average Service	Average Pay
General - Court	2	\$103,432	48.4	23.5	\$51,716
- Dispatchers	2	119,612	45.4	21.6	59,806
- Local 192 – FT	29	1,466,183	52.9	23.2	50,558
- Local 1917	7	457,133	49.4	25.1	65,305
- Other	<u>16</u>	<u>1,072,697</u>	54.8	23.0	67,044
Total	56	\$3,219,057	52.6	23.3	\$57,483
Police – LPOA	41	\$3,090,765	44.7	19.7	\$75,384
- Lts. & Sgts.	<u>24</u>	<u>2,048,109</u>	44.1	20.2	85,338
Total	65	\$5,138,874	44.5	19.9	\$79,060
Fire – 56 Hours	29	\$2,454,554	46.2	19.6	\$84,640
- 40 Hours	4	346,487	46.3	19.7	86,621
- Administration	<u>1</u>	<u>123,073</u>	47.7	22.6	123,073
Total	34	\$2,924,114	46.2	19.7	\$86,003
Totals	155	\$11,282,045	47.8	21.1	\$72,787



Section Six:
Accounting Disclosures



GASB Statement No. 25 Supplementary Information

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

Valuation Date:	November 30, 2012
Actuarial Cost Method:	Aggregate
Amortization method:	N/A
Remaining amortization period:	Expected future working lifetime
Asset valuation method:	Closed 5-year smoothed market value
Actuarial assumptions:	
Investment rate of return	8.0%
Projected salary increases*	4.0% - 11.92%
* Includes inflation at	4.0%

Membership data as of November 30, 2012, is indicated in Section Five of this report.

**GASB Statement Nos. 25 and 27
Required Supplementary Actuarial Information**

Analysis of Funding Progress

Valuation Date	(1) Valuation Value of Assets	(2) Actuarial Accrued Liability#	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2)-(1)	(5) Annual Covered Payroll	(6) UAAL As a % Of Covered Payroll
1993	\$132,136	\$122,975	107.4%	\$ (9,161)	\$24,039	-%
1994	140,037	130,496	107.3	(9,541)	35,538	-
1995	152,456	142,053	107.3	(10,403)	35,510	-
1996	167,361	151,870	110.2	(15,491)	28,003	-
1997	168,884	148,806	113.5	(20,078)	20,598	-
1998	177,035	151,085	117.2	(25,950)	20,653	-
1999	184,782	149,052	124.0	(35,730)	18,684	-
2000	192,477	148,670	129.5	(43,807)	17,132	-
2001	200,937	151,438	132.7	(49,499)	16,721	-
2002	199,627	159,272	125.3	(40,355)	17,285	-
2003	203,505	159,900	127.3	(43,605)	17,109	-
2004	199,578	164,378	121.4	(35,200)	16,070	-
2005	200,005	167,226	119.6	(32,779)	15,885	-
2006	205,101	169,506	121.0	(35,595)	16,135	-
2007	215,675	173,486	124.3	(42,189)	15,657	-
2008	210,519	179,096	117.5	(31,423)	16,055	-
2009	207,959	190,134	109.4	(17,925)	15,855	-
2010	203,934	195,105	104.5	(8,829)	13,800	-
2011	194,515	196,420	99.0	1,905	12,455	15.3
2012	186,245	200,224	93.0	13,979	11,282	123.9

Based on the Entry Age Normal Actuarial cost-method.

Note: Results prior to 2003 are based on reports provided by previous actuarial firm.

Required Supplementary Information
Schedule of Employer Contributions

Fiscal Year Ended November 30,	Actual Required Contribution*			Percent Contributed
	<u>General</u>	<u>Police</u>	<u>Fire</u>	
1995	10.20%	9.67%	18.81%	100%
1996	10.71	8.68	18.40	100
1997	10.78	10.56	20.73	100
1998	10.53	11.62	20.14	100
1999	0.00	1.71	19.06	100
2000	0.00	2.91	17.06	100
2001	0.00	1.15	15.20	100
2002	0.00	0.00	9.73	100
2003	0.00	0.00	9.50	100
2004	0.00	0.00	12.70	100
2005	0.00	0.00	0.00	100
2006	0.00	0.00	0.00	100
2007	0.00	0.00	0.00	100
2008	0.00	0.00	0.00	100
2009	0.00	0.00	0.00	100
2010	0.00	0.00	0.00	100
2011	0.00	0.00	0.00	100
2012	8.98	3.55	7.49	100
2013	28.42	12.10	19.81	
2014	45.75	23.71	50.70	

*Based on actual payroll.

Note: Results prior to 2003 are based on reports provided by previous actuarial firm.

**Required Supplementary Information
Statement of Reported Plan Assets November 30, 2012**

Market Value of Assets:

Cash and equivalents	\$86,997
Accruals & Receivables	<u>3,458,480</u>
Total	3,545,477

Investments at market value:

Stocks & Other Equities	118,869,335
Bonds & Other Fixed Income	70,051,435
Real Estate	<u>2,609,950</u>
Total Investments	191,530,720
Other Assets	3,621,946
Total Assets	198,698,143
Less accounts payable	<u>4,089,877</u>
Net assets held in trust for pension benefits	\$194,608,266

**Required Supplementary Information
Statement of Changes in Plan Net Assets
For The Fiscal Year Ended
November 30, 2012**

Additions:	
Contributions	
Employer	\$747,119
Members	<u>450,828</u>
Total	1,197,947
Investment Income (net)	24,592,352
Miscellaneous	<u>0</u>
Total Additions	25,790,299
Deductions:	
Benefits Paid	14,401,321
Refund of Contributions	769,725
Administrative Expenses	<u>84,622</u>
Total Deductions	15,255,668
Net Increase	10,534,631
Net assets held in Trust Fund:	
Beginning of year	\$184,073,635
End of year	\$194,608,266