CITY OF EAST PROVIDENCE

RHODE ISLAND

POLICE AND FIRE FIGHTERS RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT

AS OF OCTOBER 31, 2013

Prepared by:

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March 31, 2013

CITY OF EAST PROVIDENCE, RHODE ISLAND

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CITY OF EAST PROVIDENCE, RHODE ISLAND

POLICE AND FIRE FIGHTERS RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT AS OF OCTOBER 31, 2013

1. Highlights of Report

	2011 - 2012	2012 - 2013	2013 - 2014
Customary Contribution as of October 31	$ 7,525,388	$ 7,951,460	$ 5,436,880
Customary Contribution as Percentage of Total Payroll	61.1%	63.4%	42.9%
City's Actual Annual Contribution	$ 1,590,445 (Actual)	$ 7,784,310 (Actual)	$ 7,951,460 (Estimated)
Plan Assets as of October 31			
Market Value	$ 53,438,852	$ 50,790,044	$ 110,946,970
Actuarial Value	$ 53,521,413	$ 52,075,375	$ 107,769,539
Funded Status of Accrued Benefits – Based on:			
Market Value of Assets	37.9%	35.4%	73.2%
Actuarial Value of Assets	37.9%	36.3%	71.1%
Funded Status of Actuarial Accrued Liability – Based on:			
Market Value of Assets	33.5%	30.8%	64.2%
Actuarial Value of Assets	33.6%	31.6%	62.3%
Number of Participants			
Active	188	188	186
Service Retirement	156	153	152
Disability Retirement	42	42	42
Surviving Spouses	49	50	51
Terminated with Vesting	0	0	0
Total	435	433	431
Total Payroll of Active Participants	$ 12,325,700	$ 12,542,173	$ 12,666,939
Average Age of Active Participants	41.9	42.6	43.3
Average Service of Active Participants	14.4	15.2	15.5

2. Summary of Report

This report presents the results of the annual actuarial valuation of the City of East Providence, Rhode Island Police and Fire Fighters Retirement System as of October 31, 2013. The valuation has been requested by the Police and Fire Fighters Retirement Board. This is the tenth annual actuarial valuation of the Retirement System performed by Fallon Pension Actuaries, Inc. The valuation is based on the actuarial methods and assumptions as documented in this report, which were substantially revised in 2011. Included in the report are a statistical summary of participants, financial history of the pension fund, information on investment performance, and an outline of the principal plan provisions. The City's customary contribution for the 2013 – 2014 fiscal year is equal to $ 5,436,880. This represents approximately 42.9% of the total payroll of active participants of the plan. Based on the City's most recent budgeted contribution level, it is expected the City will contribute approximately $ 7,951,460 for the current year.

The pension fund market value as of October 31, 2013 was $ 110,946,970. This market value includes a deposit/transfer of funds received from the U.S. Department of Justice for benefit of the Police in the amount of $ 49,200,000. For purposes of the annual actuarial valuation of a pension plan, it is typical to use an adjusted asset value in order to smooth out year to year fluctuations in market value of assets. For this year's valuation, we have used an asset method that incorporates a five year average of realized and unrealized investment gains and losses to accomplish this purpose. The resulting actuarial value of plan assets is further limited, if necessary, to not more than a corridor value of 120% of the market value. The resulting amount used for this annual valuation is equal to $ 107,769,539.

The appendices to this report contain information required for disclosure in accordance with Statement No. 25 of the Governmental Accounting Standards Board ("GASB"). Two additional schedules are included in the appendix which presents historical information on the plan's funding progress (Appendix C) and employer contributions (Appendix D).

3. Participant Data

The Participant data for the annual actuarial valuation was supplied to us by the City of East Providence. The data was not audited by us, but has been checked for reasonableness with prior year information. Exhibit 3 presents a distribution of active participants of the plan by age and completed years of service as of October 31, 2013. There are a total of 186 active participants with an average age of 43.3 and average years of completed service of 15.5. The following chart shows a breakdown of the active members between Police and Fire.

	Number of Active Participants	Average Attained Age	Average Years of Service
Police	92	41.0	13.4
Fire Fighters	94	45.4	17.5

There are a total of 245 retired participants and beneficiaries receiving benefits, including 152 service retirements, 42 disability retirements and 51 spouses of deceased participants. Total plan membership decreased from 433 on October 31, 2012, to 431 on October 31, 2013. The net change of 2 fewer participants is the result of 2 fewer active employees in the plan. A reconciliation of participants through October 31, 2013 is shown in Exhibit 4 (pages 11 & 12).

4. Pension Plan Provisions

The principal benefit provisions of the plan as of October 31, 2013 used in the valuation are summarized in Exhibit 8. This valuation reflects the plan's benefit formula with accrual of 2.5% of final salary for the first 24 years of service, 2% of final salary for the next 4 years of service, and 1% of final salary for the last two years, up to 30 years of total service. The valuation also reflects Police and Fire Fighter contributions at the rate of 8% of pay, which was increased from 7% of pay in late 2004. Additional pension benefits related to the inclusion of holiday pay in the final salary (14 days for policemen and fire fighters) are also reflected as of October 31, 2013.

5. Plan Assets and Investment Performance

The value of assets as of October 31, 2013 was provided in financial statements from the Trustee, Bank of America. For the year ending October 31, 2013, the market value return on plan assets was approximately +14.8%. For the five year period ending on the valuation date, the compound equivalent rate of return based on market value was +10.6%. For the three year period ending on the valuation date, the compound equivalent rate of return based on market value was +8.4%.

The return on valuation assets was more than the assumed rate of return used to perform the valuation, resulting in an actuarial gain from investments. The following chart presents the annual rate of return for the last 5 years ending on October 31st.

Year Ending October 31st		Annual Rate of Return on Market Value
2009		15.2%
2010		12.8
2011		3.1
2012		7.8
2013		14.8
Compound Equivalent Annual Rate of Return	Last 5 Years:	10.6%
	Last 4 Years:	9.5%
	Last 3 Years:	8.4%

As previously mentioned, the asset valuation method incorporates a smoothing technique, which averages over the prior four year period, realized and unrealized investment gains and losses. The market value of assets as of October 31, 2013 was $ 110,946,970. The actuarial value of assets was $ 107,769,539, which is subject to the corridor limit of 120% of market value (application not needed in 2013). The determination of valuation assets as of October 31, 2013 is shown in Exhibit 7. As mentioned previously, Plan assets as of October 31, 2013 reflect a deposit/transfer from the U.S. Department of Justice of $ 49.2 million received and deposited in March , 2013.

6. Actuarial Cost Method and Assumptions

The City's contributions are calculated using the entry age normal actuarial cost method. This actuarial cost method has been revised from the projected unit credit actuarial cost method used in the previous years before 2012. A description of this cost method and the assumptions used to perform this actuarial valuation are presented in Exhibit 9. The asset valuation method was previously revised, with a new corridor limit included, such that the actuarial value of assets may not exceed 120% of the market value of assets. This new limit was not applicable for the actuarial value of assets in 2013.

The actuarial assumptions have also been substantially revised from those used in the prior actuarial valuations of the pension plan before 2011. The revised actuarial assumptions have resulted from an Experience Study which was required by Chapter 64 of the recently passed Rhode Island Security Act of 2012. In addition to the Experience Study for the City of East Providence Police and Fire Fighters Pension Plan, the State of Rhode Island Municipal Employees' Pension Plan has undergone changes to actuarial assumptions during 2011 These later changes have also been considered in setting the revised assumptions for 2011, 2012 and 2013 actuarial valuations.

The new actuarial assumptions include several changes. The interest rate assumption has been reduced to 7.50% per annum, from the previous rate of 8.50% per annum. Future annual salary increases are assumed to be 4.25% per year, reduced from the 5.00% annual increase previously assumed. It is now assumed that there will be employment terminations prior to retirement, and the rates will depend on the number of completed years of service. The mortality assumption is changed to the more recent RP-2000 Mortality Table, using the Combined Rates for Healthy Males and Females with adjustment for Blue Collar. The mortality rates will also be improved in future years using generational improvements of Scale A. Disability rates have also been revised.

7. <u>Actuarial Valuation Results</u>

Due to changes in actuarial assumptions, plan participation and annual salaries, the benefit liabilities have increased somewhat from the levels determined in the actuarial valuations before 2011. As mentioned, an adjusted market value method has been used to determine the actuarial value of assets. An actuarial gain has resulted during the year on benefit liabilities, which has been added to by an actuarial gain resulting from investment return on the actuarial value of plan assets. The investment return on the actuarial value of assets was about 9.0%, higher than the assumed interest rate for the year.

Exhibit 1 summarizes the total actuarial present value of projected benefits, actuarial accrued liability, actuarial value of assets, unfunded actuarial accrued liability, normal cost, and the City's customary contribution for this year's valuation.

In years prior to 1991, the contribution was shown as a percent of covered payroll, or the payroll for active employees who have not reached age 55. The contribution is shown as a percent of the total payroll (inclusive of longevity payments and holiday pay) in this report, as this is a more appropriate measurement. The City's actual contribution rate is applied to total payroll. The calculation of actuarial gain/loss for the year ending October 31, 2013 is shown in Exhibit 10. The total net actuarial loss for the year $ .934 million, equal to losses offset by investment gains.

8. Funded Status of the Plan

As a measure of the funded status of the pension plan, we have determined the value of benefits earned by participants through October 31, 2013, as if the pension plan were to terminate as of that date. In the unlikely event that all active participants terminated employment, this amount represents the total actuarial present value of pension benefits earned which would be paid to plan participants, including currently inactive and retired participants, and their beneficiaries, for years of service completed through October 31, 2013.

	Police	Fire	Total
1. Accrued Benefit Liability			
a. Active	$ 16,519,806	$ 23,820,067	$ 40,339,873
b. Inactive	54,365,272	56,948,254	111,313,526
c. Total	$ 70,885,078	$ 80,768,321	$ 151,653,399
2. Market Value of Assets	$ 79,637,306	$ 31,309,664	110,946,970
3. Funded Ratio (2)/(1c)x100%	112.4%	38.8%	73.2%

9. Comments and Recommendations

Based on our discussions with the Retirement Board, review of prior practices, and completion of this annual actuarial valuation, we have the following comments and recommendations:

- The valuation results suggest that the City should budget, in total, approximately 42.9% of the total payroll (base pay plus longevity payments and holiday pay) for the Police and Fire Fighters pension fund contribution; reflecting the asset transfer in 2013, the respective contribution rates have widened considerably, and are now equal to 18.6% for Police and 66.2% for Fire Fighters.

- The plan has now become a more well-funded public sector pension plan; assets are 71.1% of earned benefit liabilities on a plan discontinuance basis as of October 31, 2013. This ratio is based on the actuarial value of assets of $ 107,769,539; this ratio reflects the asset transfer/deposit added to the pension fund in 2013.

- The single most important concern for the future financial success of a well-funded pension plan is adequate investment return on plan assets. Periodic review and monitoring of investment results will ensure the continued viability of the plan. The investment management process recently applied has recently yielded very good results.

- As of October 31, 2013, between 50% - 55% of the pension plan assets based on market value as of that date were invested in equities. Since this may result in somewhat volatile asset returns from year to year, the valuation process includes a smoothing mechanism for determining the value of assets used in the actuarial valuation. We have employed a five year average of realized and unrealized investment gains (losses) in determining this year's results, with a new corridor limitation that valuation assets not exceed 120% of the pension fund market value as of October 31, 2013. This will help to stabilize the City's cost for the plan from year to year.

- For the year beginning in 2010 – 2011, a new amortization factor was instituted for the existing unfunded actuarial accrued liability, in determining the City's Customary Contribution. Previously, the amortization was determined as a level dollar amount over a predetermined amortization period of up to 40 years. Continuing on October 31, 2013, the unfunded actuarial accrued liability of $ 65,180,121 will be amortized as a level percentage of pay, over a 30 year period.

- We appreciate the cooperation and access to plan data provided by the City's Finance Department. This has allowed us to review actual plan experience with respect to the key assumptions. The result is a good foundation for a more realistic determination of the pension plan benefit obligations.

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The actuarial valuation was based on data provided to us from various sources. We have checked this information and believe it is accurate for the purpose of completing this actuarial valuation. If there are any questions concerning this report or if any additional information is desired, we are available to provide further explanation.

Respectfully submitted,
FALLON PENSION ACTUARIES, INC.

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Michael Fallon
Fellow Society of Actuaries (F.S.A.)
Enrolled Actuary (E.A. #14-03368)

EXHIBIT 1

Summary of Actuarial Valuation Results as of October 31, 2013

			Police	Fire	Total
1.	Number of Participants				
	a.	Active	92	94	186
	b.	Service Retirement	69	83	152
	c.	Disability Retirement	19	23	42
	d.	Surviving Spouses	29	22	51
	e.	Terminated with Vesting	0	0	0
	f.	Total	209	222	431
2.	Actuarial Present Value of Future Projected Benefits				
	a.	Active	$ 38,158,075	$ 45,202,228	$ 83,360,303
	b.	Inactive	54,365,272	56,948,254	111,313,526
	c.	Total	$ 92,523,347	$ 102,150,482	$194,673,829
3.	Actuarial Accrued Liability		$ 80,548,695	$ 92,400,965	$172,949,660
4.	Actuarial Value of Plan Assets		$ 77,356,975	$ 30,412,564	$107,769,539
5.	Unfunded Actuarial Accrued Liability: (3) - (4)		$ 3,191,720	$ 61,988,401	$ 65,180,121
6.	Normal Cost				
	a.	City	$ 984,556	$ 982,786	$ 1,967,342
	b.	Employee Contribution	495,584	517,771	1,013,355
	c.	Total	$ 1,480,140	$ 1,500,557	$ 2,980,697
7.	Customary Contribution				
	a.	City Normal Cost	$ 984,556	$ 982,786	$ 1,967,342
	b.	Amortization of Unfunded Actuarial Accrued Liability	169,895	3,299,643	3,469,538
	c.	Total	$ 1,154,451	$ 4,282,429	$ 5,436,880
8.	Total Payroll of Active Participants		$ 6,194,802	$ 6,472,137	$12,666,939
9.	Customary Contribution as Percentage of Total Payroll (7c)/(8)x100%		18.6%	66.2%	42.9%

EXHIBIT 2

Five Year Summary of Actuarial Valuation Results as of October 31 (2009 – 2013)

($ Amounts in Thousands)

		2009	2010	2011	2012	2013
1.	Actuarial Present Value of Future Projected Benefits	$ 144,740	$ 147,147	$ 181,929	$ 186,892	$ 194,674
2.	Actuarial Accrued Liability	120,059	124,589	159,322	164,803	172,950
3.	Value of Plan Assets *	62,974	59,604	53,521	52,075	107,770
4.	Unfunded Actuarial Accrued Liability	57,085	64,985	105,801	112,728	65,180
5.	City Normal Cost	1,740	1,500	1,894	1,951	1,967
6.	City's Customary Contribution	4,681	4,848	7,525	7,951	5,436
7.	Actual City Contribution	1,400	1,438	1,590	7,784	N/A
8.	Payroll of Active Participants **	12,580	11,774	12,326	12,542	12,667
9.	Percentage of Payroll Cost for Customary Contribution	37.2%	41.2%	61.1%	63.4%	42.9%
10.	Number of Participants					
	a. Active	202	185	188	188	186
	b. Service Retirement	151	158	156	153	152
	c. Disability Retirement	38	40	42	42	42
	d. Surviving Spouses	43	45	49	50	51
	e. Subtotal - Retired Participants (b)+(c)+(d)	232	243	247	245	245
	f. Terminated with Vesting	0	0	0	0	0
	g. Total Participants	434	428	435	433	431

* Adjusted market value for all plan years

** Total payroll (base, plus holiday, plus longevity) for all plan years

EXHIBIT 3

Distribution of Active Plan Participants With Average Annual Base Salary as of October 31, 2013

YEARS OF SERVICE (BENEFIT ACCRUAL)

ATTAINED AGE	0-4	5-9	10-14	15-19	20-24	25-29	30-34	35+	TOTAL	AVG.SAL
20-24	2	0	0	0	0	0	0	0	2	$ 46,829
25-29	10	3	0	0	0	0	0	0	13	54,482
30-34	3	14	2	0	0	0	0	0	19	55,856
35-39	1	6	10	8	0	0	0	0	25	57,792
40-44	2	6	12	24	5	0	0	0	49	60,334
45-49	0	0	7	17	10	1	0	0	35	60,231
50-54	0	1	1	7	6	13	0	0	28	65,337
55-59	1	0	0	2	1	7	2	0	13	69,064
60+	0	1	0	1	0	0	0	0	2	60,664
TOTAL	19	31	32	59	22	21	2	0	186	$ 60,328
AVERAGE SALARY	$ 55,790	$ 56,712	$ 58,175	$ 59,289	$ 66,233	$ 69,065	$ 67,883	$ 0		

Average salary includes annual base salary; holiday pay and current longevity payments are not included.

EXHIBIT 4

Reconciliation of Plan Participants

	Police	Fire	Total
Active Participants as of October 31, 2012	92	96	188
New entrants	3	3	6
Service retirements	(2)	(3)	(5)
Disability retirements	0	0	0
Return to active status	0	0	0
Deaths with surviving spouse	0	0	0
Terminations with refunds	(1)	(2)	(3)
Active Participants as of October 31, 2013	92	94	186

	Police	Fire	Total
Participants on Service Retirement as of October 31, 2012	68	85	153
New service retirements	2	3	5
Death with continuing benefits	0	(1)	(1)
Retirement from vested status	0	0	0
Deaths without continuing benefits	(1)	(4)	(5)
Transfer to active status	0	0	0
Participants on Service Retirement as of October 31, 2013	69	83	152

	Police	Fire	Total
Participants on Disability Retirement as of October 31, 2012	19	23	42
New disability retirements	0	0	0
Deaths without continuing benefits	0	0	0
Deaths with continuing benefits	0	0	0
Transfer to survivor status	0	0	0
Participants on Disability Retirement as of October 31, 2013	19	23	42

EXHIBIT 4 - Continued

Reconciliation of Plan Participants

	Police	Fire	Total
Spouses Receiving Benefits as of October 31, 2012	29	21	50
Deaths	0	(1)	(1)
New surviving spouses from retired status	0	2	2
New surviving spouses from active status	0	0	0
New surviving spouses from disabled status	0	0	0
Transfer from retired status	0	0	0
Spouses Receiving Benefits as of October 31, 2013	29	22	51

	Police	Fire	Total
Participants Terminated with Vesting as of October 31, 2012	0	0	0
New terminations with vesting	0	0	0
Retired	0	0	0
Refund of contributions	0	0	0
Participants Terminated with Vesting as of October 31, 2013	0	0	0

EXHIBIT 5

Distribution of Inactive Plan Participants as of October 31, 2013

ATTAINED AGE	DISABLED AND TERMINATED VESTED NUMBER	DISABLED AND TERMINATED VESTED ANNUAL BENEFITS	RETIREES AND BENEFICIARIES NUMBER	RETIREES AND BENEFICIARIES ANNUAL BENEFITS	TOTAL NUMBER	TOTAL ANNUAL BENEFITS
Under 45	2	$ 100,284	1	$ 42,633	3	142,917
45-49	1	46,390	6	228,728	7	275,118
50-54	5	245,915	11	553,756	16	799,671
55-59	8	417,463	25	1,111,714	33	1,529,177
60-64	4	158,088	31	1,470,171	35	1,628,259
65-69	8	313,977	32	1,195,136	40	1,509,113
70-74	7	286,819	28	1,223,271	35	1,510,090
75-79	3	142,707	19	544,089	22	686,796
80-84	4	150,347	21	634,714	25	785,061
85 and Over	0	0	29	587,512	29	587,512
TOTAL	42	$ 1,861,990	203	$ 7,591,724	245	$ 9,453,714
AVERAGE ANNUITY	--	$ 44,333	--	$ 37,398	--	$ 38,587

EXHIBIT 6

Five Year Summary of Pension Fund Investment Performance 2009-2013

		For Plan Year Ending October 31				
		2009	2010	2011	2012	2013
1.	Market Value of Assets at Beginning of Year	$ 54,557,461	$ 57,315,573	$ 58,336,221	$ 53,438,852	$ 50,790,044
2.	Contributions					
	a. City	1,567,216	1,400,002	1,437,580	1,590,445	7,784,310
	b. Employee	1,053,195	1,211,632	965,007	990,483	1,001,991
	c. Transfer Deposit	0	0	0	0	49,200,000
	d. Total	2,620,411	2,611,634	2,402,587	2,580,928	57,986,301
3.	Investment Income	1,084,394	851,050	713,206	913,600	1,895,284
4.	Realized Gain (Loss)	138,987	869,319	1,214,530	1,678,534	212,502
5.	Unrealized Gain (Loss)	6,669,945	5,227,437	(271,629)	1,333,969	9,581,223
6.	Benefit Payments	7,490,300	8,243,471	8,705,932	8,964,308	9,314,049
7.	Expenses	265,325	295,321	250,131	191,531	204,335
8.	Market Value of Assets at End of Year	$ 57,315,573	$ 58,336,221	$ 53,438,852	$ 50,790,044	$ 110,946,970
9.	Rate of Return	15.2%	12.8%	3.1%	7.8%	14.8%

Compound equivalent annual rate of return: for the five year period 2009 – 2013 is 10.6%; for three year period 2011 – 2013 is 8.4%.

EXHIBIT 7

Reconciliation of Plan Assets as of October 31, 2013

		Book Value	Market Value	Actuarial Value
		(1)	(2)	(3)
1.	Value of Plan Assets as of October 31, 2012	$ 45,229,802	$ 50,790,044	$ 52,075,375
2.	Contributions			
	a. City	7,784,310	7,784,310	7,784,310
	b. Employee	1,001,991	1,001,991	1,001,991
	c. Transfer Deposit	49,200,000	49,200,000	49,200,000
	d. Total	$ 57,986,301	$ 57,986,301	$ 57,986,301
3.	Investment Income	1,895,284	1,895,284	1,895,284
4.	Net Realized Gain (Loss) on Sales of Investments	212,502	212,502	822,774
5.	Net Increase (Decrease) in Unrealized Appreciation	--	9,581,223	4,508,189
6.	Benefit Payments	(9,314,049)	(9,314,049)	(9,314,049)
7.	Expenses	(204,335)	(204,335)	(204,335)
8.	Value of Plan Assets as of October 31, 2013	$ 95,805,505	$ 110,946,970	$ 107,769,539

Note: Actuarial value of assets is determined by replacing actual realized gain (loss) and actual unrealized gain (loss) by the average of such gains (losses) over the prior five years. The distribution of appreciation between realized gain and increase in unrealized gain has been closely approximated for this year. However, the total appreciation is the correct value and may be otherwise shown as a combined amount in the future. The actuarial value of assets is subject to a corridor limitation equal to 120% of the market value of assets (not applicable in 2013).

EXHIBIT 8

Summary of Principal Provisions of the Plan

1.	Effective Date	November 1, 1961
2.	Eligibility for Participation	Immediately upon becoming an employee of the police or fire department, and being sworn in as a police officer or fire fighter.
3.	Definition of Salary	Salary including holiday pay (at 14 days for policemen and fire fighters) plus longevity payment based on schedule below. For Police and Fire Fighters: 6% of base salary after 5 years of service 7% of base salary after 10 years of service 8% of base salary after 15 years of service 9% of base salary after 20 years of service
4.	Cost of Living Adjustments After retirement	For Police, participants who retire between November 1, 1982 and November 1, 1984 receive 3% compounded cost of living increase annually. Participants who retire after November 1, 1994 receive 3% compounded cost of living increase annually at or after age 51. After October 1, 1995 annual 3% compounded cost of living increase extended to disabled policemen prior to age 51. For Fire Fighters, participants who retire after November 1, 1985 receive 3% compounded cost of living increase annually at or after age 51. Participants who retire after November 1, 1989 will receive 3% compounded cost of living increases annually regardless of age.
5.	Normal Form of Pension	Life annuity; optional non-spouse joint and survivor annuity available on actuarial equivalent basis.
6.	Definition of Credited Service	Equals completed years and months from date of hire. For any month, 15 days or more is considered a full month of service.

EXHIBIT 8 - Continued

7.	Participant Contributions	Police and Fire Fighters contribute 8% of compensation.
8.	Service Retirement	
	a. Eligibility	Earlier of (i) or (ii): (i) Age 60 and 10 years of service, or (ii) 20 years of service

	b. Benefit Formula	For (i) above:
		
		2% of salary for each year of credited service to a maximum of 70%.
		
		For (ii) above:
		
		2½% of salary for each of the first 24 years of credited service, plus 2% of salary for each of the next 4 years plus 1% of salary for each additional year of credited service to a maximum of 70% at 30 years of credited service).

9.	Disability Retirement	
	a. Eligibility - Service Related	Active participant.
	b. Benefit Formula - Service Related	$66^2/_3$% of salary at time of disability plus 10% of salary for each child under age 18 to a maximum of 80% of salary.
	c. Eligibility - Non Service Related	10 years of service.
	d. Benefit Formula - Non Service Related	1¾ % of salary at time of disability for each year of service to date of disability, with minimum benefit of 25% of salary, and maximum benefit of 50% of salary. If credited service at date of disability is twenty years or more, at age 55, participant is entitled to a service retirement annuity.

EXHIBIT 8 - Continued

10.	Termination of Service Prior to Retirement	
	a. Eligibility	10 years of service.
	b. Benefit Provided	Accrued pension based on service and salary to date of termination. Payable at age 55.
	c. Refund of Contributions	An employee who has not satisfied the vesting requirements will be entitled to a return of participant contributions without interest.
11.	Death Benefits	
	a. Eligibility - Service Related	Death resulting from an act of duty.
	b. Benefits Provided - Service Related	Depends on marital and dependent status: (i) With surviving spouse equals 50% of salary at time of death, plus 10% of salary for each child under age 18 to a maximum of 70% of salary (ii) Without surviving spouse equals 15% of salary at time of death for each child under the age of 18 with a maximum of 60% of salary.
	c. Eligibility - Non Service Related	3 years of service.
	d. Benefit Provided - Non Service Related	Payable to surviving spouse as follows: 30% of salary increased by 1% for each year of service in excess of 3 years, to a maximum of 50% of salary, and beginning at the surviving spouse's age 55, plus 10% of salary for each child under age 18 to a maximum of 60% of salary, with benefits to spouse and children under age 18 beginning immediately.
	e. R.I. State Mandated Spouse's Death Benefit	Plan benefit above, or 67½% of final pension payment, if provides a higher benefit.

EXHIBIT 9

Actuarial Cost Method and Assumptions

1.	Actuarial Cost Method	The entry age normal actuarial cost method. Under this method, the annual normal cost is determined for each active participant as of each valuation date, and represents the level percentage of pay from age at hire through retirement to fund the projected retirement benefit. The actuarial accrued liability is equal to the accumulated annual normal costs from entry through the valuation date. The unfunded actuarial accrued liability represents the excess of the actuarial accrued liability over the valuation assets. The projected unit credit actuarial cost method was previously used before 2012.
2.	Interest	7.50% per annum (previously 8.50% before 2011).
3.	Salary Increases	Future salaries expected to increase at rate of 4.25% per year (previously 5.00% before 2011).
4.	Mortality	The RP-2000 Combined Healthy for Males and Females with Blue Collar adjustments, projected with Scale AA. Sample rates are as follows:

Age	Male	Female
25	.0004	.0002
35	.0008	.0004
45	.0014	.0008
55	.0036	.0020
65	.0135	.0100
75	.0369	.0283

5.	Terminations	Rates based on years of service:

Service	Rate
1	.0400
5	.0314
10	.0207
15	.0100
20 or More	.0000

EXHIBIT 9 - Continued

6. Retirement

The following annual rates of retirement age:

After Age 40	Annual Rate
With 20 Years	12%
21 – 23 Years	14%
24 – 26 Years	16%
27 – 29 Years	18%
30 Years or More	20%
Age 60 and Over	100%

7. Disability

Rates based on attained age:

Age	Rate
25	.0050
35	.0075
45	.0180
55	.0300

8. Cost of Living Adjustments

In accordance with benefit provisions of the plan, 3% annual cost of living adjustments are assumed for the appropriate categories of retired members.

9. Value of Assets

Adjusted market value as of October 31, determined by replacing actual gains (losses) and unrealized gains (losses) by a 4 year average of such gains (losses). Allocation of assets between police and fire determined based on equivalent funded status of accrued benefits on a termination basis as of the valuation date.

10. Percent Married

85% of participants are assumed to be married. Female spouses are assumed to be three years younger than male spouses (previously 100% assumed before 2011).

11. Date of Valuation

October 31, 2013.

EXHIBIT 10

Determination of Actuarial Gain (Loss)

1.	Unfunded Actuarial Accrued Liability as of October 31, 2012	$ 112,727,453
2.	City Normal Cost for Plan Year Commencing November 1, 2012	1,950,978
3.	Interest on (1) and (2) at 7.5% per annum	8,600,882
4.	City Contributions for Plan Year Ending October 31, 2013	7,784,310
5.	Interest on (4) at 7.5% per annum for ½ year	291,912
6.	Transfer Deposit – (Google / US DOJ Payment)	49,200,000
7.	Interest on (6) at 7.5% per annum for 7/12 year	2,152,500
8.	Effect of Employee Contributions and City Shortfall	396,001
9.	Increase due to Changes in Actuarial Assumptions and Methods	0
10.	Expected Unfunded Actuarial Accrued Liability as of October 31, 2013 (1) + (2) + (3) - (4) - (5) - (6) - (7) + (8) + (9)	$ 64,246,592
11.	Actual Unfunded Actuarial Accrued Liability as of October 31, 2013	$ 65,180,121
12.	Actuarial Gain (Loss): (8) - (9)	($ 933,259)
13.	Sources of Actuarial Gain (Loss):	
	a. Investment Experience	$ 1,195,547
	b. Other Actuarial Experience *	(2,129,076)
	c. Total	($ 933,529)

*Includes salary increases, mortality, disability, retirements, and new participants.

EXHIBIT 12

Glossary of Terms

This glossary summarizes the technical terms contained in this report.

1. Actuarial Assumptions: Assumptions as to the occurrence of future events affecting the Retirement System such as:

   - Rates of investment return
   - Increases in a member's salary
   - Inflation
   - Probability of mortality, turnover, disablement
   - Retirement at each age and other relevant items

2. Actuarial Cost Method: A procedure for allocating the Actuarial Present Value of total projected pension plan benefits between Normal Cost and Actuarial Accrued Liability.

3. Actuarial Present Value of Benefits: The single-sum amount required at the valuation date to provide the projected pension plan benefits and which reflects anticipated future events, the terms of the plan and the Actuarial Assumptions.

4. Actuarial Accrued Liability: That portion of the Actuarial Present Value of Benefits which is not provided for by future Employer Normal Costs or employee contributions.

5. Normal Cost: That portion of the Actuarial Present Value of Benefits which is assigned to the current year. The City Normal Cost is determined as the total Normal Cost less the expected employee contributions for the current year.

6. Unfunded Actuarial Accrued Liability: That portion of the Actuarial Accrued Liability in excess of the assets.

7. Accrued Benefit Liability: That portion of the Actuarial Value of Benefits which represents the amount to which a participant would be entitled if he terminated his employment with the employer as of the valuation date.

Disclosure of Pension Information in Accordance with GASB Statement No. 25

APPENDIX A

Funding Status and Progress

The amount shown below as "pension benefit obligation" is a standardized disclosure measure of the present value of pension benefits, adjusted for the effects of projected salary increases and any step rate benefits estimated to be payable in the future as a result of employee service to date. The measure is the actuarial present value of credited projected benefits and is intended to help users assess The City of East Providence Police and Fire Fighters Retirement System funding status on an ongoing concern basis, assess progress made in accumulating sufficient assets to pay benefits when due and make comparisons among Public Employee Retirement Systems ("PERS"). The measure is often independent of the actuarial funding method used to determine contributions to the system.

The pension benefit obligation was determined as part of an actuarial valuation at October 31, 2013. Significant actuarial assumptions used include (a) a rate of return on the investment of present and future assets of 7.50 percent per year compounded annually, (b) projected salary increases of 4.25 percent per year compounded annually, attributable to inflation and seniority/merit, and (c) post-retirement benefit increases of 3 percent per year compounded annually from retirement.

As required by GASB Statement No. 25, which has been adopted by the Fund during the fiscal year ending October 31, 2013, additional schedules have been added to the report showing Funding Progress (in Appendix D) and Employer Contributions (in Appendix E) for the six year period ending October 31, 2013.

APPENDIX A - Continued

At October 31, 2013, the unfunded pension benefit obligation was as follows (in thousands):

	Police ($000)	Fire ($000)	Total ($000)
Pension benefit obligation:			
Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	$ 54,365	$ 56,948	$ 111,313
Current employees:			
- Accumulated employee contributions	$ 4,582	$ 5,890	$ 10,472
- Employer-financed vested	18,829	25,993	44,822
- Employer-financed nonvested	2,773	3,570	6,343
Total pension benefit obligation	$ 80,549	$ 92,401	$ 172,950
Net assets available for benefits, at market value	$ 79,637	$ 31,310	$ 110,947
Unfunded pension benefit obligation:	$ 912	$ 61,091	$ 62,003

APPENDIX B

Revenues by Source and Expenses By Type

REVENUES BY SOURCE

Fiscal Year Ending October 31	Employee Contributions	Employer Contributions	Investment Income	Total
2000	$ 767,105	$ 475,193	$ 2,836,379	$ 4,078,677
2001	809,129	297,830	2,930,088	4,037,047
2002	739,348	316,867	2,662,384	3,718,599
2003	758,434	325,051	2,166,505	3,249,990
2004	854,463	754,998	1,144,414	2,753,875
2005	896,263	782,234	1,167,580	2,846,077
2006	935,149	985,136	1,160,676	3,080,961
2007	1,004,256	1,494,518	1,071,667	3,570,441
2008	1,068,554	1,564,102	1,375,106	4,007,762
2009	1,053,195	1,567,216	1,084,394	3,704,805
2010	1,211,632	1,400,002	851,050	3,462,684
2011	965,007	1,437,580	713,206	3,115,793
2012	990,483	1,590,445	913,600	3,494,528
2013	1,001,991	7,784,310	1,895,284 *	10,681,585

EXPENSES BY TYPE

Fiscal Year Ending October 31	Benefits**	Administrative Expenses	Total
2000	$ 4,736,666	$ 523,023	$ 5,259,689
2001	4,888,271	498,603	5,386,874
2002	5,102,499	459,332	5,561,831
2003	5,467,561	427,028	5,891,589
2004	5,764,126	349,556	6,113,682
2005	6,070,139	517,025	6,587,164
2006	6,511,544	479,289	6,990,833
2007	6,843,367	463,751	7,307,118
2008	7,084,598	449,139	7,533,737
2009	7,490,300	265,325	7,755,625
2010	8,243,471	295,321	8,538,792
2011	8,705,932	250,131	8,956,063
2012	8,964,308	191,531	9,155,839
2013	9,314,049	204,335	9,518,384

* Not including gain or loss on sale of assets

** Includes refund of employee contributions, if any

APPENDIX C

Analysis of Funding Progress
(In Millions of Dollars)

Fiscal Year Ending October 31	(1) Net Assets Available for Benefits*	(2) Pension Benefit Obligation	(3) Percentage Funded (1) / (2)	(4) Unfunded Pension Benefit Obligation (2) - (1)	(5) Annual Covered Payroll***	(6) Unfunded Pension Benefit Obligation as a % of Covered Payroll (4) / (5)
2000	$ 80.95	$ 77.88	104%	$ 0.00	$ 10.04	0%
2001	71.44	82.36	87%	10.92	10.57	103%
2002	63.25	86.86	73%	23.61	10.89	217%
2003	67.13	90.22	74%	23.09	11.03	209%
2004	68.50	94.77	72%	26.27	11.10	237%
2005	70.11	99.59	70%	29.48	11.26	262%
2006	76.88	105.48	73%	28.60	11.91	240%
2007	84.93	111.25	76%	26.32	13.19	200%
2008	54.56	114.67	48%	60.11	12.97	463%
2009	57.32	120.06	48%	62.74	12.58	499%
2010	58.34	124.59	47%	66.25	11.77	563%
2011	53.44	159.32	34%	105.88	12.33	859%
2012	50.79	164.80	31%	114.01	12.54	909%
2013	110.97	172.95	64%	62.00	12.67	489%

Analysis of the dollar amounts of net assets available for benefits, pension benefit obligation, and unfunded pension benefit obligation in isolation can be misleading. Expressing the net assets available for benefits as a percentage over time indicates whether the System is becoming financially stronger or weaker. Generally, the greater this percentage, the stronger the System. Trends in unfunded pension benefit obligation and annual covered payroll are affected by inflation. Expressing the unfunded pension benefit obligation as a percentage of annual covered payroll approximately adjusts for the effects of inflation and aids analysis of the System's progress made in accumulating sufficient assets to pay benefits when due. Generally, the smaller this percentage, the stronger the System.

* Market Value ** "N/A" = Not Available *** Covered Payroll of Members of Retirement Plan

APPENDIX D

Schedule of Funding Progress
(In Millions of Dollars)

Six Years Ended October 31, 2013

Actuarial Valuation Date October 31	(1) Actuarial Value of Plan Assets	(2) Actuarial Accrued Liability	(3) Funded Ratio (1) / (2)	(4) Unfunded Actuarial Liability (2) - (1)	(5) Annual Covered Payroll	(6) Ratio of Unfunded Actuarial Liability to Annual Covered Payroll (4) / (5)
2008	$ 65.47	$ 114.67	57%	$ 49.20	$ 12.97	379%
2009	62.97	120.06	52%	57.09	12.58	454%
2010	59.60	124.59	48%	64.99	11.77	552%
2011	53.52	159.32	34%	105.80	12.33	858%
2012	52.08	164.80	32%	112.72	12.54	899%
2013	107.70	172.95	62%	65.25	12.67	515%

APPENDIX E

Schedule of Employer Contributions
(In Millions of Dollars)

Six Years Ended October 31, 2013

Fiscal Year Ending October 31	Annual Recommended Contributions	Actual Employer Contributions	Percentage of Actual Employer Contributions to Annual Recommended Contributions
2008	$ 4,654,000	$ 1,564,000	34%
2009	4,369,000	1,567,000	36%
2010	4,681,000	1,400,000	30%
2011	4,847,900	1,438,000	30%
2012	7,525,400	1,590,400	21%
2013	7,951,500	7,784,310	98%