

Burlington Employees' Retirement System

Report on the Sixty-Second Actuarial Valuation

Prepared as of June 30, 2015

December 2015





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Members of the Board:

Chapter 24, Article II, Section 24-60 of the Burlington Code of Ordinances provides for actuarial valuations of the assets and liabilities of the Burlington Employees' Retirement System at least once every three years and more often if the Retirement Board so directs.

The sixty-second actuarial valuation of the System, prepared as of June 30, 2015, has now been completed and the results are presented in this report, together with the determination of the amount of contributions payable by the City in accordance with the Retirement Board's funding policy and information on disclosures required for accounting purposes by the Governmental Accounting Standards Board.

The Board of Trustees and staff of the Retirement office may use this report for the review of the operation of the System. The report may also be used in the preparation of BERS' audited financial statements. Use of this report for any other purpose or by anyone other than the Board of Trustees, the staff of the Retirement office or its auditors may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. No one may make any representations or warranties based on any statements or conclusions contained in this report without Buck Consultants' prior written consent.

The actuarial assumptions and methods used in this valuation are described in Schedule B.

The results of the valuation are based on the Plan provisions in effect on June 30, 2015. A summary of the System provisions is shown in Schedule C.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. An analysis of the potential range of future results is beyond the scope of this valuation.

The Table of Contents, which immediately follows, outlines the material contained in the report.

I am a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions about it.

Respectfully submitted,


David L. Driscoll, FSA, EA, MAAA
Principal, Consulting Actuary

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Section I - Summary of Principal Results

For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below.

Valuation Date	June 30, 2014	June 30, 2015
Class A:		
Number of active members	175	174
Earnable compensation for employees below maximum retirement age	\$ 10,287,071	\$ 10,395,873
Number of retirees and beneficiaries	167	170
Annual retirement benefits	\$ 6,359,699	\$ 6,526,001
Number with vested rights	13	16
Class B:		
Number of active members	754	668
Earnable compensation for employees below maximum retirement age	\$ 37,566,282	\$ 34,369,246
Number of retirees and beneficiaries	425	444
Annual retirement benefits	\$ 5,761,991	\$ 6,290,094
Number with vested rights	343	367
Actuarial Value of Assets:		
Class A	\$ 70,858,939	\$ 73,754,058
Class B	87,552,488	94,837,105
Unfunded Past Service Cost:		
Class A	\$ 30,404,821	\$30,419,769
Class B	34,135,064	30,869,359

Contributions for Fiscal Year	2016	2017
Class A:		
Normal Contribution Rate	10.83%	9.77%
Past Service Contribution	\$ 2,862,064	\$ 2,878,098
Class B:		
Normal Contribution Rate	7.07%	6.27%
Past Service Contribution	\$ 3,217,340	\$ 2,965,422

Comments on the valuation results as of June 30, 2015, are given in Section IV and further discussion of the contribution levels is set forth in Section V. Section VI discusses disclosure information for accounting purposes.

Schedule B of this report outlines the full set of actuarial assumptions and methods employed.

Schedule C presents a summary of the principal System provisions as interpreted for the valuation. Effective with this valuation, provisions under the new contracts for AFSCME and Fire employees were reflected as follows:

- 1- Employee contributions for AFSCME Class B employees will increase from 3% to 3.4% in fiscal year 2016, 3.8% in fiscal year 2017, and 4.2% in fiscal year 2018. For Class A Fire employees, member contributions will rise to 11.0% of payroll in fiscal year 2017.
- 2- Employees will be fully vested after completion of five years of service; previously, they were 20% vested upon completion of three years of services and were vested in additional increments of 20% per year of additional service until they were 100% vested upon completion of seven years of service.
- 3- Employees who leave and withdraw their contributions will now receive interest of 2% per year on their contribution balances. Previously, they had been provided with interest at the rate of 5% per year.
- 4- Cost-of-living adjustments for those who retire after November 2, 2015, will equal the CPI-U subject to a maximum of 2.75%
- 5- Salary increases will be implemented in the amounts of 1% for fiscal year 2015, 1.5% for fiscal year 2016, 2.5% for fiscal year 2017 and 2.75% for fiscal year 2018.

These measures generally had the effect of reducing employer costs and liabilities under the System below the levels that would have otherwise developed.

Further, this report reflects the following:

- 6- The elections of buyouts by 23 Burlington Electric employees. The 23 employees who had elected such buyouts were treated as deferred vested participants eligible to be paid their accrued benefits at their normal retirement date.
- 7- The City reported that pension-eligible wages previously reported for years 2011 – 2014 had been overstated. At the City's request, previously reported wages for such years were reduced by 1.55% across the board.

Additionally, if the actuarially determined employer contribution (ADEC) exceeds \$9 million for fiscal year 2017, employee contributions percentages will automatically increase by up to 1% of wages and then re-set at the end of the year. If the actuarially determined employer contribution exceeds \$9 million for fiscal year 2018, the contribution will increase by up to 2% and then be re-set. Further, if those increases are not enough to maintain the ADEC at \$9 million, the City may reopen the financial components of the collective bargaining agreements.

Section II - Participant Data

Participant data were furnished by the City of Burlington. Buck did not audit the data, although they were reviewed for reasonableness and consistency with prior data. The accuracy of the results of the valuation is dependent on the accuracy of the data.

Tables 1 through 4 of Schedule D show the number and annual earnable compensation of active members who were included in the valuation, while Tables 5 through 14 of Schedule D show the number and annual retirement benefits of retirees and beneficiaries included in the valuation. In addition, there are 16 Class A former members and 367 Class B former members entitled to deferred vested benefits.

Section III – Assets

The amount of assets taken into account in this valuation is based on information reported by the City of Burlington.

Assets are valued on the basis of a five-year expected average market value method. The operation of this method is described in Schedule B. Based on this method, the actuarial value of assets amount to \$168,571,163. This may be compared to current book and market values of \$141,411,854 and \$159,227,898 respectively.

As part of the valuation procedure, investment earnings for the year ending June 30, 2015 have been analyzed. Based on the procedures used and certain approximations, the yield for the year has been estimated to be (1.73)% based on the market value of assets and 7.83% based on the actuarial value of assets.

Reconciliation of Market Value of Plan Assets, July 1, 2011 - June 30, 2015				
	July 1, 2011 - June 30, 2012	July 1, 2012 - June 30, 2013	July 1, 2013 - June 30, 2014	July 1, 2014 - June 30, 2015
Market value at beginning of period	134,079,722	135,532,844	144,020,307	164,216,609
Contributions during period	12,546,410	12,711,462	13,162,589	13,225,437
Total investment income	1,420,339	8,842,397	21,464,817	(2,828,746)
Benefit payments and expenses	(12,513,627)	(13,066,396)	(14,431,104)	(15,385,401)
Market value at end of period	135,532,844	144,020,307	164,216,609	159,227,898
Expected market value at end of period	144,840,194	146,006,340	154,222,676	175,107,575
Investment gain/(loss) for the year	(9,307,350)	(1,986,033)	9,993,933	(15,879,676)

Year Ended	Investment Gain / (Loss)		Weight	=	Weighted Gain / (Loss)
June 30, 2015	(15,879,676)	x	0.80	=	(12,703,742)
June 30, 2014	9,993,933	x	0.60	=	5,996,360
June 30, 2013	(1,986,033)	x	0.40	=	(794,413)
June 30, 2012	(9,307,350)	x	0.20	=	<u>(1,861,470)</u>
					(9,363,265)

Actuarial Value of Assets = Market Value **minus** weighted gain / (loss) = **\$168,591,163**

Section IV - Comments on Valuation

The method used to determine Normal Cost and Accrued Actuarial Liability is the Entry Age Normal Cost Method. Under the Entry Age Normal Cost Method, an annual Normal Cost is determined for each covered active Member, which is the contribution required to provide all the projected pension benefits assuming this contribution is payable over a period ending on the date of retirement (separation from active service) expressed as a level percentage of compensation. The Actuarial Accrued Liability is determined as the excess of the total present value of all pension benefits over the total present value of future Normal Costs. The Unfunded Actuarial Accrued Liability as of the valuation date is determined as the excess of the Actuarial Accrued Liability over the assets of the Fund. The Normal Cost and Accrued Actuarial Liability are derived by making certain assumptions as to the rates of interest, mortality, turnover, etc., which are assumed to reflect experience for many years into the future. Since actual experience will differ from the assumptions, the costs determined must be regarded as estimates of the true costs of the Plan. The effects of any actuarial gains or losses are immediately reflected in the Unfunded Actuarial Accrued Liability and the Normal Cost. The unfunded actuarial accrued liability is amortized in level dollar amounts over periods up to 30 years.

Schedule A of this report contains the valuation balance sheet, which shows the present and prospective assets and liabilities of the System as of June 30, 2015. The valuation balance sheet shows that as of June 30, 2015, the System has accrued liabilities of \$229,880,291. Of this amount, \$146,499,737 represents the present value of benefits payable on account of retired members, beneficiaries and former members entitled to deferred vested benefits and \$83,380,554 represents the accrued liability for prospective benefits payable on account of active members. Against these liabilities the System has actuarial assets of \$168,591,163. The difference between the total liabilities of \$229,880,291 and the assets of \$168,591,163 is \$61,289,128, which represents the unfunded past service cost as of June 30, 2015. The System's unfunded accrued liability decreased by \$3,250,757 from its level of \$64,539,885 as of June 30, 2014. Schedule A contains a breakdown of the assets and liabilities described above by membership class. The percentage of the System's accrued liabilities covered by the actuarial value of assets rose from 71.05% as of June 30, 2014, to 73.34% as of June 30, 2015.

Section V - Appropriation to be made by the City

Article II, Division 1, Section 24 - 32 of the Ordinances governing the operation of the System provides that the Retirement Board shall certify to the Board of Finance the amounts payable by the City to the System, including an estimated amount required for operating expenses.

The contribution by the City, excluding operating expenses, consists of:

- (i) a normal contribution to cover the cost of benefits expected to accrue under the Plan during the fiscal year following the valuation date, reduced by required Class A member contributions equal, on average to 10.89% of compensation and required Class B member contributions equal, on average to 3.27% of compensation on average, plus
- (ii) a past service contribution to liquidate the unfunded past service cost over a 30-year period from the date of establishment in accordance with the policy adopted by the Retirement Board. The initial unfunded past service cost to be amortized over 30 years was that in existence as of June 30, 2004.

Based on the latest valuation results and the adopted funding policy, the following table sets forth the basis for determining the City's contributions for the fiscal year ending June 30, 2016.

Contributions payable by the City to the system

Contribution	Amount	Percent of Compensation
Class A		
Normal	\$ 1,084,798*	9.77%
Past Service	<u>2,878,098</u>	25.91%*
Total	\$ 3,962,896	
Class B		
Normal	\$ 2,497,963*	6.27%
Past Service	<u>2,965,422</u>	7.45%*
Total	\$ 5,463,385	

* Estimated based on fiscal year-end 2017 budget payrolls of \$11,106,579 and \$39,809,493 for Class A and Class B, respectively.

The recommended normal contribution rates in the table above should be applied to the respective earnable compensation of Class A and Class B members of the System for the fiscal year ending 2017 in order to determine the required appropriations for currently accruing benefits. In addition, the amount estimated to be required for operating expenses of the System is to be included in the certification of the Retirement Board. Further, the table below incorporates the split of the Class B contribution between Burlington Electric Department (BED), Burlington School District (BSD), and other participating entities.

Contribution	Amount	Percent of Compensation
Burlington Electric Department (BED) - Class B		
Normal	\$ 513,603	6.06%
Past Service	<u>993,993</u>	11.74%
Total	\$ 1,507,596	
Burlington School District (BSD)- Class B		
Normal	\$ 753,418	7.94%
Past Service	<u>539,843</u>	5.69%
Total	\$ 1,293,261	
Other Class B Covered Employees		
Normal	\$ 1,230,942	5.63%
Past Service	<u>1,431,586</u>	6.55%
Total	\$ 2,662,528	

Schedule E provides a development of the past service contribution for Class A and B members of the System for the fiscal year ending 2017.

Schedule F presents historical and projected required City contributions to the Retirement System assuming all actuarial assumptions are realized. No future liability gains or losses are reflected and assets are projected to earn 8% per annum. The projected payroll is assumed to increase 3.5% per annum. The actual annual contributions required by the City will be based upon future actuarial valuations.

Section VI - Accounting Information

In prior years' reports, information required under GASB Statement No. 25 has been presented. Effective with the fiscal year ending June 30, 2014, GASB Statement No. 25 was superseded by GASB Statement No. 67. The disclosures required for the System under Statement 67 as of June 30, 2015, are provided in a separate report. For the fiscal year ending June 30, 2015 and beyond, GASB Statement No. 27 was superseded by GASB Statement No. 68. Financial disclosures required under GASB 68 are also provided in a separate report.

Section VII – Experience

Records are maintained whereby the actual experience of active and retired members is compared to that expected on the basis of the tables adopted by the Retirement Board. In this way, deviations in the experience from that anticipated will be noted and any adjustments believed necessary will be brought to the attention of the Retirement Board in the experience studies required by the Burlington Ordinances.

During the last year, the total unfunded actuarial accrued liability (UAL) was expected to increase from \$64,539,885 to \$65,325,730. The actual UAL at the end of the year was \$64,482,199. The chart below reconciles the expected to actual UAL. The primary sources of changes were a \$1,115,564 liability gain, a \$246,815 investment loss, and a \$25,218 gain from updated plan provisions.

The sources of the (Gains)/Losses are as follows:

Actual UAL as of June 30, 2014		\$ 64,539,885
Expected UAL (Prior to Changes) as of June 30, 2015		\$ 65,325,730
Salary Increases	\$ (276,405)	
New Participants	20,308	
Active - Retirements	940,217	
Active - Terminations	164,024	
Active - Mortality	79,716	
Active - Disabilities	(954,333)	
Retiree Mortality	(1,147,605)	
Other (Data Corrections, etc.)	58,514	
Total Liability (Gain)/Loss		\$ (1,115,564)
Investment (Gain)/Loss		246,815
Newly Eligible Employees		0
Ordinance and Actuarial Assumption Changes (including reflection of buy-outs and salary history changes)		(3,167,853)
Total Change in UAL		<u>\$ (4,036,602)</u>
Actual UAL as of June 30, 2015		\$ 61,289,128

The reconciliation of the UAL is as follows:

	Class A Members	Class B Members	Total System
Total UAL as of June 30, 2014	\$ 30,404,821	\$ 34,135,064	\$64,539,885
Interest Adjustment	(152,206)	(639,719)	(791,925)
FY 2014-15 Experience Base	<u>167,154</u>	<u>(2,625,986)</u>	<u>(2,458,832)</u>
Total UAL as of June 30, 2015	\$ 30,419,769	\$ 30,869,359	\$61,289,128

Schedule A

Valuation Balance Sheet Showing the Assets and Liabilities Accrued Under the Burlington Employees' Retirement System as of June 30, 2015

Assets

	Class A Members	Class B Members	Total System
Valuation Assets	\$ 73,754,058	\$ 94,837,105	\$ 168,591,163
Unfunded past service cost	<u>30,419,769</u>	<u>30,869,359</u>	<u>61,289,128</u>
Total Assets	<u>\$ 104,173,827</u>	<u>\$ 125,706,464</u>	<u>\$ 229,880,291</u>

Liabilities

Present value of benefits payable on account of retired members, beneficiaries and members entitled to deferred vested benefits	\$ 72,859,037	\$ 73,640,700	\$ 146,499,737
Present value of prospective benefits accrued to date on account of present active members	<u>31,314,790</u>	<u>52,065,764</u>	<u>83,380,554</u>
Total Liabilities	<u>\$ 104,173,827</u>	<u>\$ 125,706,464</u>	<u>\$ 229,880,291</u>

Schedule B

Outline of Actuarial Assumptions and Methods for Determination of Contribution Amounts

Basis for Assumptions

As required under Part II, Section 24-61 of the Burlington Code of Ordinances, experience studies are performed at least once in every five-year period. Schedule B of this report outlines the full set of actuarial assumptions and methods employed in the current valuation. The assumptions were based on a recent experience study covering the period from July 1, 2007, through June 30, 2012. The assumptions were adopted by the Board on the basis of the study.

Interest Rate

8% per annum, compounded annually.

Separations before Normal Retirement

Representative values of the assumed annual rates of withdrawal and vesting, early service retirement, death and disability are as follows:

Class A Members				
Age	Withdrawal and Vesting	Early Service Retirement	Death*	Disability*
20	14.0%			
25	7.0		.1%	.2%
30	6.0		.1	.3
35	6.0		.1	.4
40	5.0		.1	.5
42	4.6		.1	.6
45	4.0	15.0%	.1	.7
50	3.0	15.0	.2	1.3
53	1.2	20.0	.3	1.8
54	0.6	20.0	.3	2.0

Class B Members				
Age	Withdrawal and Vesting**	Early Service Retirement	Death*	Disability*
25	15.0%		.1%	.1%
30	12.0		.1	.1
35	10.0		.1	.1
40	4.0		.1	.2
45	4.0		.1	.3
50	4.0		.2	.5
55	4.0	5.0%	.4	.9
60	4.0	10.0	.6	1.7
61	4.0	15.0	.7	2.1
62	4.0	20.0	.8	2.5
63	4.0	25.0	1.0	2.9
64	4.0	25.0	1.1	3.4

* Rates reflect both ordinary and accidental occurrences.

** Rates are assumed to be higher during the first three years of membership (i.e., 27.5% at age 25, 22% at ages 30 and 35, 16.5% at ages 40 - 64).

Schedule B (continued)

Outline of Actuarial Assumptions and Methods for Determination of Contribution Amounts

Normal Service Retirement

The representative values of the assumed rates of normal service retirement are as follows:

Age	Class A	Age	Class B
55	20.0%	65	25.0%
56	20.0	66	20.0
57	20.0	67	25.0
58	20.0	68	20.0
59	20.0	69	25.0
60	100.0	70	100.0

Benefit Commencement after Separation

Class A vested terminations are assumed to commence benefits at age 55. Class B vested terminations prior to June 30, 2000 are assumed to commence at age 65. Class B vested retirements after June 30, 2000 are assumed to commence at age 55 with a reduced benefit.

Salary Increases

Representative values of the assumed annual rates of future salary increase are as follows:

Age	Class A&B
25	8.8%
30	7.0
35	5.6
40	4.9
45	4.6
50	4.3
55	4.0
59	3.9
60	3.9
65	3.8
69	3.8

For Class A Firemen and Class B AFSCME employees, salary increases rates as described above were reduced by 2% during fiscal year 2015, 1.5% during fiscal 2016, 0.5% during fiscal 2017 and 0.25% during fiscal 2018 to reflect the provisions of recently concluded collective bargaining agreements outlined in section I of this report.

Deaths after Retirement

105% of the probabilities in the RP-2000 Combined Mortality Tables for Males and Females with full generational projection by Scale BB.

Future Expenses

No provisions made.

Schedule B (continued)

Outline of Actuarial Assumptions and Methods for Determination of Contribution Amounts

Adjustments to Allowances

Cost-of-living increases averaging 3% per year were assumed. For Class A Firemen and Class B AFSCME employees retiring after 11/2/15, cost-of-living increases were capped at 2.75%.

Accrual Rate Election

85% of retiring members are assumed to elect the no-COLA accrual rate and 15% of retiring members are assumed to elect the full-COLA accrual rate.

Funding Method

Entry Age Normal with level percentage of salary. Gains (losses) as they occur, reduce (increase) the unfunded past service cost.

Asset Valuation Method

Based on a five-year expected value of assets method in which actuarial assets are set equal to the market value of assets as of the valuation date plus:

- i) four-fifths of the difference between the expected return on market assets and the actual return on market assets during the year preceding the valuation;
- ii) three-fifths of the difference between the expected return on market assets and the actual return on market assets during the second year preceding the valuation;
- iii) two-fifths of the difference between the expected return on market assets and the actual return on market assets during the third year preceding the valuation; and
- iv) one-fifth of the difference between the expected return on market assets and the actual return on market assets during the fourth year preceding the valuation.

Expected return is equal to a year of expected investment earnings (based on the valuation interest rate) on the market value of assets as of the beginning of the year and the cash flow (contributions minus benefit payments) during the year, assuming mid-year contributions and benefit payments.

Revisions from Prior Year Assumptions

- For Class A Firemen and Class B AFSCME employees, salary increases rates were reduced by 2% during fiscal year 2015, 1.5% during fiscal 2016, 0.5% during fiscal 2017 and 0.25% during fiscal 2018 to reflect the terms of recently concluded collective bargaining agreements.
- For Class A Firemen and Class B AFSCME employees retiring after 11/2/15, annual cost-of-living adjustments were capped at 2.75%.

Miscellaneous

The valuation was prepared on an ongoing-plan basis. The valuation was based on members in the System as of the valuation date and did not take future members into account. No provision has been made for contingent liabilities with respect to non-vested terminated members who may be reemployed. The valuation assumptions include an anticipated future annual rate of inflation of approximately 3% a year.

Schedule C

Brief Summary of Principal System Provisions as Interpreted for Valuation Purposes

System Name

Burlington Employees' Retirement System

Effective Date

July 1, 1954.

Average Final Compensation (AFC)

For Class A Police non-union employees, Class A Police employees hired after January 10, 2011, Class A Fire employees hired after October 7, 2011 or Class B AFSCME Local 1343 employees hired after June 7, 2011, or Class B IBEW Local 300 employees hired after October 30, 2012, it is the average earnable compensation during the highest 5 non-overlapping 12-month periods. For all others, it is the average earnable compensation during the highest 3 non-overlapping 12-month periods.

Membership Eligibility

Regular employees of the City of Burlington excluding elective officers other than the mayor and excluding teachers other than certain teachers employed prior to July 1, 1947.

Membership Classification

Class A

Members of the Fire and Police Departments not including clerical employees.

Class B

All other members.

Service Retirement

Eligibility

Class A

For Police employees hired after January 10, 2011, age 40 and 20 years of creditable service. For Fire employees hired after October 7, 2011, age 45 and 20 years of creditable service. For all others, age 45 and 7 years of creditable service. Compulsory at age 60.

Class B

Age 55 and 7 years of creditable service.

Amount of Benefit

Class A

For Fire employees hired before January 1, 2007 and Police employees hired before July 1, 2006, 2.75% of AFC times creditable service not in excess of 25 years plus .5% of AFC times creditable service between 25 and 35 years. For Police employees hired after January 10, 2011, 2.5% of AFC times creditable service not in excess of 20 years plus 5% of AFC times creditable service between 20 and 25 years. For all others, 2.65% of AFC times creditable service not in excess of 25 years plus .5% of AFC times creditable service between 25 and 35 years. Benefit increased by Cost of Living Adjustment detailed below.

In lieu of this benefit, at the time of retirement, a member hired prior to July 1, 2006 may choose either (i) an accrual rate of 3.25% for the first 25 years of creditable service, plus an accrual of .5% for creditable service

Schedule C (continued)

Brief Summary of Principal System Provisions as Interpreted for Valuation Purposes

between 25 and 35 years, and a Cost of Living Adjustment equal to one half of the Cost of Living Adjustment detailed below, or (ii) an accrual rate of 3.8% for all years of service prior to June 30, 2006 for the first 25 years, an accrual rate of 3.6% for all years of service commencing July 1, 2006 for the first 25 years, plus an accrual rate of .5% for creditable service between 25 and 35 years, and no Cost of Living Adjustment.

A Fire employee hired on or after January 1, 2007 or a Police employee hired on or after July 1, 2006 may only select a benefit with a full Cost of Living Adjustment.

For Police employees hired after January 10, 2011 or Fire employees hired after October 7, 2011, the above benefits based on AFC and creditable service at retirement are reduced actuarially for the period of time by which retirement precedes age 50.

For Fire employees hired on or before October 7, 2011 who retire on July 1, 2013 or later, the above benefits based on AFC and creditable service at retirement are reduced actuarially until age 48 for the period of time by which retirement precedes age 55.

For all others, prior to age 55, the above benefit based on AFC and creditable service at retirement is reduced actuarially for the period of time by which retirement precedes the earlier of 25 years of creditable service and age 55. For employees who terminate with 20 to 25 years of creditable service the above benefit based on AFC and creditable service at retirement is reduced by 1.82% for each year that creditable service is less than 25 years.

Class B

For employees hired prior to July 1, 2006: Age 65 and older, the greater of (i) 1.6% of AFC (at age 65) times creditable service not in excess of 25 years plus .5% of AFC (at age 65) times creditable service in excess of 25 years or (ii) the actuarial equivalent of the benefit determined at age 65. This benefit will be increased by the Cost of Living Adjustment detailed below.

For employees hired on or after July 1, 2006: Age 65 and older, the greater of (i) 1.4% of AFC (at age 65) times creditable service not in excess of 25 years plus .5% of AFC (at age 65) times creditable service in excess of 25 years or (ii) the actuarial equivalent of the benefit determined at age 65. This benefit will be increased by the Cost of Living Adjustment detailed below.

In lieu of this benefit, at the time of retirement, a member may choose (i) an accrual rate of 1.9% for all years of service prior to June 30, 2006 for the first 25 years, an accrual rate of 1.8% for all years of service commencing July 1, 2006 for the first 25 years, plus an accrual of .5% for creditable service in excess of 25 years, and a Cost of Living Adjustment equal to one-half of the Cost of Living Adjustment detailed below, or (ii) an accrual rate of 2.2% for all years of service prior to June 30, 2006 for the first 25 years, an accrual rate of 2.0% for all years of service commencing July 1, 2006 for the first 25 years, plus an accrual of .5% for creditable service in excess of 25 years, and no Cost of Living Adjustment.

Except for employees detailed below, prior to age 65, the above benefit based on AFC and creditable service at retirement reduced by 2% for each year that retirement precedes age 65. For Class B IBEW employees hired before May 1, 2008, who elect a contribution rate of 4% is elected the early reduction factor is 2% for each year the retirement precedes age 65. For Class B IBEW employees hired before May 1, 2008, who elect a contribution rate of 3% the benefit is reduced by a factor which varies with age. The factor equals 1 at 65 and .4 at 50.

Schedule C (continued)

Brief Summary of Principal System Provisions as Interpreted for Valuation Purposes

For Class B IBEW employees hired after May 1, 2008, the benefit is reduced by a factor which varies by age. The factor equals 1 at 65 but is equal to .356 at age 55.

For Class B AFSCME Local 1343 employees hired before January 1, 2006 that meet the Rule of 82 by December 7, 2011 but retire later than December 7, 2011, the reduction is 4% per year at ages 55 to 59 for each year under age 65, and the standard 2% per year reduction for ages 60 to 65. For other Class B AFSCME Local 1343 employees retiring after December 7, 2011, there will be full actuarial reduction from ages 55 to 59 and the standard 2% per year reduction for ages 60 to 65.

Cost of Living Adjustment

Benefits increase annually by changes in the Consumer Price Index of more than 1%. For Class A Firemen and Class B AFSCME employees retiring after 11/2/15, the maximum annual increase is 2.75%. For all other participants, the maximum annual increase is 6%. Increases are not applicable to deferred vested benefit prior to commencement, survivor income benefit, disability benefit prior to normal retirement age or members who choose to have no cost of living adjustment.

Service Adjustment

Class A service for calculation of benefits shall be adjusted such that any Class A employee shall be granted 1.07 years of credit for each year in which the employee worked prior to July 1, 1996, and 1.17 years thereafter, in a position regularly assigned a workweek consisting on average of fifty-three or more hours of work per week.

Disability Retirement

Eligibility

All Members. Permanently disabled. Class B AFSCME Local 1343 employees must have 2 years of creditable service to be eligible for disabilities that are not work-related. Class A Fire employees hired after October 7, 2011 must have 1 year of creditable service to be eligible for disabilities that are not work-related. All other employees are immediately eligible.

Amount of Benefit

A benefit payable until normal service retirement eligibility (Class A - age 55 and 7 years of creditable service, Class B - age 65 and 7 years of creditable service). For Class A Fire employees hired after October 7, 2011, it is equal to $66\frac{2}{3}\%$ of the member's earnable compensation less workmen's compensation. For Class B IBEW employees hired after October 20, 2012, it is equal to $66\frac{2}{3}\%$ of the member's earnable compensation less workmen's compensation. For Class B AFSCME employees, it is equal to $66\frac{2}{3}\%$ of the member's earnable compensation less workmen's compensation and Social Security. For all others, it is equal to 75% of the member's earnable compensation less workmen's compensation and, in the case of Class B, less Social Security.

After normal service retirement eligibility, a service retirement benefit based on AFC at retirement and creditable service at normal service retirement eligibility, including the period while permanently disabled and receiving a disability benefit from the System.

Schedule C (continued)

Brief Summary of Principal System Provisions as Interpreted for Valuation Purposes

Accidental Death

Eligibility

Class A only. Death due to accident while in the performance of duty.

Amount of Benefit

A benefit to the spouse until death or remarriage of the greater of (i) 55% of AFC, and (ii) the participant's current accrued retirement benefit. Upon death or remarriage of the spouse, the benefit will be payable to children until age 21.

Survivor Income

Eligibility

All Members. Death in active service.

Amount of Benefit

Class A

30% of compensation during the July preceding death payable to spouse until earlier of death or 2nd anniversary of remarriage. An additional 5% per unmarried child under 21 (maximum additional 10%) is payable until benefits cease or children no longer eligible. If there is no spouse or spouse dies, the benefit is payable to unmarried children under age 21 until earlier of death, marriage or age 21.

Class B

30% of compensation during the July preceding death payable to spouse until earlier of death, 2nd anniversary of remarriage or age 62. Upon the spouse's attainment of age 62 (if not remarried) a benefit based on the 50% Joint and Survivor form of payment will be paid to the spouse for life. If there is no spouse or spouse dies, the benefit is payable to unmarried children under age 21 until earlier of death, marriage or age 21.

Return of Contributions

Accumulated contributions returned upon separation with no vested benefits under the plan or upon death with no accidental death benefit payable.

Upon death of a retired member, the excess of his contribution at retirement over the benefits paid will be paid to his beneficiary or estate.

Vested Retirement

Eligibility

For Class A Fire and Class B AFSCME employees, 5 years of creditable service unless currently vested, all others, 3 years of creditable service

Vesting percentage

For Class A Fire and Class B AFSCME employees, 100% after 5 years, and 0% before that unless already partially vested as of July 1, 2015 under the prior vesting schedule.

For all others, a percentage grading from 20% after completion of 3 years of service to 100% after completion of 7 years of service.

Schedule C (continued)

Brief Summary of Principal System Provisions as Interpreted for Valuation Purposes

Amount of Benefit

Class A

Vesting percentage times the benefit calculated using AFC and creditable service at termination. The benefit is payable commencing at age 55. Member may elect early receipt with reduction as for service retirement prior to age 55.

Class B

Vesting percentage times the benefit calculated using AFC and creditable service at termination. The benefit is payable commencing at age 65. Member may elect early receipt with reduction as for service retirement prior to age 65.

Survivor Spouse's Pension

Eligibility

All Members. Death of a terminated member entitled to a vested retirement benefit prior to commencement of such benefit.

Amount of Benefit

50% of reduced accrued benefit reflecting the 50% Joint and Survivor form of payment (ages as of date payments commence) payable at member's early retirement date.

Spouse may elect to receive payments later than member's early retirement date with no reduction for receipt at member's 65th birthday.

Offsets on Benefits

Disability and accidental death benefits are offset by workmen's compensation paid for the same disability or death.

Contributions

By Members

Class A

11.0% for Fire employees and 10.8% for other class A employees of earnable compensation for the first 35 years of creditable service, none thereafter.

Class B

For IBEW employees hired before May 1, 2008, who so elect 4.0% of earnable compensation, for AFSCME employees, 3.4% as of July 1, 2015, 3.80% as of July 1, 2016 and 4.20% as of July 1, 2017, all others 3.0% of earnable compensation.

By City

Remainder necessary to fund for the benefits of the System on an actuarial basis. With the exception that if actuarially determined employer contribution exceeds \$9 million for fiscal year 2017, all the employee contributions will automatically increase up to 1% of wages and then re-set at the end of the year. If the actuarially determined employer contribution exceeds \$9 million for fiscal year 2018, the contribution will increase up to 2% and then re-set; further, if those increases are not enough to keep the ADEC at \$9M, the City may reopen the financial components of the Agreement (Backup trigger).

Schedule C (continued)

Brief Summary of Principal System Provisions as Interpreted for Valuation Purposes

Revisions from Prior Year Plan Provisions

Effective with this valuation, provisions under the new contracts for AFSCME and Fire employees were reflected as follows:

- Employee contributions for AFSCME Class B employees will increase from 3% to 3.4% in fiscal year 2016, 3.8% in fiscal year 2017, and 4.2% in fiscal year 2018. For Class A Fire employees, member contributions will rise to 11.0% of payroll in fiscal year 2017.
- Employees will be fully vested after completion of five years of service; previously, they were 20% vested upon completion of three years of services and were vested in additional increments of 20% per year of additional service until they were 100% vested upon completion of seven years of service.
- Employees who leave and withdraw their contributions will now receive interest of 2% per year on their contribution balances. Previously, they had been provided with interest at the rate of 5% per year.
- Cost-of-living adjustments for those who retire after November 2, 2015, will equal the CPI-U subject to a maximum of 2.75%
- Salary increases will be implemented in the amounts of 1% for fiscal year 2015, 1.5% for fiscal year 2016, 2.5% for fiscal year 2017 and 2.75% for fiscal year 2018.

Schedule D

Table 1: The Number and Annual Earnable Compensation of Active Members Distributed by Age as of June 30, 2015

Class A Members

Age	Male		Female	
	Number	Amount	Number	Amount
21	1	39,379		
22	2	92,529		
23	3	122,531	1	48,419
24	2	94,751	1	47,725
25	9	423,145		
26	4	189,566		
27	5	254,052		
28	9	456,328	1	56,380
29	2	92,467	1	18,468
30	6	310,750	1	54,889
31	9	482,048	2	112,750
32	3	170,066	1	58,309
33	6	325,922		
34	11	650,668	1	48,963
35	7	423,717	3	176,673
36	6	343,534	1	51,508
37	4	246,787		
38	5	340,408		
39	5	353,765		
40	10	670,488		
41	5	331,784	1	57,369
42	5	324,258		
43	5	343,004	1	67,958
44	4	265,181		
45	6	462,660		
46	5	317,919		
47	5	377,970		
48	3	223,802	1	91,995
49	3	258,063		
50	1	58,468		
51	2	119,993		
53	1	68,121		
54	1	67,958		
56	1	71,527		
58	1	62,904		
59			1	67,958
TOTAL	157	9,436,511	17	959,362

Schedule D (continued)

Table 2: The Number and Annual Earnable Compensation of Active Members Distributed by Age as of June 30, 2015

Class B Members

Age	Male		Female	
	Number	Amount	Number	Amount
19	1	40,916		
21			1	28,893
23	2	74,749	2	41,604
24	1	56,990	3	102,556
25	8	337,507	6	194,523
26	8	290,945	4	136,963
27	5	169,291	4	141,079
28	5	202,174	5	168,637
29	7	323,500	4	150,666
30	7	273,021	2	131,411
31	6	236,566	10	401,122
32	5	243,802	4	177,061
33	7	332,956	4	188,934
34	13	815,029	6	327,650
35	6	369,942	7	341,639
36	4	123,997	6	297,197
37	9	543,120	4	224,962
38	9	404,162	7	354,094
39	4	213,388	5	263,106
40	11	611,185	6	279,495
41	8	499,424	4	137,769
42	7	298,772	5	224,618
43	6	303,811	4	221,318
44	12	610,687	9	447,783
45	14	774,340	5	209,976
46	15	891,533	7	324,153
47	14	671,136	4	249,147
48	9	646,932	12	454,245
49	12	749,160	7	309,431
50	9	639,192	5	246,004
51	14	832,039	7	259,497

Schedule D (continued)

Table 2: The Number and Annual Earnable Compensation of Active Members Distributed by Age as of June 30, 2015

Class B Members (continued)

Age	Male		Female	
	Number	Amount	Number	Amount
52	10	575,501	11	564,683
53	21	1,407,395	7	260,591
54	10	555,700	11	632,012
55	16	1,008,378	13	602,067
56	7	412,651	9	492,538
57	15	770,276	9	431,306
58	15	765,753	4	204,485
59	8	425,940	7	401,590
60	10	645,536	5	203,564
61	11	711,463	6	245,195
62	8	519,292	6	274,023
63	9	495,746	5	251,424
64	5	332,282	4	212,994
65	6	330,566	4	200,141
66	3	164,345	2	65,627
67	2	129,572		
68	3	94,576		
69			1	20,667
71	2	113,113		
72			1	43,829
73	1	35,463		
74	1	48,173		
76	1	38,007		
82	1	20,208		
83	1	46,774		
TOTAL	404	22,226,976	264	12,142,270

Schedule D (continued)

Table 3: The Number and Annual Earnable Compensation of Active Members Distributed by Years of Service as of June 30, 2015

Class A Members

Years of Service	Male		Female	
	Number	Amount	Number	Amount
0	8	347,812	1	18,468
1	18	793,301	2	96,144
2	9	453,415	1	48,963
3	11	562,595		
4	11	610,693	2	106,396
5	4	215,617		
6	7	390,814	3	169,130
7	7	403,454	2	114,738
8	3	177,020	1	58,309
9	2	115,589	1	58,775
10	4	252,436		
11	6	358,037	1	60,529
12	4	251,877		
13	13	832,044	1	91,995
14	7	458,977		
15	9	653,959		
16	8	561,646	1	67,958
17	9	637,991		
18	4	288,847		
19	3	250,738		
20	6	458,672		
21			1	67,958
22	1	118,484		
24	2	137,962		
26	1	104,528		
TOTAL	157	\$9,436,511	17	\$959,362

Schedule D (continued)

Table 4: The Number and Annual Earnable Compensation of Active Members Distributed by Years of Service as of June 30, 2015

Class B Members

Years of Service	Male		Female	
	Number	Amount	Number	Amount
0	29	1,359,176	28	1,090,120
1	34	1,561,711	27	1,052,001
2	41	2,246,886	27	1,103,686
3	28	1,393,287	21	939,494
4	13	618,563	13	530,886
5	15	838,168	13	537,300
6	17	989,277	7	367,857
7	20	1,115,242	8	407,574
8	16	932,441	12	586,363
9	13	723,020	10	382,627
10	14	662,932	9	433,617
11	10	460,678	4	172,391
12	14	773,563	8	423,503
13	8	369,364	4	166,161
14	11	612,141	10	603,178
15	4	185,060	8	394,770
16	18	970,769	10	461,758
17	7	511,276	5	201,069
18	7	400,082	3	169,097
19	7	455,773	3	148,520
20	9	541,762	10	579,922
21	3	229,824	1	63,419
22	2	245,342	2	65,849
23			1	51,430
24	5	282,557		
25	4	266,347	1	73,475
26	3	207,467	1	58,387
27	5	335,260	5	297,580
28	5	306,560	2	134,045
29	1	65,953		
30	2	114,083	1	51,136
31	9	636,103	2	120,640
32	3	200,677		
33	5	304,705	2	129,121
34	4	283,761	1	51,136
35	4	242,743		
36	6	358,164		
37	3	164,278	2	117,048
38	2	95,206		
39	1	48,173	2	119,013
42			1	58,097
46	1	70,429		
47	1	48,173		
TOTAL	404	22,226,976	264	12,142,270

Schedule D (continued)

Table 5: The Number and Annual Retirement Benefits of Retirees Distributed by Age as of June 30, 2015

Class A Members

Service Retirements

Age	Male		Female	
	Number	Amount	Number	Amount
44	1	41,411		
45	1	61,567		
46	2	133,494	1	61,917
47	2	94,205		
48	3	173,735		
49	5	259,943		
50	5	261,732	1	47,201
51	4	254,144		
52	6	239,863		
53	3	141,318	1	69,974
54	7	427,828		
55	4	188,542	1	30,952
56	5	178,915		
57	5	198,625		
58	5	172,063		
59	7	253,820		
60	7	380,184		
61	1	28,572		
62	5	199,178		
63	2	102,261		
64	4	152,528		
65	9	297,462	1	8,395
66	6	216,200	1	2,075
67	5	128,355		
68	6	250,694		
69	5	161,792		
70	2	80,611		

Schedule D (continued)

Table 5: The Number and Annual Retirement Benefits of Retirees Distributed by Age as of June 30, 2015

Class A Members (continued)

Service Retirements

Age	Male		Female	
	Number	Amount	Number	Amount
71	7	268,589		
72	4	138,323		
73	1	31,042		
74	4	125,435		
75	1	20,306		
76	1	1,109		
79	1	43,668		
80	1	42,309		
81	1	34,942		
82	1	27,738		
83	1	27,175		
84	1	25,652		
85	1	23,100		
89	1	29,913		
TOTAL	143	5,918,343	6	220,515

Schedule D (continued)

Table 6: The Number and Annual Retirement Benefits of Retirees Distributed by Age as of June 30, 2015

**Class B Members (continued)
Service Retirements**

Age	Male		Female	
	Number	Amount	Number	Amount
55	1	6,385	2	32,695
56	1	21,260		
57	3	26,780	3	53,442
58			2	16,121
59	5	95,757	2	26,375
60	2	34,181	3	40,327
61	3	85,091	2	15,076
62	5	111,715	5	51,596
63	12	274,351	2	23,227
64	7	129,258	8	162,151
65	18	319,600	13	184,021
66	20	351,166	18	216,277
67	14	243,629	6	86,441
68	15	256,052	8	91,796
69	9	121,970	8	136,102
70	9	154,135	3	14,831
71	4	40,385	2	26,635
72	6	105,521	6	50,914
73	10	120,227	12	169,448
74	7	106,996	7	151,899
75	1	19,557	6	74,537
76	5	40,321	1	1,357
77	7	91,740	4	68,779
78	6	126,856	4	68,724
79	4	64,799	4	34,322
80	3	21,105	4	22,663
81	5	55,146	3	13,228
82	1	17,694	1	13,624
83	4	59,929	3	52,334
84	2	18,534	2	2,845
85			4	14,511
86	1	15,457	1	7,664
87	1	8,642	1	448
88	1	11,284		
89	1	5,114	1	12,393
90			1	2,047
92			1	2,340
95			1	11,283
TOTAL	193	\$3,160,637	154	1,952,472

Schedule D (continued)

Table 7: The Number and Annual Retirement Benefits of Retirees Distributed by Age as of June 30, 2015

**Class A Members
Disability Retirements**

Age	Male		Female	
	Number	Amount	Number	Amount
47	1	34,800		
52	1	27,013		
68	1	16,670		
83	2	35,306		
TOTAL	5	\$113,789		

Schedule D (continued)

Table 8: The Number and Annual Retirement Benefits of Retirees Distributed by Age as of June 30, 2015

Class B Members

Disability Retirements

Age	Male		Female	
	Number	Amount	Number	Amount
50	1	7,007		
51			1	10,793
53	1	6,037		
54	1	40,779		
55	2	21,190	3	59,044
56	3	63,093	1	15,509
57	2	70,973	1	872
59	1	38,866		
60	2	37,707	2	46,542
62	4	77,370	1	5,010
63	3	55,881	1	28,864
64	2	35,404	1	19,378
88	1	5,837		
TOTAL	23	\$460,145	11	186,011

Schedule D (continued)

Table 9: The Number and Annual Retirement Benefits of Beneficiaries of Retirees Distributed by Age as of June 30, 2015

Class A Members

Beneficiaries of Deceased Members

Age	Male		Female	
	Number	Amount	Number	Amount
20	1	15,819		
22			1	7,731
51			1	47,643
52			1	20,727
57			1	6,782
59			1	8,499
62			1	6,916
71			2	26,449
72			1	19,749
73			1	30,365
74			1	12,136
80			1	19,134
83	1	19,088		
85			1	13,691
93			1	18,624
TOTAL	2	\$34,907	14	\$238,447

Schedule D (continued)

Table 10: The Number and Annual Retirement Benefits of Beneficiaries of Retirees Distributed by Age as of June 30, 2015

Class B Members

Beneficiaries of Deceased Members

Age	Male		Female	
	Number	Amount	Number	Amount
30			1	1,093
32	1	1,456		
47			1	24,911
49			1	13,134
50			1	6,398
52	1	9,480		
53			1	11,875
54			1	375
58			1	1,788
60	1	12,774		
61			1	11,956
62			1	4,076
63			1	2,114
64	1	2,949	1	6,853
65			2	27,024
66			2	7,934
67			2	23,462
68	1	3,503	2	46,548
69			1	5,033
70			1	2,390
71			2	36,000
73			4	23,463
74	1	32,266		
75			6	50,098
76	2	18,092		
77			4	19,991
79			1	8,325
80			2	3,675
81			1	4,310
82			2	21,783
83			1	6,063
84	1	1,527	1	3,289
85			2	7,806
86			2	27,141
87			1	11,320
89	1	7,156	1	10,707
91			2	10,689
TOTAL	10	89,204	53	441,625

Schedule D (continued)

Table 11: The Number and Annual Retirement Benefits of Service Retirements Distributed by Form of Annuity as of June 30, 2015

Class A Members

Form	Male		Female	
	Number	Amount	Number	Amount
Life Annuity	81	\$3,749,049	4	\$210,045
Certain & Life	17	621,821		
Joint & Survivor	38	1,295,099	2	10,470
Joint & Survivor Pop-up	7	252,375		
TOTAL	143	\$5,918,343	6	\$220,515

Schedule D (continued)

Table 12: The Number of Retirees, Disabled Retirees, and Beneficiaries Distributed By COLA Type as of June 30, 2015

Class A Members

COLA Type	Male	Female
No COLA	88	6
Half COLA	14	1
Full COLA	48	13
TOTAL	150	20

Schedule D (continued)

Table 13: The Number and Annual Retirement Benefits of Service Retirements Distributed by Form of Annuity as of June 30, 2015

Class B Members

Form	Male		Female	
	Number	Amount	Number	Amount
Life Annuity	78	\$1,210,388	113	\$1,489,116
Certain& Life	22	\$224,065	18	\$153,289
Joint & Survivor	66	\$1,163,835	16	\$189,227
Joint & Survivor Pop-up	27	\$562,350	7	\$120,840
TOTAL	193	\$3,160,637	154	\$1,952,472

Schedule D (continued)

Table 14: The Number of Retirees, Disabled Retirees, and Beneficiaries Distributed by COLA Type as of June 30, 2015

Class B Members

COLA Type	Male	Female
No COLA	122	108
Half COLA	15	9
Full COLA	89	101
TOTAL	226	218

Schedule E

Past Service Amortization Schedule

Class A Members

Description	Date Established	Original Balance	July 1, 2015 Outstanding Balance	FY 2016 Past Service Contribution	July 1, 2016 Outstanding Balance	Years Remaining to Fund	FY 2017 Past Service Contribution
Initial Amortization	July 1, 2004	\$3,698,048	\$ 3,272,362	\$ 333,298	\$ 3,200,853	19	\$ 333,298
FY 2005 Experience	July 1, 2005	6,655,535	6,395,624	638,490	6,268,784	20	638,489
FY 2006 Experience	July 1, 2006	2,588,959	2,533,543	248,368	2,487,858	21	248,368
FY 2007 Experience	July 1, 2007	(1,715,997)	(1,707,301)	(164,622)	(1,679,263)	22	(164,622)
FY 2008 Experience	July 1, 2008	713,490	720,667	68,447	709,873	23	68,447
FY 2009 Experience	July 1, 2009	3,308,275	3,387,905	317,375	3,341,562	24	317,375
FY 2010 Experience	July 1, 2010	3,969,991	4,117,040	380,856	4,065,547	25	380,855
FY 2011 Experience	July 1, 2011	3,564,353	3,689,737	337,419	3,647,497	26	337,419
FY 2012 Experience	July 1, 2012	2,191,929	2,323,817	210,280	2,299,442	27	210,280
FY 2013 Experience	July 1, 2013	2,337,776	2,395,464	214,678	2,372,423	28	214,678
FY 2014 Experience	July 1, 2014	2,892,368	3,123,757	277,475	3,096,183	29	277,475
FY 2015 Experience	July 1, 2015		167,154		180,256	30	16,036
Total			\$30,419,769	\$ 2,862,064	\$29,991,285		\$ 2,878,098

Equivalent Single Amortization Period: 23 Years

Schedule E

Past Service Amortization Schedule

Class B Members

Description	Date Established	Original Balance	July 1, 2015 Outstanding Balance	FY 2016 Past Service Contribution	July 1, 2016 Outstanding Balance	Years Remaining to Fund	FY 2017 Past Service Contribution
Initial Amortization	July 1, 2004	\$6,322,451	\$ 5,617,438	\$ 572,148	\$ 5,494,685	19	\$ 572,149
FY 2005 Experience	July 1, 2005	6,670,273	6,496,272	648,537	6,367,437	20	648,537
FY 2006 Experience	July 1, 2006	5,080,481	4,981,518	488,349	4,891,690	21	488,349
FY 2007 Experience	July 1, 2007	(728,430)	(724,739)	(69,881)	(712,837)	22	(69,881)
FY 2008 Experience	July 1, 2008	(3,206,229)	(3,238,491)	(307,585)	(3,189,985)	23	(307,585)
FY 2009 Experience	July 1, 2009	9,475,775	9,703,857	909,045	9,571,121	24	909,045
FY 2010 Experience	July 1, 2010	4,577,654	4,747,211	439,151	4,687,837	25	439,151
FY 2011 Experience	July 1, 2011	2,690,665	2,766,213	252,965	2,734,545	26	252,965
FY 2012 Experience	July 1, 2012	1,410,313	1,495,172	135,296	1,479,490	27	135,296
FY 2013 Experience	July 1, 2013	3,153,185	3,375,379	302,497	3,342,912	28	302,496
FY 2014 Experience	July 1, 2014	(1,596,745)	(1,724,485)	(153,182)	(1,709,262)	29	(153,182)
FY 2015 Experience	July 1, 2015		(2,625,986)		(2,836,065)	30	(251,920)
Total			\$30,869,359	\$ 3,217,340	\$30,121,568		\$ 2,965,422

Equivalent Single Amortization Period: 23 Years

Schedule F

Historical and Projected Contributions

Class A and B Employees

Fiscal Year Ending	Projected Payroll	Normal Contribution		Past Service Contribution	Contribution Shortfall	Total City Contribution	
June 30, 2009	36,833,782	3,073,086	8.3%	2,851,003	(48,794)	5,875,295	16.0%
June 30, 2010	40,328,362	3,297,021	8.2%	2,455,550	0	5,752,571	14.3%
June 30, 2011	42,563,572	3,097,260	7.3%	3,681,967	0	6,779,227	15.9%
June 30, 2012	43,148,038	3,045,975	7.1%	4,501,979	0	7,547,954	17.5%
June 30, 2013	43,477,161	3,083,144	7.1%	5,092,361	0	8,175,505	18.8%
June 30, 2014	44,616,671	2,919,432	6.5%	5,437,938	0	8,357,370	18.7%
June 30, 2015	47,918,295	3,077,388	6.4%	5,955,113	0	9,032,501	18.8%
June 30, 2016	49,392,887	3,859,534	7.8%	6,079,404		9,938,938	20.1%
June 30, 2017	50,916,072	3,582,761	7.0%	5,843,520		9,426,281	18.5%
June 30, 2018	52,698,134	3,708,158	7.0%	5,843,520		9,551,678	18.1%
June 30, 2019	54,542,569	3,837,944	7.0%	5,843,520		9,681,464	17.8%
June 30, 2020	56,451,559	3,972,272	7.0%	5,843,520		9,815,792	17.4%

Notes:

No future liability gains or losses are assumed; assets are assumed to earn 8% per annum.

Projected payroll assumed to increase 3.5% per annum.

Unfunded liability as of June 30, 2004, was amortized over 30 years.

All future changes in unfunded liability will be amortized over 30 years.

Schedule F

Historical and Projected Contributions

Class A Employees

Fiscal Year Ending	Projected Payroll	Normal Contribution		Past Service Contribution	Contribution Shortfall	Total City Contribution	
June 30, 2009	9,568,421	1,233,492	12.9%	1,055,533	0	2,289,025	23.9%
June 30, 2010	9,412,887	1,150,199	12.2%	1,123,981	0	2,274,180	24.2%
June 30, 2011	9,478,375	955,410	10.1%	1,441,355	0	2,396,765	25.3%
June 30, 2012	9,505,863	932,642	9.8%	1,822,213	0	2,754,855	29.0%
June 30, 2013	9,440,369	991,311	10.5%	2,159,631	0	3,150,942	33.4%
June 30, 2014	10,367,799	916,997	8.8%	2,369,912	0	3,286,909	31.7%
June 30, 2015	11,224,232	1,047,489	9.3%	2,584,590		3,632,079	32.4%
June 30, 2016	11,414,532	1,236,072	10.8%	2,862,064		4,098,136	35.9%
June 30, 2017	11,106,579	1,084,798	9.8%	2,878,098		3,962,896	35.7%
June 30, 2018	11,495,309	1,122,766	9.8%	2,878,098		4,000,864	34.8%
June 30, 2019	11,897,645	1,162,063	9.8%	2,878,098		4,040,161	34.0%
June 30, 2020	12,314,063	1,202,735	9.8%	2,878,098		4,080,833	33.1%

Notes:

No future liability gains or losses are assumed; assets are assumed to earn 8% per annum.

Projected payroll assumed to increase 3.5% per annum.

Unfunded liability as of June 30, 2004, was amortized over 30 years.

All future changes in unfunded liability will be amortized over 30 years.

Schedule F

Historical and Projected Contributions

Class B Employees

Fiscal Year Ending	Projected Payroll	Normal Contribution		Past Service Contribution	Contribution Shortfall	Total City Contribution	
June 30, 2009	27,265,361	1,839,594	6.7%	1,795,470	(48,794)	3,586,270	13.2%
June 30, 2010	30,915,475	2,146,822	6.9%	1,331,569	0	3,478,391	11.3%
June 30, 2011	33,085,197	2,141,849	6.5%	2,240,612	0	4,382,461	13.2%
June 30, 2012	33,642,175	2,113,333	6.3%	2,679,766	0	4,793,099	14.2%
June 30, 2013	34,036,792	2,091,833	6.1%	2,932,730	0	5,024,563	14.8%
June 30, 2014	34,248,872	2,002,435	5.8%	3,068,026	0	5,070,461	14.8%
June 30, 2015	36,694,063	2,029,899	5.5%	3,370,523		5,400,422	14.7%
June 30, 2016	37,978,355	2,623,462	6.9%	3,217,340		5,840,802	15.4%
June 30, 2017	39,809,493	2,497,963	6.3%	2,965,422		5,463,385	13.7%
June 30, 2018	41,202,825	2,585,392	6.3%	2,965,422		5,550,814	13.5%
June 30, 2019	42,644,924	2,675,881	6.3%	2,965,422		5,641,303	13.2%
June 30, 2020	44,137,496	2,769,537	6.3%	2,965,422		5,734,959	13.0%

Notes:

No future liability gains or losses are assumed; assets are assumed to earn 8% per annum.

Projected payroll assumed to increase 3.5% per annum.

Unfunded liability as of June 30, 2004, was amortized over 30 years.

All future changes in unfunded liability will be amortized over 30 years.

Schedule G

Annual Amortization of the Unfunded Past Service Liability

Fiscal Year	Beginning of FY Balance of Unfunded Liability	Amortization Payment in Fiscal Year
2016	\$61,289,128	\$6,079,404
2017	\$60,112,854	\$5,843,520
2018	\$59,078,363	\$5,843,520
2019	\$57,961,112	\$5,843,520
2020	\$56,754,480	\$5,843,520
2021	\$55,451,319	\$5,843,520
2022	\$54,043,904	\$5,843,520
2023	\$52,523,897	\$5,843,520
2024	\$50,882,288	\$5,843,520
2025	\$49,109,351	\$5,843,520
2026	\$47,194,580	\$5,843,520
2027	\$45,126,626	\$5,843,520
2028	\$42,893,236	\$5,843,520
2029	\$40,481,175	\$5,843,520
2030	\$37,876,149	\$5,843,520
2031	\$35,062,721	\$5,843,520
2032	\$32,024,218	\$5,843,520
2033	\$28,742,636	\$5,843,520
2034	\$25,198,527	\$5,843,520
2035	\$21,370,889	\$5,843,520
2036	\$17,237,040	\$4,938,074
2037	\$13,677,929	\$3,651,047
2038	\$11,121,116	\$2,914,330
2039	\$9,096,474	\$3,148,833
2040	\$6,675,360	\$3,387,971
2041	\$3,821,418	\$2,161,550
2042	\$1,965,581	\$1,341,544
2043	\$781,283	\$751,160
2044	\$92,626	\$405,584
2045	(\$305,547)	(\$111,591)
2046	(\$218,400)	(\$235,873)
2047	\$0	