

**CITY OF YPSILANTI FIRE AND POLICE RETIREMENT SYSTEM**  
**53<sup>RD</sup> ACTUARIAL VALUATION REPORT**  
**JUNE 30, 2008**

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April 1, 2009

The Retirement Board  
City of Ypsilanti  
Fire and Police Retirement System  
Ypsilanti, Michigan

Dear Board Members:

**Submitted in this report** are the results of the 53<sup>rd</sup> Annual Actuarial Valuation of the assets, liabilities, reserves and contribution requirements associated with benefits provided by the City of Ypsilanti Fire and Police Retirement System, which is based on Act No. 345 of the Public Acts of 1937, as amended.

**The valuation was based upon** data, furnished by the Board and the City, concerning financial operations and individual retirants, beneficiaries and members. Data was checked for year to year consistency, but was not audited by the actuary.

**The date of the valuation** was June 30, 2008.

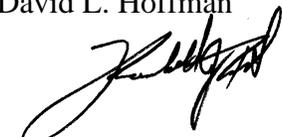
This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the constitution of the State of Michigan. The actuarial assumptions used for the valuation produce results which we believe are reasonable.

The undersigned are Members of the American Academy of Actuaries (M.A.A.A.) as indicated, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully submitted,



David L. Hoffman



Randall J. Dziubek, A.S.A., M.A.A.A.

DLH:mrb

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## **SECTION A**

### **BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM**

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## BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

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***Benefit Promises Made Which Must Be Paid For.*** A retirement system is an orderly means of handing out, keeping track of, and financing contingent pension promises to a group of employees. As each member of the retirement system acquires a unit of service credit he is, in effect, handed an "IOU" which reads: "The Retirement System promises to pay you one unit of retirement benefits, payments in cash commencing when you retire."

The principal related financial question is: When shall the money required to cover the "IOU" be contributed? This year, when the benefit of the member's service is received? Or, some future year when the "IOU" becomes a cash demand?

The constitution of the State of Michigan is directed to the question:

"Financial benefits arising on account of service rendered in each fiscal year shall be funded during that year and such funding shall not be used for financing unfunded accrued liabilities."

Section 9(2) of Act 345 is also directed to the question:

"Sec. 9(2). - - - For the purpose of creating and maintaining a fund for the payment of the pensions and other benefits payable hereunder the said city, village or municipality, subject to the provisions of this act, shall appropriate, at the end of such regular intervals as may be adopted, quarterly, semi-annually, or annually, an amount sufficient to maintain actuarially determined reserves covering pensions payable or which might be payable on account of service performed and to be performed by active members and pensions being paid retired members and beneficiaries - - - ."

This retirement system meets this constitutional requirement by having as its ***financial objective to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year to year*** and will not have to be increased for future generations of taxpayers.

Section 20(m) of Act 728 of 2002 requires that an annual required contribution shall consist of a current service cost (the normal cost) and a payment for unfunded actuarial liability (both interest and principal). This requirement is consistent with the financial objective stated above.

A by-product of the level percent of payroll contribution objective is the accumulation of invested assets for varying periods of time. ***Invested assets are a by-product of level percent of payroll contributions, not the objective.*** Investment income becomes a major contributor to the retirement system, and the amount is directly related to the amount of contributions and investment performance.

If contributions to the retirement system are less than the preceding amount, the difference, plus investment earnings not realized thereon, will have to be contributed at some later time, or, benefits will have to be reduced, to satisfy the fundamental fiscal equation under which all retirement programs must operate; that is:

$$\mathbf{B = C + I - E}$$

The aggregate amount of Benefit payments to any group of members and their beneficiaries cannot exceed the sum of:

The aggregate amount of Contributions received on behalf of the group

. . . plus . . .

Investment earnings on contributions received and not required for immediate payment of benefits

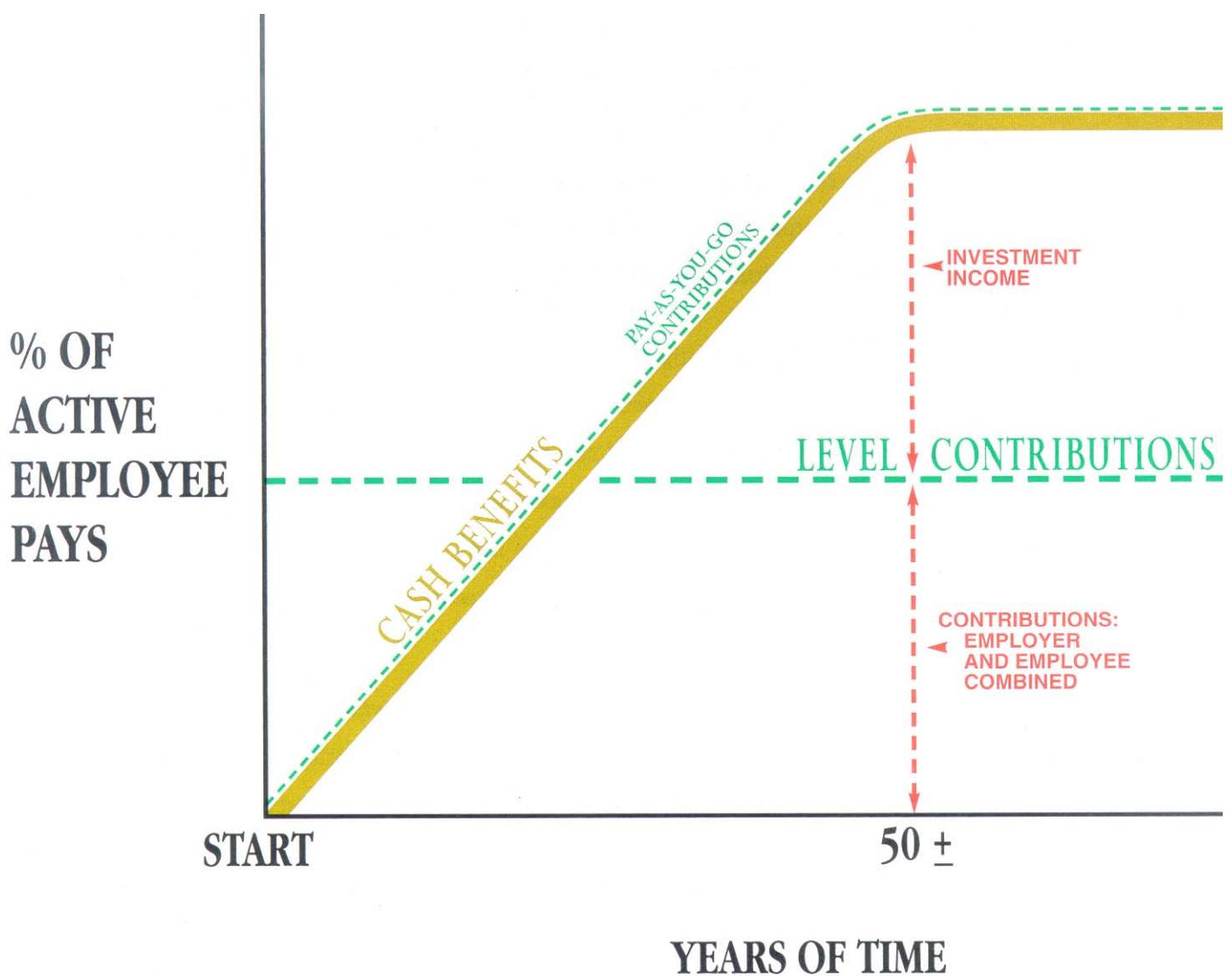
. . . minus . . .

The Expenses of operating the program.

There are retirement systems designed to defer the bulk of contributions far into the future. Lured by artificially low present contributions, the inevitable consequence of a relentlessly increasing contribution rate -- to a level greatly in excess of the level percent of payroll rate -- is ignored.

***This method of financing is prohibited in Michigan by the state constitution.***

***Computed Contribution Rate Needed to Finance Benefits.*** From a given schedule of benefits and from the data furnished, the actuary calculates the contribution rate by means of an actuarial valuation - the technique of assigning monetary values to the risks assumed in operating a retirement system.



**CASH BENEFITS LINE.** This relentlessly increasing line is the fundamental reality of retirement plan financing. It happens each time a new benefit is added for future retirements (and happens regardless of the design for contributing for benefits).

**LEVEL CONTRIBUTION LINE.** Determining the level contribution line requires detailed assumptions concerning a variety of experiences in future decades, including:

Economic Risk Areas

- Rates of investment return
- Rates of pay increase
- Changes in active member group size

Non-Economic Risk Areas

- Ages at actual retirement
- Rates of mortality
- Rates of withdrawal of active members (turnover)
- Rates of disability

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## **SECTION B**

### VALUATION RESULTS

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**CITY'S COMPUTED CONTRIBUTIONS FOR THE  
FISCAL YEAR BEGINNING JULY 1, 2009**

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Contributions for	Contributions Expressed as Percents of Annual Pay
Normal Cost	
Age and service pensions	23.39 %
Death-in-Service survivor pensions	0.25
Disability pensions	<u>1.82</u>
Total	25.46 %
Members' Contributions	
Gross contributions@	9.88
Less prospective refunds	<u>0.90</u>
Available for pensions	8.98
City's Normal Cost	16.48
Unfunded Actuarial Accrued Liabilities	
Retirants and beneficiaries	0.00
Active members*	<u>6.59</u>
Total	<u>6.59</u>
City's Required Employer Contribution for Pensions	23.07 %
City Dollar Contribution#	\$968,212

@ Weighted average of two rates.

\* Financed as a level percent-of-payroll over an open period of 30 years.

# Adjusted for the time delay between valuation date and beginning of fiscal year. Please refer to Comment E on page B-6.

## REPORTED FUND BALANCE

Reserves	Reported Fund Balance June 30,	
	2008	2007
Reserve for Employees' Contributions	\$ 4,702,346	\$ 4,808,648
Reserve for Employer Contributions	4,737,138	10,586,750
Reserve for Retired Benefit Payments	21,189,169	18,209,602
Reserve for Undistributed Investment Income	-	-
Total Fund Balance	\$ 30,628,653	\$ 33,605,000

*Valuation assets* are equal to reported market value of assets, except that only 20% of the difference between the market-to-market rate of return and the projected rate of return (the 8% actuarial assumption) is recognized each year. Such spreading reduces the fluctuation in the City's computed contribution rate which might otherwise be caused by market value fluctuations. The details of the spreading technique are shown on pages C-8 to C-11. The present method was adopted for the 1993 year. The valuation assets as of June 30, 2008 total \$32,934,094.

*In financing actuarial accrued liabilities*, valuation assets allocated to pensions of \$32,934,094 were distributed as follows:

Reserves for	Valuation Assets Applied to Actuarial Accrued Liabilities for			Totals
	Active Members	Retirants & Beneficiaries	Contingency Reserve	
Employees' Contributions	\$ 4,702,346			\$ 4,702,346
Employer Contributions	4,737,138			4,737,138
Retired Benefit Payments	21,608	\$ 21,167,561		21,189,169
Reserve for Undistributed Investment Income	-			-
Valuation Asset Adjustment	2,305,441			2,305,441
Total	\$ 11,766,533	\$ 21,167,561	\$ -	\$ 32,934,094

**DERIVATION OF EXPERIENCE GAIN (LOSS)  
YEAR ENDED JUNE 30, 2008**

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

(1) UAAL* at start of year	\$ 4,155,001
(2) Normal cost from last valuation	653,651
(3) Actual employer contributions	941,417
(4) Interest accrual: $[(1) + 1/2 [(2) - (3)]] \times .08$	320,889
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	4,188,124
(6) Change from benefit changes	0
(7) Change from revised actuarial assumptions/methods	0
(8) Expected UAAL after changes: (5) + (6) + (7)	4,188,124
(9) Actual UAAL at end of year	4,935,819
(10) Gain (loss): (8) - (9)	(747,695)
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year \$36,211,916	(2.1)%

\* *Unfunded actuarial accrued liabilities.*

<b>Valuation Date</b>	<b>Experience Gain (Loss)</b>
<b>June 30,</b>	<b>As a % of Beginning Accrued Liability</b>
1997	0.4 %
1998	4.6
1999	4.4
2000	4.0
2001	1.6
2002	(4.3)
2003	(7.8)
2004	(6.5)
2005	(7.6)
2006	(4.1)
2007	1.0
2008	(2.1)

# SUMMARY STATEMENT OF SYSTEM RESOURCES AND OBLIGATIONS

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## PRESENT RESOURCES AND EXPECTED FUTURE RESOURCES

A. Present valuation assets:	
1. Net assets from system financial statements	\$30,628,653
2. Funding value adjustment	<u>2,305,441</u>
3. Valuation assets	32,934,094
B. Actuarial present value of expected future employer contributions:	
1. For normal costs	4,507,258
2. For unfunded actuarial accrued liability	<u>4,935,819</u>
3. Total	9,443,077
C. Actuarial present value of expected future member contributions	<u>2,905,148</u>
D. Total Present and Expected Future Resources	\$45,282,319

## ACTUARIAL PRESENT VALUE OF EXPECTED FUTURE BENEFIT PAYMENTS

A. To retirants and beneficiaries	\$21,167,561
B. To vested terminated members	1,466,945
C. To present active members:	
1. Allocated to service rendered prior to valuation date - actuarial accrued liability	15,235,407
2. Allocated to service likely to be rendered after valuation date	<u>7,412,406</u>
3. Total	22,647,813
D. Total Actuarial Present Value of Expected Future Benefit Payments	\$45,282,319

## COMMENTS AND CONCLUSION

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**COMMENT A:** The overall 2007/2008 actuarial experience was less favorable than projected experience as reflected by the experience loss shown on page B-3. This experience loss is primarily attributable to lower than assumed retired mortality and return on investments.

**COMMENT B:** The June 30, 1996 and later actuarial valuations reflect benefit increases for existing retirees who were receiving benefits below the January 1, 1996 estimated Federal and State poverty levels. Future increases in the poverty level are not reflected in this report, but would lead to higher City contribution rates. These increases will be included in the actuarial valuation when such increases are reported to the actuary in future years.

**COMMENT C:** As of June 30, 2008 the funded ratio is 87.0%. Market value of System assets was \$30.63 million. The difference between valuation assets and the market value of assets, \$2.31 million, represents accumulated investment losses scheduled for phased-in recognition in the next four actuarial valuations. Without investment gains it is expected that the System's funded ratio at that fourth year would be approximately 80%. The table that follows shows our best, rough estimate of computed employer contributions in the next three actuarial valuations, assuming an 8% market value return and no actuarial gains or losses. The change in the contribution from year to year reflects the phase-in of the accumulated investment losses (\$2.31 million) discussed above.

<b>Valuation Date</b>	<b>Payroll</b>	<b>Employer Normal Cost</b>	<b>Amortization Payment</b>	<b>Total Employer Contribution</b>
June 30, 2008	\$3,843,177	16.48%	6.59%	23.07%
June 30, 2009	\$4,016,120	16.48%	6.92%	23.40%
June 30, 2010	\$4,196,845	16.48%	7.28%	23.76%
June 30, 2011	\$4,385,703	16.48%	7.58%	24.06%

Please remember that these are rough estimates and, as seen in recent years, actual experience can deviate significantly from assumed, even over the near term. These numbers are being provided at the request of the City; our understanding is that they are to be used for advanced preliminary budgeting numbers.

**COMMENT D:** All indications are that investment experience since June 30, 2008 for all public retirement systems has been very poor. It would be expected that the typical public retirement system has seen investment returns since June 30, 2008 of -20% (or worse). If the Ypsilanti Fire and Police Retirement System experience has been similar, we would expect the employer contribution requirement to be at least \$500,000 higher than current contributions.

**COMMENT E:** For any period of time, the percent-of-payroll contribution needs to be converted to dollar amounts. Any of the following procedures would be acceptable:

- a) Contribute dollar amounts that are equal to the percent-of-payroll contribution requirement of 23.07% for member payroll each pay period.

For example, if payroll for a pay period is \$150,000, then a \$34,605 pension contribution should be made for that pay period. This dollar amount is derived by multiplying the percent-of-payroll contribution requirement by the payroll.

- b) Contribute \$968,212 on January 1, 2010. An adjustment of 0.6434% should be made for each month of delay in making this contribution after the date above.
- c) Contribute dollar amounts that are equal to the City's normal cost contribution requirement of 16.48% for member payroll each pay period. In addition, contribute \$276,572 on January 1, 2010 for amortization of unfunded actuarial accrued liabilities. An adjustment of 0.6434% should be made for each month of delay in making this payment.

Current Board policy has been to set the required City contribution based on procedure b) shown above.

All three procedures shown are appropriate and generate sufficient annual contributions. Procedures a) and b) can produce over/under contributions in times where significant changes are occurring in the covered active member payroll. Procedure c) prevents over/under contributions at such times.

We believe that the Board has the authority to establish the contribution level but recommend that your attorney be consulted for guidance.

**CONCLUSION:** The City's contributions (members' contributions are additional) to the City of Ypsilanti Fire and Police Retirement System, for the fiscal year beginning July 1, 2009, have been computed to be 23.07% of active member payroll. This computed contribution conforms with the requirements of PA 728 of 2002.

## COMPARATIVE STATEMENT

Valuation Date June 30,	Fiscal Year	Actuarial Accrued Liabilities & Reserves	Actuarial Accrued Assets	% Funded	Unfunded Actuarial Accrued Liabilities & Reserves			City's Contribution Rate				
					Dollars	Amortiz. Period	% of Payroll	Computed Percents		Dollars		
								Pension	Health	Computed	Actual	
1996	97-98	\$23,506,576	\$24,612,528	104.7	\$(1,105,952)	30	- %	13.75 %		--	--	
1996	97-98	23,778,940	24,612,528	103.5	(833,588)	30	-	14.15	**	\$526,112	--	
1996	97-98	23,778,940	24,612,528	103.5	(833,588)	30	-	14.15	4.88 % #	707,556	\$526,000	
1997	98-99	24,914,577	25,839,088	103.7	(924,511)	30	-	14.14		748,246	595,000	
1998	99-00	25,708,661	27,766,480	108.0	(2,057,819)	30	-	12.83		742,909	595,000	
1999	00-01	27,010,112	30,351,193	112.4	(3,341,081)	30	-	11.35		720,531	595,000	
2000	01-02	27,824,096	32,479,327	116.7	(4,655,231)	30	-	9.35		--	--	
2000	01-02	26,204,216	32,718,398	124.9	(6,514,182)	10	-	0.00	*	0	595,000	
2001	02-03	26,933,083	34,479,264	128.0	(7,546,181)	10	-	0.00		0	0	
2002	03-04	27,899,273	34,970,658	125.3	(7,071,385)	10	-	0.00		0	0	
2003	04-05	29,020,485	33,916,996	116.9	(4,896,511)	10	-	0.00		0	0	
2004	05-06	29,734,426	32,569,762	109.5	(2,835,336)	10	-	5.09		0.00		
2004	05-06	31,251,133	32,569,762	104.2	(1,318,629)	10	-	11.78	**	0.00	500,602	500,602
2005	06-07	32,774,898	31,180,708	95.1	1,594,190	30	-	16.54		0.00	730,106	941,417
2006	07-08	34,011,868	30,843,790	90.7	3,168,078	30	-	18.55		0.00		
2006	07-08	34,980,132	30,843,790	88.2	4,136,342	30	-	21.57	**	0.00		
2007	08-09	36,090,972	32,056,915	88.8	4,034,057	30	-	21.69		0.00		
2007	08-09	36,211,916	32,056,915	88.5	4,155,001	30	-	21.91	**	0.00		
<b>2008</b>	<b>09-10</b>	<b>37,869,913</b>	<b>32,934,094</b>	<b>87.0</b>	<b>4,935,819</b>	<b>30</b>	<b>128</b>	<b>23.07</b>		<b>0.00</b>		
<b>2008</b>	<b>09-10</b>	<b>37,869,913</b>	<b>32,934,094</b>	<b>87.0</b>	<b>4,935,819</b>	<b>30</b>	<b>128</b>	<b>23.07</b>	**	<b>0.00</b>		

\* Revised actuarial assumptions.      \*\* Retirement System was amended.

# After including reimbursement for retiree health insurance premiums.

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

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

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## **SECTION C**

### **SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA**

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**BRIEF SUMMARY OF ACT 345 BENEFIT PROVISIONS  
(JUNE 30, 2008)**

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**Eligibility**

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**Amount**

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**SERVICE RETIREMENT**

20 or more years of service (25 years for Fire Chief) regardless of age or age 60 regardless of service.	Straight life pension equals 3.0% of 3 year average final compensation (AFC) times years of service for police and 3.0% AFC times first 25 years of service plus 1% of AFC times years of service in excess of 25 years for IAFF.
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**DEFERRED RETIREMENT**

10 or more years of service.	Computed as service retirement but based upon service, AFC and benefit in effect at termination. Benefit begins at date retirement would have occurred had member remained in employment.
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**DEATH AFTER RETIREMENT SURVIVOR'S PENSION**

Payable to a surviving spouse, if any, upon the death of a retired member who was receiving a straight life pension which was effective July 1, 1975 or later.	Spouse's pension equals 60% of the straight life pension the deceased retirant was receiving.
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**NON-DUTY DEATH-IN-SERVICE SURVIVOR'S PENSION**

Payable to a surviving spouse, if any, upon the death of a member with 10 or more years of service.	Accrued straight life pension actuarially reduced in accordance with an Option I election.
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**DUTY DEATH-IN-SERVICE SURVIVOR'S PENSION**

Payable upon the expiration of worker's compensation to the survivors of a member who died in the line of duty.	Same amount that was paid by worker's compensation.
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**NON-DUTY DISABILITY**

Payable upon the total and permanent disability of a member with 5 or more years of service.	To Age 55: 1.5% of AFC times years of service. At Age 55: Same as Service Retirement Pension.
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**DUTY DISABILITY**

Payable upon the total and permanent disability of a member in the line of duty.	To Age 55: 50% of AFC. At Age 55: Same as Service Retirement Pension with service credit from date of disability to age 55.
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**POST-RETIREMENT BENEFIT INCREASES**

Retirees who are receiving benefits below the estimated Federal and State poverty levels have their benefits increased up to the poverty level.

**MEMBER CONTRIBUTIONS**

10% of pay (Fire Chief: 5%).

**RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS  
COMPARATIVE STATEMENT**

Year Ended June 30,	Added to Rolls			Removed from Rolls		Rolls End of Year				% Incr. in Annual Pensions	Average Pension	Present Value of Pensions
	No.	Annual Pensions	Post-Ret. Increases	No.	Annual Pensions	No.	Active Per Retired	Annual Pensions				
								Dollars	% of Pay			
1985	2	\$ 50,137			\$ 368	42	1.6	\$ 409,718	19.9 %	13.8 %	\$ 9,755	\$ 4,542,985
1986	4	77,088				46	1.4	486,806	23.2	18.8	10,583	5,431,487
1987	17	279,810		2	7,244	61	0.9	759,372	40.0	56.0	12,449	8,869,974
1988	5	59,001		2	9,211	64	1.0	809,162	39.1	6.6	12,643	9,065,831
1989	3	60,369		1	2,575	66	1.0	866,956	39.7	7.1	13,136	9,648,631
1990	3	42,779	\$ 40,405	2	16,742	67	1.0	933,398	39.4	7.7	13,931	10,159,853
1991	4	48,482		1	13,010	70	1.0	968,870	35.9	3.8	13,841	10,780,916
1992	5	94,749		1	16,966	74	1.0	1,046,653	34.5	8.0	14,144	11,665,379
1993	3	66,150				77	0.9	1,112,803	35.3	6.3	14,452	12,339,784
1994	2	58,690				79	0.9	1,171,493	38.6	5.3	14,829	13,123,866
1995	7	138,032		1	25,434	85	0.8	1,284,091	41.6	9.6	15,107	14,427,739
1996	6	117,023	43,747	1	9,210	90	0.8	1,435,651	41.8	11.8	15,952	15,854,562
1997	2	40,767		1	19,947	91	0.8	1,456,471	40.9	1.5	16,005	15,887,077
1998			2,190			91	0.8	1,458,661	38.6	0.2	16,029	15,649,774
1999	3	73,511	3,908	3	37,695	91	0.8	1,498,385	38.9	2.7	16,466	16,061,894
2000	6	180,781	2,591	4	55,996	93	0.7	1,625,761	43.6	8.5	17,481	16,749,097
2001	2	20,819	13,725	4	40,320	91	0.7	1,619,985	42.5	(0.4)	17,802	16,575,035
2002	3	53,805	2,446	3	43,160	91	0.7	1,633,076	42.3	0.8	17,946	16,589,766
2003			12,136	1	16,549	90	0.7	1,628,663	40.7	(0.3)	18,096	16,279,677
2004	2	24,041	2,533	3	33,849	89	0.7	1,621,388	41.7	(0.4)	18,218	16,177,858
2005	2	70,098	5,147	4	43,496	87	0.7	1,653,137	40.9	2.0	19,002	16,648,815
2006	1	75,314	12,483			88	0.7	1,740,934	43.6	5.3	19,783	17,361,798
2007	6	195,338	1,390	1	21,610	93	0.6	1,916,052	48.4	10.1	20,603	19,207,107
<b>2008</b>	<b>9</b>	<b>213,336</b>	<b>(6,350)</b>	<b>1</b>	<b>15,816</b>	<b>101</b>	<b>0.5</b>	<b>2,107,222</b>	<b>54.8</b>	<b>10.0</b>	<b>20,864</b>	<b>21,167,561</b>

**RETIRANTS AND BENEFICIARIES JUNE 30, 2008**  
**TABULATED BY TYPE OF PENSIONS BEING PAID**

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Type of Pensions Being Paid	Number	Annual Pensions
Age and Service Pension		
Regular pension - benefit terminating upon death of retiree	22	\$ 425,681
Regular pension - automatic 60% joint and survivor benefit	55	1,237,030
Option 1 pension - joint and survivor benefit	3	68,885
Option 2 pension - modified joint and survivor benefit	3	120,360
Pension being paid survivor beneficiary of deceased age and service retiree	<u>10</u>	<u>135,972</u>
Total age and service pensions	93	1,987,928
Casualty Pensions		
Duty disability pension	5	82,736
Pension being paid survivor beneficiary of deceased disability retiree	1	12,186
Pension being paid survivor beneficiary of deceased member	<u>2</u>	<u>24,372</u>
Total casualty pensions	<u>8</u>	<u>119,294</u>
<b>Total Pensions Being Paid</b>	<b>101</b>	<b>\$ 2,107,222</b>

**RETIRANTS AND BENEFICIARIES - BY ATTAINED AGES**  
**JUNE 30, 2008**

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Attained Ages	No.	Annual Pensions
42	1	\$ 40,436
43	1	30,296
44	1	15,020
45	1	41,383
46	1	39,808
47	4	132,194
48	1	38,287
51	2	32,464
52	2	63,939
53	1	16,912
54	2	81,701
55	3	70,614
56	2	32,829
57	2	27,347
58	1	12,186
59	2	58,690
60	5	93,615
61	7	157,559
62	5	139,511
63	6	109,049
64	4	88,564
65	4	59,753
66	2	32,666
67	3	58,573
68	8	149,101
69	1	17,301
70	4	44,342
71	1	48,728
72	3	54,455
77	1	14,245
78	1	24,954
79	2	35,470
80	2	40,685
81	1	19,613
82	2	36,576
83	1	12,186
84	1	12,186
85	1	12,186
86	5	62,544
87	2	24,882
88	1	12,186
91	1	12,186
<b>Totals</b>	<b>101</b>	<b>\$ 2,107,222</b>

**INACTIVE VESTED MEMBERS - BY ATTAINED AGES**  
**JUNE 30, 2008**

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<b>Attained Ages</b>	<b>No.</b>	<b>Estimated Annual Pensions</b>
39	1	\$ 33,100
41	1	16,242
46	1	43,107
49	1	34,995
<b>Totals</b>	<b>4</b>	<b>\$127,445</b>

## ACTIVE MEMBERS IN VALUATION - COMPARATIVE SCHEDULE

Year Ended June 30,	Number Added During Year		Terminations During Year									End of Year No.	Valuation Payroll	Group Averages				
			Normal Retirement		Disability Retirement		Died-in Service		Withdrawals					Pay	% Incr.	Age	Service	
	A	E	A	E	A	E	A	E	A	A	A							E
	A	E	A	E	A	E	A	E	A	A	A			E	No.	\$	\$	%
1989	6	6	3	2.5	0	0.2	0	0.1	0	3	3	2.4	66	\$2,184,887	\$33,104	5.6 %	35.4 yrs.	9.8 yrs.
1990	5	4	1	2.1	1	0.2	0	0.1	0	2	2	2.1	67	2,370,014	35,373	6.9	35.1	9.9
1991	7	3	2	3.6	0	0.2	0	0.1	0	1	1	2.1	71	2,702,494	38,063	7.6	35.0	9.7
1992	9	9	4	4.3	0	0.1	0	0.1	0	5	5	2.3	71	3,037,480	42,781	12.4	34.5	9.0
1993	7	8	3	3.8	0	0.1	0	0.1	1	4	5	2.7	70	3,151,542	45,022	5.2	34.5	8.7
1994	4	4	2	3.2	0	0.2	0	0.0	0	2	2	3.2	70	3,033,156	43,331	(3.8)	35.1	9.0
1995	5	8	4	3.2	0	0.2	0	0.0	0	4	4	2.9	67	3,085,734	46,056	6.3	35.1	8.7
1996	14	7	4	3.0	0	0.2	0	0.0	0	3	3	2.8	74	3,437,601	46,454	0.9	34.7	7.6
1997	6	8	1	2.6	0	0.2	0	0.1	1	6	7	3.7	72	3,564,118	49,502	6.6	35.5	8.0
1998	5	5	0	2.1	0	0.2	0	0.1	2	3	5	3.2	72	3,776,037	52,445	5.9	36.1	8.6
1999	4	5	2	2.2	0	0.3	0	0.1	0	3	3	2.9	71	3,855,156	54,298	3.5	37.6	9.1
2000	5	10	4	2.8	0	0.2	1	0.1	0	5	5	2.7	66	3,728,601	56,494	4.0	36.9	8.8
2001	4	3	0	1.7	0	0.2	0	0.0	0	3	3	2.3	67	3,813,904	56,924	0.8	37.9	9.4
2002	5	9	1	0.8	0	0.3	0	0.0	0	8	8	2.3	63	3,858,409	61,245	7.6	37.6	10.2
2003	2	3	0	0.5	0	0.1	0	0.0	0	3	3	1.9	62	4,003,846	64,578	5.4	38.7	11.3
2004	2	3	2	1.8	0	0.2	0	0.0	1	0	1	1.7	61	3,891,478	63,795	(1.2)	39.0	11.9
2005	3	5	2	1.2	0	0.2	0	0.0	0	3	3	1.6	59	4,042,199	68,512	7.4	39.5	12.5
2006	5	5	1	2.9	0	0.2	1	0.0	0	3	3	1.3	59	3,996,679	67,740	(1.1)	39.3	12.6
2007	8	7	3	4.3	0	0.2	1	0.0	0	3	3	2.3	60	3,957,733	65,962	(2.6)	37.3	10.9
<b>2008</b>	<b>3</b>	<b>8</b>	<b>4</b>	<b>2.8</b>	<b>0</b>	<b>0.2</b>	<b>0</b>	<b>0.0</b>	<b>0</b>	<b>4</b>	<b>4</b>	<b>1.9</b>	<b>55</b>	<b>3,843,177</b>	<b>69,876</b>	<b>5.9</b>	<b>37.7</b>	<b>11.6</b>

A = Actual number of persons.  
E = Expected number of persons.

**ACTIVE MEMBERS JUNE 30, 2008**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

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Attained Age	Years of Service to Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	3							3	\$ 130,124
25-29	12							12	610,619
30-34	1	3	1					5	339,492
35-39		2	5	1				8	607,244
40-44			4	8	2			14	1,126,644
45-49			2	4	4			10	797,771
50-54					2			2	143,390
62					1			1	87,893
<b>Totals</b>	<b>16</b>	<b>5</b>	<b>12</b>	<b>13</b>	<b>9</b>			<b>55</b>	<b>\$ 3,843,177</b>

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

**Group Averages:**

Age: 37.7 years  
Service: 11.6 years  
Annual Pay: \$69,876

**DERIVATION OF VALUATION ASSETS**  
**MARKET VALUE WITH 20% RECOGNITION OF THE DIFFERENCE BETWEEN**  
**THE MARKET RATE OF RETURN AND THE PROJECTED RATE OF RETURN**

	1989	1990	1991	1992	1993	1994
<b>Beginning of Year:</b>						
(1) Market Value	\$ 18,588,355	\$20,609,921	\$20,193,121	\$20,487,287	\$21,523,460	\$22,960,936
(2) Valuation Assets	17,580,218	19,774,199	21,183,338	21,829,960	22,204,796	23,085,622
<b>End of Year:</b>						
(3) Market Value	20,609,921	20,193,121	20,487,287	21,523,460	22,960,936	21,752,529
(4) Net Additions to Assets, Excluding Investment Income, Administrative Expenses, and Retiree Health Insurance	(145,307)	(292,674)	(524,324)	(616,864)	(530,070)	(413,962)
(5) Total Investment Income =(3)-(1)-(4)	2,166,873	(124,126)	818,490	1,653,037	1,967,546	(794,445)
(6) Projected Rate of Return	7.00%	7.00%	7.00%	7.00%	7.00%	7.00%
(7) Projected Investment Income =(6)x[(2)+.5x(4)]	1,225,530	1,373,950	1,464,482	1,506,507	1,535,783	1,601,505
(8) Investment Income In Excess of Projected Income	941,343	(1,498,076)	(645,992)	146,530	431,763	(2,395,950)
(9) Excess Investment Income Recognized This Year (5 year recognition)						
(9a) From This Year	188,269	(299,615)	(129,198)	29,306	86,353	(479,190)
(9b) From One Year Ago	(303,568)	188,269	(299,615)	(129,198)	29,306	86,353
(9c) From Two Years Ago	250,576	(303,568)	188,269	(299,615)	(129,198)	29,306
(9d) From Three Years Ago	492,199	250,576	(303,568)	188,269	(299,615)	(129,198)
(9e) From Four Years Ago	486,282	492,201	250,576	(303,569)	188,267	(299,616)
(10) Change in Valuation Assets =(4)+(7)+9[a..e]	2,193,981	1,409,139	646,622	374,836	880,826	395,198
<b>End of Year:</b>						
(3) Market Value	\$20,609,921	\$20,193,121	\$20,487,287	\$21,523,460	\$22,960,936	\$21,752,529
(11) Valuation Assets = (2) + (10)	\$19,774,199	\$21,183,338	\$21,829,960	\$22,204,796	\$23,085,622	\$23,480,820
<b>Rate of Return:</b>						
Market Value	11.7%	(0.6)%	4.1%	8.2%	9.3%	(3.5)%
Asset Value	13.4%	8.7%	5.6%	4.6%	6.4%	3.5%

**DERIVATION OF VALUATION ASSETS**  
**MARKET VALUE WITH 20% RECOGNITION OF THE DIFFERENCE BETWEEN**  
**THE MARKET RATE OF RETURN AND THE PROJECTED RATE OF RETURN**

	1995	1996	1997	1998	1999	2000
<b>Beginning of Year:</b>						
(1) Market Value	\$21,752,529	\$23,543,512	\$24,653,827	\$27,468,157	\$31,304,085	\$33,313,844
(2) Valuation Assets	23,480,820	23,970,822	24,612,528	25,839,088	27,766,480	30,351,189
<b>End of Year:</b>						
(3) Market Value	23,543,512	24,653,827	27,468,157	31,304,085	33,313,844	33,763,825
(4) Net Additions to Assets, Excluding Investment Income, Administrative Expenses, and Retiree Health Insurance	(833,803)	(919,389)	(725,382)	(549,377)	(725,382)	(549,377)
(5) Total Investment Income: =(3)-(1)-(4)	2,624,786	2,029,704	3,539,712	4,385,305	3,539,712	4,385,305
(6) Projected Rate of Return	7.00%	7.00%	7.00%	7.00%	7.00%	8.00%
(7) Projected Investment Income: =(6)x[(2)+.5x(4)]	1,614,474	1,645,779	1,697,489	1,789,508	1,920,886	2,390,714
(8) Investment Income In Excess of Projected Income	1,010,312	383,925	1,842,223	2,595,797	739,374	(1,006,200)
(9) Excess Investment Income Recognized This Year (5 year recognition)						
(9a) From This Year	202,062	76,785	368,445	519,159	147,875	(201,240)
(9b) From One Year Ago	(479,190)	202,062	76,785	368,445	519,159	147,875
(9c) From Two Years Ago	86,353	(479,190)	202,062	76,785	368,445	519,159
(9d) From Three Years Ago	29,306	86,353	(479,190)	202,062	76,785	368,445
(9e) From Four Years Ago	(129,200)	29,306	86,351	(479,190)	202,060	76,787
(10) Change in Valuation Assets: =(4)+(7)+9[a..e]	490,002	641,706	1,226,560	1,927,392	2,584,709	2,367,207
<b>End of Year:</b>						
(3) Market Value	\$23,543,512	\$24,653,827	\$27,468,157	\$31,304,085	\$33,313,844	\$33,763,825
(11) Valuation Assets: = (2) + (10)	\$23,970,822	\$24,612,528	\$25,839,088	\$27,766,480	\$30,351,189	\$32,718,396
<b>Rate of Return:</b>						
Market Value	12.3%	8.8%	14.6%	16.1%	8.6%	4.2%
Asset Value	5.7%	6.6%	8.0%	9.7%	11.8%	11.0%

**DERIVATION OF VALUATION ASSETS**  
**MARKET VALUE WITH 20% RECOGNITION OF THE DIFFERENCE BETWEEN**  
**THE MARKET RATE OF RETURN AND THE PROJECTED RATE OF RETURN**

	2001	2002	2003	2004	2005	2006
<b>Beginning of Year:</b>						
(1) Market Value	\$33,763,825	\$31,168,835	\$27,758,724	\$26,539,534	\$28,249,831	\$28,640,403
(2) Valuation Assets	32,718,396	34,479,264	33,095,260	31,921,572	30,476,636	31,180,708
<b>End of Year:</b>						
(3) Market Value	31,168,835	27,758,724	26,539,534	28,249,831	28,640,403	30,236,677
(4) Net Additions to Assets, Excluding Investment Income, Administrative Expenses, and Retiree Health Insurance	(779,265)	(743,567)	(1,244,169)	(1,387,895)	(1,365,010)	(1,150,381)
(5) Total Investment Income: =(3)-(1)-(4)	(1,815,725)	(2,666,544)	24,979	3,098,192	1,755,582	2,746,655
(6) Projected Rate of Return	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%
(7) Projected Investment Income: =(6)x[(2)+.5x(4)]	2,586,301	2,728,598	2,597,854	2,498,210	2,383,530	2,448,441
(8) Investment Income In Excess of Projected Income	(4,402,026)	(5,395,142)	(2,572,875)	599,982	(627,948)	298,214
(9) Excess Investment Income Recognized This Year (5 year recognition)						
(9a) From This Year	(880,405)	\$(1,079,028)	\$(514,575)	\$119,996	\$(125,590)	\$59,643
(9b) From One Year Ago	(201,240)	(880,405)	(1,079,028)	(514,575)	119,996	(159,080)
(9c) From Two Years Ago	147,875	(201,240)	(880,405)	(1,079,028)	(514,575)	88,070
(9d) From Three Years Ago	519,159	147,875	(201,240)	(880,405)	(1,079,028)	(544,581)
(9e) From Four Years Ago	368,443	(1,356,237)	147,875	(201,239)	(880,406)	(1,079,030)
(10) Change in Valuation Assets: =(4)+(7)+9[a..e]	1,760,868	(1,384,004)	(1,173,688)	(1,444,936)	(1,461,083)	(336,918)
<b>End of Year:</b>						
(3) Market Value	\$31,168,835	\$27,758,724	\$26,539,534	\$28,249,831	\$28,640,403	\$30,236,677
(11) Valuation Assets: = (2) + (10)	\$34,479,264	\$33,095,260	\$31,921,572	\$30,476,636	\$29,015,553	\$30,843,790
<b>Rate of Return:</b>						
Market Value	(5.4)%	0.0%	0.0%	0.0%	0.0%	9.8%
Asset Value	7.9%	0.0%	0.0%	0.0%	0.0%	2.7%

**DERIVATION OF VALUATION ASSETS**  
**MARKET VALUE WITH 20% RECOGNITION OF THE DIFFERENCE BETWEEN**  
**THE MARKET RATE OF RETURN AND THE PROJECTED RATE OF RETURN**

	2007	2008	2009	2010	2011	2012
<b>Beginning of Year:</b>						
(1) Market Value	\$30,236,677	\$33,605,000				
(2) Valuation Assets	30,843,790	32,056,915				
<b>End of Year:</b>						
(3) Market Value	33,605,000	30,628,653				
(4) Net Additions to Assets, Excluding Investment Income, Administrative Expenses, and Retiree Health Insurance	(1,056,000)	(1,278,148)				
(5) Total Investment Income; =(3)-(1)-(4)	4,424,323	(1,698,199)				
(6) Projected Rate of Return	8.00%	8.00%				
(7) Projected Investment Income: =(6)x[(2)+.5x(4)]	2,425,263	2,513,427				
(8) Investment Income In Excess of Projected Income	1,999,060	(4,211,626)				
(9) Excess Investment Income Recognized This Year (5 year recognition)						
(9a) From This Year	\$399,812	\$(842,325)				
(9b) From One Year Ago	59,643	399,812	\$(842,325)			
(9c) From Two Years Ago	(159,080)	59,643	399,812	\$(842,325)		
(9d) From Three Years Ago	88,070	(159,080)	59,643	399,812	\$(842,325)	
(9e) From Four Years Ago	(544,583)	183,850	(25,118)	59,642	399,812	\$ (842,326)
(10) Change in Valuation Assets: =(4)+(7)+9[a..e]	1,213,125	877,179				
<b>End of Year:</b>						
(3) Market Value	\$33,605,000	\$30,628,653				
(11) Valuation Assets: = (2) + (10)	\$32,056,915	\$32,934,094				
<b>Rate of Return:</b>						
Market Value	14.9%	0.0%				
Valuation Assets	7.5%	0.0%				

**SUMMARY OF  
CURRENT ASSET INFORMATION  
FURNISHED FOR VALUATION**

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**Balance Sheet**

<b>Current Assets (Market Value)</b>	<b>Reserve for</b>
Cash & Equivalent	\$ 2,735,227
Accruals & Receivables	0
Common & Preferred Stock	12,498,900
Bonds	14,666,012
Real Estate Investments	728,514
<b>Total Current Assets</b>	<b>30,628,653</b>
Less Accounts Payable	0
<b>Total Net Assets</b>	<b>\$ 30,628,653</b>
	<b>Employees' Contributions</b> \$ 4,702,346
	<b>Employer Contributions</b> 4,737,138
	<b>Retired Benefit Payments</b> 21,189,169
	<b>Undistributed Income</b> 0
	<b>Total Reserves</b> \$ 30,628,653

**Receipts and Disbursements**

	<b>2007-2008</b>	<b>2006-2007</b>
Balance - July 1,	\$ 33,605,000	\$ 30,236,677
Receipts:		
Employees' Contributions	418,956	404,508
Employer Contributions	941,417	730,106
Investment Income	(1,544,141)	4,559,322
Disbursements:		
Benefit Payments	2,014,793	1,816,191
Refund of Member Contributions	623,728	374,423
Administrative Expense	154,058	134,999
Balance June 30,	\$ 30,628,653	\$ 33,605,000
Ratio of investment income (net of expenses and health insurance premiums) to mean assets balance	0.0%	0.0%

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## **SECTION D**

### **SUMMARY OF ACTUARIAL COST METHOD AND ASSUMPTIONS**

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## ACTUARIAL COST METHOD

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

- (i) The annual normal costs for each individual active member, payable from the date of hire to the date of retirement, are sufficient to accumulate the actuarial present value of the member's benefit at the time of retirement;
- (ii) each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.

***Financing of Unfunded Actuarial Accrued Liabilities.*** Unfunded actuarial accrued liabilities (the portion of total liabilities not covered by present assets or expected future normal cost contributions) were amortized by level (principal and interest combined) percent-of-payroll contributions over an open period of 30 years.

## **ACTUARIAL ASSUMPTIONS USED FOR THE VALUATIONS**

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

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

- (i) Long-term rates of investment return to be generated by the assets of the Fund.
- (ii) Patterns of pay increases to members.
- (iii) Rates of mortality among members, retirants and beneficiaries.
- (iv) Rates of withdrawal of active members (without entitlement to a retirement benefit).
- (v) Rates of disability among members.
- (vi) The age patterns of actual retirement.

In making a valuation, the actuary calculates the monetary effect of each assumption for as long as a present covered person survives - - - a period of time which can be as long as a century.

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Actual experience of the System will not coincide exactly with assumed experience, regardless of the wisdom of the assumptions, or the skill of the actuary and the precision of the many calculations made. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

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

## VALUATION ASSUMPTIONS

**The rate of investment return (regular interest)**, net of expenses, used in making the valuation was 8.0% per annum, compounded annually. This rate is not the assumed real return which, for funding purposes, is the rate of return in excess of average salary increases. Considering other assumptions used in the valuation, the 8.0% translates to a real return of approximately 3.5%. Experience over the last 5 years has been as illustrated below:

	Year Ended June 30,					5 Year Average
	2008	2007	2006	2005	2004	
1) Gross investment return	0.5 %	0.4 %	3.1 %	0.3 %	0.6 %	1.0 %
Less: expenses	0.5	0.4	0.4	0.4	0.5	0.4
health care prem.*	-	-	-	-	-	0.0
2) Net nominal rate of return#	0.0	0.0	2.7	(0.1)	0.1	0.5
3) Increase in CPI	5.0	2.7	4.3	2.5	3.3	3.6
4) Average salary increase	5.9	(2.6)	(1.1)	7.4	(1.2)	1.7
5) Real return:						
- funding purposes	(5.9)	2.6	3.8	(7.5)	1.3	(1.2)
- assumption	3.5	3.5	3.5	3.5	3.5	3.5

\* For the June 30, 2003 valuation, this percentage represents a transfer to a Fiduciary Fund

# The nominal rate of return was computed using the approximate formula:  $i = I$  divided by  $1/2 (A+B-I)$ , where  $I$  is realized investment income net of expenses and, prior to 1997, health care premiums,  $A$  is the beginning of year asset value and  $B$  is the end of year asset value.

**The mortality table** used to measure post-retirement mortality was the 1983 Group Annuity Mortality Table, with a 2 year setback for men and a 3 year setback for women. This table was first used for the June 30, 2000 valuation.

Sample Ages	Single Life Retirement Values			
	Present Value of		Future Life	
	\$1 Monthly for Life		Expectancy (Years)	
	Men	Women	Men	Women
45	\$140.25	\$146.68	35.62	42.58
50	134.69	143.12	30.98	37.77
55	127.78	138.35	26.55	33.03
60	119.13	131.97	22.29	28.39
65	108.20	123.66	18.23	23.89
70	95.49	113.08	14.52	19.59
75	82.00	100.09	11.31	15.57
80	68.01	85.80	8.57	12.03

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement.

**SAMPLE RATES OF SEPARATION  
(EXCLUDING DEATHS AND DISABILITY)  
FROM ACTIVE EMPLOYMENT BEFORE RETIREMENT**

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Sample Ages	Years of Service	% of Active Members Separating Within Next Year	
		Police	Fire
ALL	0	15.00 %	8.00 %
	1	13.00	6.00
	2	10.00	5.00
	3	7.00	4.00
	4	5.00	3.00
25 30 35 40	5 & Over	6.50	2.50
		5.46	2.50
		3.25	1.40
		1.30	0.60
45 50 55 60		0.65	0.50
		0.65	0.50
		0.65	0.50
		0.65	0.50

These rates were first used for the June 30, 2000 valuation.

Sample Ages	Percent Increase in Salary During Next Year		Service at Beginning of Year	Additional Service Based Merit & Seniority Portion of Annual Increases
	Base	Merit and Seniority		
20	4.50 %	3.00 %	1-5	7.5 %
25	4.50	3.00	6-10	1.4
30	4.50	2.60	11-15	1.4
35	4.50	1.10	16 & over	0.0
40	4.50	0.20		
45	4.50	0.20		
50	4.50	0.20		
55	4.50	0.10		
60	4.50	0.00		

These assumptions were first used for the June 30, 2000 valuation.

If the number of active members remains constant, then the total active member payroll will increase 4.5% annually, the base portion of the individual salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

Sample rates of becoming disabled are as follows:

Sample Ages	Percent Becoming Disabled Within Next Year	
	Men	Women
20	0.15 %	0.06 %
25	0.18	0.10
30	0.20	0.15
35	0.29	0.27
40	0.42	0.38
45	0.65	0.57
50	1.05	0.91

*Probabilities of retirement* for members eligible to retire were:

Active Members Retiring Within Next Year				
Years of Service	Police	Fire	Retirement Ages	Fire Chief
20	60 %	50 %	45	20 %
21	40	15	46	20
22	40	15	47	20
23	50	15	48	20
24	50	15	49	20
25	50	15	50	20
26	50	15	51	15
27	50	15	52	10
28	50	15	53	10
29	50	15	54	10
30	100	100	55	10
			56	10
			57	10
			58	10
			59	20
			60	100

A member was assumed to be eligible for retirement after attaining age 40 with 20 or more years of service (age 45 with 25 or more years of service for Fire Chief) or after attaining age 60 with 10 or more years of service.

These rates were first used for the June 30, 2000 valuation.

**SUMMARY OF ASSUMPTIONS USED**  
**JUNE 30, 2008**

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**Pensions in an Inflationary Environment**

**Value of \$1,000/month Retirement Benefit  
To an Individual Who Retires at Age 40  
In an Environment of 4.5% Inflation**

<u>Age</u>	<u>Value</u>
40	\$ 1,000
41	957
42	916
43	876
44	839
45	802
50	644
55	517
60	415
65	333
70	267
75	214
80	172
85	138
86	132
87	126

The life expectancy of a 40 year old male retiree is age 80. The life expectancy for a 40 year old female retiree is age 87. Half of the people will outlive their life expectancy. The effects of even moderate amounts of inflation can be significant for those who live to an advanced age.

**SUMMARY OF ASSUMPTIONS USED**  
**JUNE 30, 2008**  
**MISCELLANEOUS AND TECHNICAL ASSUMPTIONS**

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<b>Marriage Assumption:</b>	90% of members are assumed to be married for purposes of death-in-service benefits. 80% of members are assumed to be married at retirement.
<b>Pay Increase Timing:</b>	Beginning of (Fiscal) year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
<b>Decrement Timing:</b>	Decrements of all types are assumed to occur mid-year.
<b>Eligibility Testing:</b>	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
<b>Benefit Service:</b>	Exact fractional service is used to determine the amount of benefit payable.
<b>Decrement Relativity:</b>	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
<b>Decrement Operation:</b>	Disability and mortality decrements do not operate during the first 5 years of service. Disability and turnover decrements do not operate during retirement eligibility.
<b>Normal Form of Benefit:</b>	The assumed normal form of benefit is the straight life form.
<b>Loads:</b>	Retirement Present Values were loaded by 4.5% to account for the subsidized annuity withdrawal.
<b>Incidence of Contributions:</b>	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

## GLOSSARY

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**ACTUARIAL ACCRUED LIABILITY.** The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

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

**ACTUARIAL ASSUMPTIONS.** Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turn-over and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

**ACTUARIAL COST METHOD.** A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

**ACTUARIAL EQUIVALENT.** A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

**ACTUARIAL PRESENT VALUE.** The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

**AMORTIZATION.** Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

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

**NORMAL COST.** The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

**PLAN TERMINATION LIABILITY.** The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for the future service and salary. The termination liability will generally be less than the liabilities computed on a "going-concern" basis and is not normally determined in a routine actuarial valuation.

**RESERVE ACCOUNT.** An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

**UNFUNDED ACTUARIAL ACCRUED LIABILITY.** The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

**VALUATION ASSETS.** The value of current plan assets recognized for valuation purposes. Generally based on market value, adjusted to eliminate some of the market value fluctuation.

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## **SECTION E**

### **CERTAIN DISCLOSURES REQUIRED BY STATEMENTS NO. 25 AND NO. 27 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD**

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

**GASB STATEMENTS NO. 25 AND NO. 27  
REQUIRED ACTUARIAL INFORMATION  
SCHEDULE OF FUNDING PROGRESS**

Actuarial Valuation June 30,	(a) Actuarial Value of Assets	(b) Entry Age Actuarial Accrued Liability	(b-a) Unfunded Accrued Liability (UAL)	(a/b) Funded Ratio	(c) Annual Covered Payroll	[(b-a)/c] UAL as a Percentage of Covered Payroll
1996 #	\$24,612,528	\$23,778,940	\$ (833,588)	104 %	\$3,437,601	- %
1997	25,839,088	24,914,577	(924,511)	104	3,564,118	-
1998	27,766,480	25,708,661	(2,057,819)	108	3,776,037	-
1999	30,351,193	27,010,112	(3,341,081)	112	3,855,156	-
2000	32,479,327	27,824,096	(4,655,231)	117	3,728,601	-
2000 *	32,440,367	26,204,216	(6,236,151)	124	3,728,601	-
2001	34,479,264	26,933,083	(7,546,181)	128	3,813,904	-
2002	34,970,658	27,899,273	(7,071,385)	125	3,858,409	-
2003	33,916,996	29,020,485	(4,896,511)	117	4,003,846	-
2004 #	32,569,762	31,251,133	(1,318,629)	104	3,891,478	-
2005	31,180,708	32,774,898	1,594,190	95	4,042,199	39
2006 #	30,843,790	34,980,132	4,136,342	88	3,996,679	103
2007 #	34,292,073	36,211,916	1,919,843	95	3,957,733	49
<b>2008 #</b>	<b>32,934,094</b>	<b>37,869,913</b>	<b>4,935,819</b>	<b>87</b>	<b>3,843,177</b>	<b>128</b>

\* After changes in actuarial assumptions and/or methods.

# After changes in benefit provisions.

**GASB STATEMENTS NO. 25 AND NO. 27**  
**REQUIRED SUPPLEMENTARY INFORMATION**

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

Valuation date	6/30/2008
Actuarial cost method	Individual entry age
Amortization method for unfunded actuarial accrued liabilities	Level percent open
Remaining amortization period	30-years
Asset valuation method	5-year smoothed market
Actuarial assumptions:	
Investment rate of return	8.00%
Projected salary increases including salary inflation at	4.5% - 15.0%
Cost-of-living adjustments	4.50%
	None

Membership of the plan consisted of the following at June 30, 2008, the date of the latest actuarial valuation:

Retirees and beneficiaries receiving benefits	101
Terminated plan members entitled to but not yet receiving benefits	4
Active plan members	<u>55</u>
Total	160

**GASB STATEMENTS NO. 25 AND NO. 27**  
**REQUIRED ACTUARIAL INFORMATION – PENSIONS ONLY**  
**SCHEDULE OF EMPLOYER CONTRIBUTIONS**

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<b>Fiscal Year Ending June 30,</b>	<b>Annual Required Contribution</b>	<b>Percent Contributed @</b>
1994	\$556,629	100.0 %
1995	589,833	-
1995 *	455,744	100.8
1996	441,249	101.7
1997	452,235	103.9
1998 #	526,112	100.0
1999	545,090	100.0
2000	523,998	-
2000 *	529,048	100.0
2001	477,827	100.0
2002	0	100.0
2003	0	100.0
2004 #	0	100.0
2005	0	100.0
2006 #	500,602	100.0
2007 #	730,106	100.0
<b>2008 #</b>	<b>941,417</b>	<b>100.0</b>

\* After changes in actuarial assumptions and/or methods.

# After changes in benefit provisions.

@ Excludes contribution for reimbursement of health insurance premiums, if any.

April 1, 2009

Retirement Board  
City of Ypsilanti Fire and Police Retirement System  
1 South Huron Street  
Ypsilanti, Michigan 48197

**Attention: Retirement Board Chairperson**

Enclosed are six copies of the report of the 53<sup>rd</sup> Annual Actuarial Valuation of the City of Ypsilanti Fire and Police Retirement System. I will be happy to meet with the Retirement Board to discuss the report.

Sincerely,



David L. Hoffman

DLH:mrb  
Enclosures

cc: Ms. Marilou Uy, Finance Director (+7 report copies)  
Mr. Michael VanOverbeke, Attorney (+1 report copy)  
Rehmann Robson (+2 report copy)