Gabriel Roeder Smith & Company
Consultants & Actuaries

CITY OF GRAND RAPIDS GENERAL RETIREMENT SYSTEM

42ND ANNUAL ACTUARIAL VALUATION REPORT

JUNE 30, 2009

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November 17, 2009

The Board of Trustees
City of Grand Rapids General
Retirement System
Grand Rapids, Michigan

Dear Board Members:

The results of the ***42nd Annual Actuarial Valuation*** of the City of Grand Rapids General Retirement System are presented in this report. The purpose of the annual valuation is to measure the System's funding progress and to determine the City's contribution rate for the ensuing fiscal year in accordance with the established funding policy.

The date of the valuation was ***June 30, 2009***.

The valuation was based upon statistical data furnished by your Executive Director concerning Retirement System benefits, financial transactions, individual members, terminated members and retirants and beneficiaries. Data was checked for internal and year-to-year consistency, but was not otherwise audited. This information is summarized in Section B.

To the best of our knowledge, this report is complete and accurate and was made in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the Retirement System Ordinance.

The actuaries submitting this report are Members of the American Academy of Actuaries (MAAA) as indicated, and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,

Norman L. Jones

Norman L. Jones, FSA, MAAA

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SECTION A

VALUATION RESULTS

CONTRIBUTIONS TO PROVIDE BENEFITS FOR FISCAL YEAR BEGINNING JULY 1, 2010

Contributions for	% of Active Payroll
Normal cost of benefits:	
Age & service pensions	14.88 %
Disability pensions (CRF)	0.51 %
Death-in-service pensions	0.35 %
Refunds of member contributions	0.21 %
Totals	15.95 %
Member contributions (weighted average) #	3.93 %
Employer Normal Cost	12.02 %
Unfunded actuarial accrued liabilities (Full funding credit)*	1.10 %
COMPUTED EMPLOYER RATE @	**13.12 %**

* *Amortized as a level percent-of-payroll over a period of 29 years.*

\# *Weighted average of member contribution rates described on pages B-5 and B-6.*

@ *In addition to this percent-of-payroll contribution, the City contributes for (i) certain Supplemental Benefits for a small, closed group of retirants and beneficiaries in accordance with the provisions of Ordinance Section 1.290, and (ii) 0.5% of payroll to provide a Medicare Supplement for members retiring after December 31, 1989.*

DETERMINING EMPLOYER DOLLAR CONTRIBUTIONS

For any period of time, the percent-of-payroll contribution rate needs to be converted to dollars – and then contributed to the Retirement System in a timely manner.

The recommended procedure is: (1) ***at the end of each payroll period, multiply the active member payroll for the period by the employer contribution percent***; and (2) ***promptly contribute the dollar amount so determined***.

The valuation payroll is $51,808,141.

ALLOCATION OF VALUATION ASSETS
YEAR ENDED JUNE 30, 2009

In financing the actuarial accrued liabilities, valuation assets of $381,136,182 were distributed as follows:

	Present Valuation Assets Applied to			
Reserves for	**Non-Retired Member Actuarial Accrued Liabilities**	**Retired Life Actuarial Liabilities**	**Contingency Reserve**	**Totals**
Member Contributions (MDF)	$ 27,060,059			$ 27,060,059
Employer Contributions (EAF)	215,968,513			215,968,513
Retired Benefit Payments (BRF)	(378,079)	$223,054,392		222,676,313
Undistributed Income (IEF)	(84,568,703)			(84,568,703)
Totals	$158,081,790	$223,054,392	$0	$381,136,182

Assets were applied against actuarial accrued liabilities in determining unfunded actuarial accrued liabilities as follows:

	Retired Lives	**Non-Retired Members**	**Total**
Computed Actuarial Accrued Liabilities and Reserves	$223,054,392	$168,284,908	$391,339,300
Applied Assets	223,054,392	158,081,790	381,136,182
Unfunded Actuarial Accrued Liabilities (Full Funding Credit)	$ 0	$ 10,203,118	$ 10,203,118

DERIVATION OF EXPERIENCE GAIN (LOSS)
YEAR ENDED JUNE 30, 2009

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

	2008-2009	2007-2008
(1) UAAL* at start of year	$(21,782,411)	$(22,820,799)
(2) Employer normal cost from last valuation	5,838,971	6,223,268
(3) Actual employer contributions	3,833,164	6,008,558
(4) Interest accrual:		
[(1) + ½ [(2) – (3)]] x .075	(1,558,463)	(1,703,508)
(5) Expected UAAL before changes:		
(1) + (2) – (3) + (4)	(21,335,067)	(24,309,597)
(6) Increase from benefit changes	0	0
(7) Change from revised actuarial assumptions		
or valuation methods	0	(21,499,975)
(8) Change in SPDR (13th Check Reserve)	none	none
(9) Expected UAAL after changes:		
(5) + (6) + (7) + (8)	(21,335,067)	(45,809,572)
(10) Actual UAAL at end of year	10,203,118	(21,782,411)
(11) Gain (loss): (9) - (10)	$(31,538,185)	$(24,027,161)
(12) Gain (loss) as percent of actuarial accrued liabilities at start of year ($376,984,359)	(8.4%)	(6.5%)

* *Unfunded Actuarial Accrued Liabilities.*

Valuation Date June 30	Experience Gain (Loss) As % of Beginning Accrued Liability
2005	2.1 %
2006	9.1 %
2007	6.0 %
2008	(6.5)%
2009	(8.4)%

SUMMARY STATEMENT OF SYSTEM RESOURCES AND OBLIGATIONS
YEAR ENDED JUNE 30, 2009

Present Resources and Expected Future Resources

A.	Present valuation assets:	
	1. Net assets from system financial statements	$265,392,265
	2. Market value adjustment	$115,743,917
	3. Valuation assets	$381,136,182
B.	Actuarial present value of expected future employer contributions:	
	1. For normal costs	$ 58,754,895
	2. For unfunded actuarial accrued liability	$ 10,203,118
	3. Total	$ 68,958,013
C.	Actuarial present value of expected future member contributions	$ 21,009,095
D.	Total Present and Expected Future Resources	$471,103,290

Actuarial Present Value of Expected Future Benefit Payments

A.	To retirants and beneficiaries:	
	1. Annual pensions	$223,054,392
	2. Reserve	$0
	3. Total	$223,054,392
B.	To vested terminated members	$ 6,805,212
C.	To present active members:	
	1. Allocated to service rendered prior to valuation date - actuarial accrued liability	$161,479,696
	2. Allocated to service likely to be rendered after valuation date	$ 79,763,990
	3. Total	$241,243,686
D.	Total Actuarial Present Value of Expected Future Benefit Payments	$471,103,290

COMMENTS, RECOMMENDATIONS AND CONCLUSION

COMMENT A: Overall experience fell far short of expectations during the period ending June 30, 2009 (see page A-3). Nearly the entire loss resulted from a lower than assumed rate of recognized investment income (i.e., on a funding value basis). On a market value basis there was a $100 million loss, which, under the revised Asset Valuation Method, will not be fully recognized until 2013.

COMMENT B: With the change in the asset valuation method, the Actuarial Value of Assets exceeded the Market Value of Assets by $115.7 million as of June 30, 2009. Without offsetting gains in the near term, recognition of the loss will result in an expected employer contribution of about 28% of payroll in FY 2016.

COMMENT C: The ratio of assets computed under funding value relative to the market value of assets is 144% ($381 million and $265 million, respectively). While some stakeholders in the Retirement System may believe that this difference results in an unrealistic picture of the state of the Retirement System, it does fall within the range of accepted practice. However, we believe any further increase in this ratio would be problematic. Under actuarial standards of practice, it is essential that there be a convergence of funding and market values over a reasonably short period of time. We recommend that policymakers, at minimum, adopt a plan so that this ratio will gradually decline from the current level. We believe that such a policy would strengthen the System.

COMMENT D: Below is the 5-year contribution rate projection based on market returns of 7.5% and a 29 year amortization period. These projections are based on all future experience matching exactly with our assumptions of future experience. Gains and losses in other risk areas may also have a material effect on contribution rates in future years.

Grand Rapids General Retirement System
Projected Valuation Results
(Amounts in $ Millions)

Valuation Year	Funding Value	Employer Rate	Funded Ratio	MV Returns	FV Return	Market Value	MV-FV
2009	$381	13.12%	97%	(21.27%)	(0.63%)	$265	($116)
2010	$361	16.59%	89%	7.50%	(1.47%)	$270	($91)
2011	$341	20.07%	81%	7.50%	(1.93%)	$276	($64)
2012	$315	23.93%	72%	7.50%	(3.61%)	$283	($32)
2013	$301	26.50%	66%	7.50%	(0.64%)	$292	($9)

COMMENTS, RECOMMENDATIONS AND CONCLUSION

RECOMMENDATION FOR REGULAR RESERVE TRANSFER: Inter-fund transfers are made either when (i) there is a residual June 30 balance in the Income-Expense Fund (IEF) after regular interest credits have been made or (ii) the year end balance in the Benefit Reserve Fund (BRF) falls below the present value of benefits currently being paid. On June 30, 2009, there was a balance in the IEF (see page B-7). Therefore, adjusting transfers on the following page are recommended.

Transfer From	To	Amount Market	Amount Cost
EAF	BRF	$ 378,079	$ 378,079
EAF	IEF	84,568,703	43,280,118

Ending balances in each reserve fund as of June 30, 2009, were assumed to be as follows:

	MDF	EAF	BRF	IEF
Market	$27,060,059	$15,277,814	$223,054,392	$0
Cost	$27,060,059	$56,566,399	$223,054,392	$0

CONCLUSION: The City's contribution rate for the fiscal year beginning July 1, 2010 has been computed to be 13.12% of active member payroll based on the funding policy specified in the retirement ordinance.

BENEFIT RESERVE FUND
COMPARATIVE STATEMENT

Valuation Date	Pensions Being Paid # No.	Pensions Being Paid # $/Month	BRF Assets	Actuarial Accrued Liabilities		Assets/ Liabilities
9/30/85	629	$ 207,275	$ 24,239,762	$ 23,341,044		103.9%
9/30/86	647	237,439	27,797,199	26,983,272		103.0%
6/30/87	633	247,460	29,505,741	28,091,664		105.0%
6/30/88	651	279,244	32,674,436	32,424,564		100.8%
6/30/89	651	312,958	36,776,104	36,479,100		100.8%
6/30/90	663	343,281	40,073,257	40,093,944		99.9%
6/30/91	678	369,579	41,562,455	42,761,376		97.2%
6/30/92	665	389,614	43,117,326	46,723,992		92.3%
6/30/93	672	427,573	50,569,023	50,970,952		99.2%
6/30/94	691	493,395	58,667,587	59,146,993		99.2%
6/30/95	708	550,795	66,024,913	66,238,128		99.7%
6/30/96 @	694	566,986	66,130,823	65,059,236		101.6%
6/30/97	723	655,088	78,180,552	75,499,536		103.6%
6/30/98	744	733,413	86,953,541	85,337,556		101.9%
6/30/99	738	767,331	89,129,126	89,023,224		100.1%
6/30/00	760	842,336	95,495,173	97,823,364		97.6%
6/30/01 @	776	912,560	103,845,535	108,962,016		95.3%
6/30/02	844	1,177,287	111,628,579	115,595,412	*	96.6%
6/30/03	823	1,196,319	143,899,020	142,984,548	**	100.6%
6/30/04	810	1,201,433	145,869,450	145,138,248		100.5%
6/30/05	818	1,254,783	150,763,627	150,637,824		100.1%
6/30/06 @	850	1,381,419	164,111,269	169,274,820		96.9%
6/30/07	901	1,509,551	187,416,077	185,255,424		101.2%
6/30/08	943	1,715,019	213,985,562	212,537,508		100.7%
6/30/09	961	1,807,846	222,676,313	223,054,392		99.8%

@ *Revised actuarial assumptions.*

* *Not including July 1, 2002 retirements. Total liability including July window retirements was $145,321,248.*

** *Not including July 1, 2003 retirements. Total liability including July window retirements was $146,183,328.*

Includes disability benefits beginning with the 6/30/2007 valuation.

CASUALTY RESERVE FUND
COMPARATIVE STATEMENT

Valuation Date	Disabilities Being Paid # No.	Disabilities Being Paid # $/Month	CRF Assets	Liabilities for Present Disabilities	Contingency Reserve*
9/30/84	26	$12,263	$1,638,468	$1,652,532	$(14,064)
9/30/85	28	13,207	1,818,208	1,769,352	48,856
9/30/86	32	16,241	1,966,972	2,171,856	(204,884)
6/30/87	30	15,522	2,095,985	2,042,028	53,957
6/30/88	31	16,529	2,262,923	2,192,592	70,331
6/30/89	32	17,006	2,444,130	2,285,292	158,838
6/30/90	33	18,946	2,648,324	2,458,992	189,332
6/30/91	37	21,878	2,846,753	2,806,092	40,661
6/30/92	37	21,861	2,955,426	2,847,432	107,988
6/30/93	35	20,389	3,125,197	2,618,868	506,329
6/30/94	34	20,012	3,394,462	2,517,767	876,695
6/30/95	33	18,952	3,716,251	2,327,256	1,388,995
6/30/96 @	34	21,084	4,088,821	2,408,004	1,680,817
6/30/97	37	25,370	4,524,646	2,896,728	1,627,918
6/30/98	38	29,023	4,952,402	3,369,024	1,583,378
6/30/99	36	27,590	5,259,793	3,029,544	2,230,249
6/30/00	35	27,240	3,790,662	2,915,748	874,914
6/30/01 @	35	29,042	3,783,851	3,204,348	579,503
6/30/02	35	26,471	3,766,314	2,853,444	912,870
6/30/03	36	31,132	3,698,081	3,675,756	22,325
6/30/04	37	36,334	3,644,731	4,447,596	(802,865)
6/30/05	39	39,059	4,356,659	4,767,192	(410,533)
6/30/06 @	38	40,232	4,684,207	5,065,128	(380,921)
6/30/07	0	0	0	0	0
6/30/08	Disability benefits are included in the Benefit Reserve Fund Comparative				
6/30/09	Statement beginning with the 6/30/2007 valuation.				

* *A positive amount indicates less costly disability experience than assumed, while a (negative) amount indicates more costly disability experience than assumed.*

@ *Revised actuarial assumptions.*

ACTUARIAL ACCRUED LIABILITIES & ASSETS
HISTORICAL COMPARATIVE SCHEDULE
($ AMOUNTS IN MILLIONS)

Valuation Date	Valuation Assets	Actuarial Accrued Liability Dollar Amount	Actuarial Accrued Liability Funded Ratio *1*	Unfunded Actuarial Accrued Liability Dollar Amount	Unfunded Actuarial Accrued Liability Ratio to Payroll *2*	Unfunded Actuarial Accrued Liability Financing Period
9/30/81 @	$ 36.9	$ 56.3	65.5 %	$ 19.4	81.5 %	23
9/30/82 *	42.6	63.9	66.7 %	21.3	91.1 %	22
9/30/83	48.8	65.8	74.2 %	17.0	77.0 %	21
9/30/84	55.6	71.0	78.3 %	15.4	66.6 %	20
9/30/85	62.6	78.4	79.9 %	15.8	63.7 %	19
9/30/86	71.5	85.6	83.5 %	14.1	53.3 %	18
6/30/87	82.9	95.9	86.5 %	13.0	47.2 %	30
6/30/88	91.3	104.8	87.1 %	13.5	45.9 %	29
6/30/89	100.7	111.8	90.1 %	11.1	37.6 %	28
6/30/90 *	111.1	124.5	89.2 %	13.4	43.8 %	27
6/30/91	119.9	134.4	89.2 %	14.4	42.5 %	26
6/30/92 @	126.1	153.0	82.4 %	27.0	71.7 %	25
6/30/93	139.6	165.8	84.2 %	26.2	67.3 %	24
6/30/94	151.8	180.2	84.2 %	28.4	71.4 %	23
6/30/95 *	161.1	192.5	83.7 %	31.4	76.6 %	22
6/30/96 *@	198.4	205.5	96.6 %	7.1	16.4 %	21
6/30/97	220.9	217.8	101.4 %	(3.1)	-	20
6/30/98	244.0	231.9	105.2 %	(12.0)	-	19
6/30/99	269.1	245.4	109.6 %	(23.7)	-	18
6/30/00	286.1	257.1	111.3 %	(29.0)	-	17
6/30/01 *@	290.5	269.5	107.8 %	(21.0)	-	16
6/30/02	282.8	285.3	99.1 %	2.5	5.1 %	15
6/30/03 *	270.6	297.6	90.9 %	26.9	52.7 %	14
6/30/04	282.2	307.8	91.7 %	25.6	49.4 %	13
6/30/05 *	305.5	334.6	91.3 %	29.0	54.3 %	15
6/30/06 @	352.5	352.9	99.9 %	0.3	0.6 %	14
6/30/07 *	391.7	368.9	106.2 %	(22.8)	-	13
6/30/08 #	398.8	377.0	105.8 %	(21.8)	-	30
6/30/09	381.1	391.3	97.4 %	10.2	19.7 %	29

* *Retirement System amended.*
@ *Revised actuarial assumptions.*
\# *Revised asset valuation method.*

1 ***Valuation Assets as a Percent of 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 percent can be expected to move gradually toward 100%.

2 ***UAAL as a Percent of 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 percent, the greater the financial strength and vice-versa.

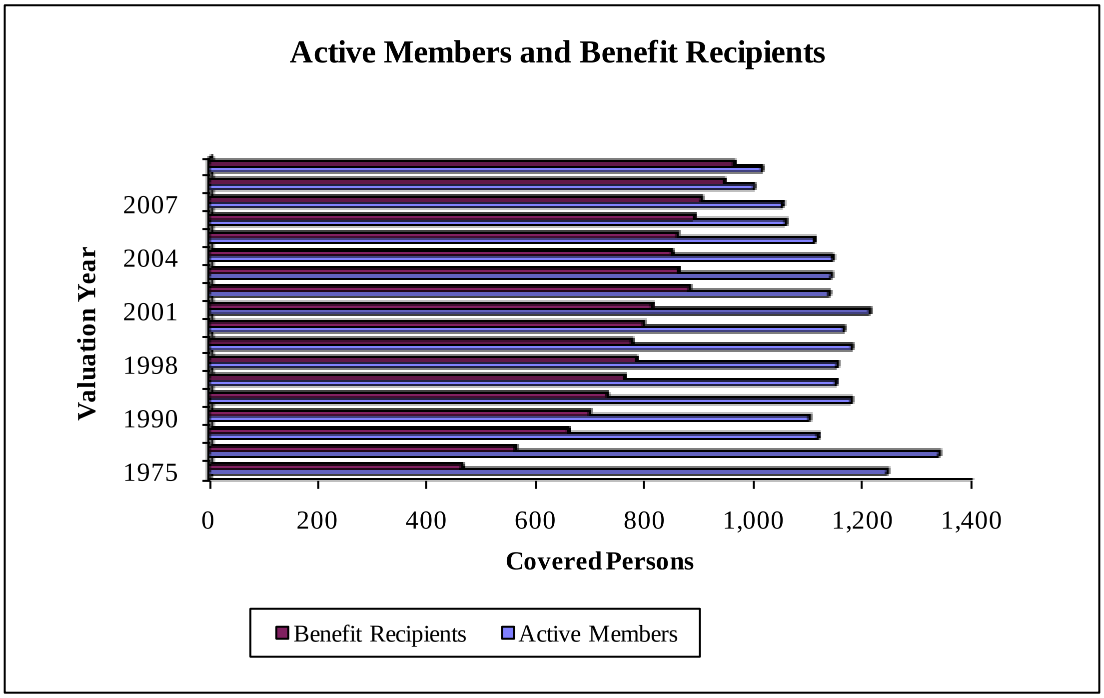
CITY AND MEMBER CONTRIBUTIONS
HISTORICAL COMPARISON

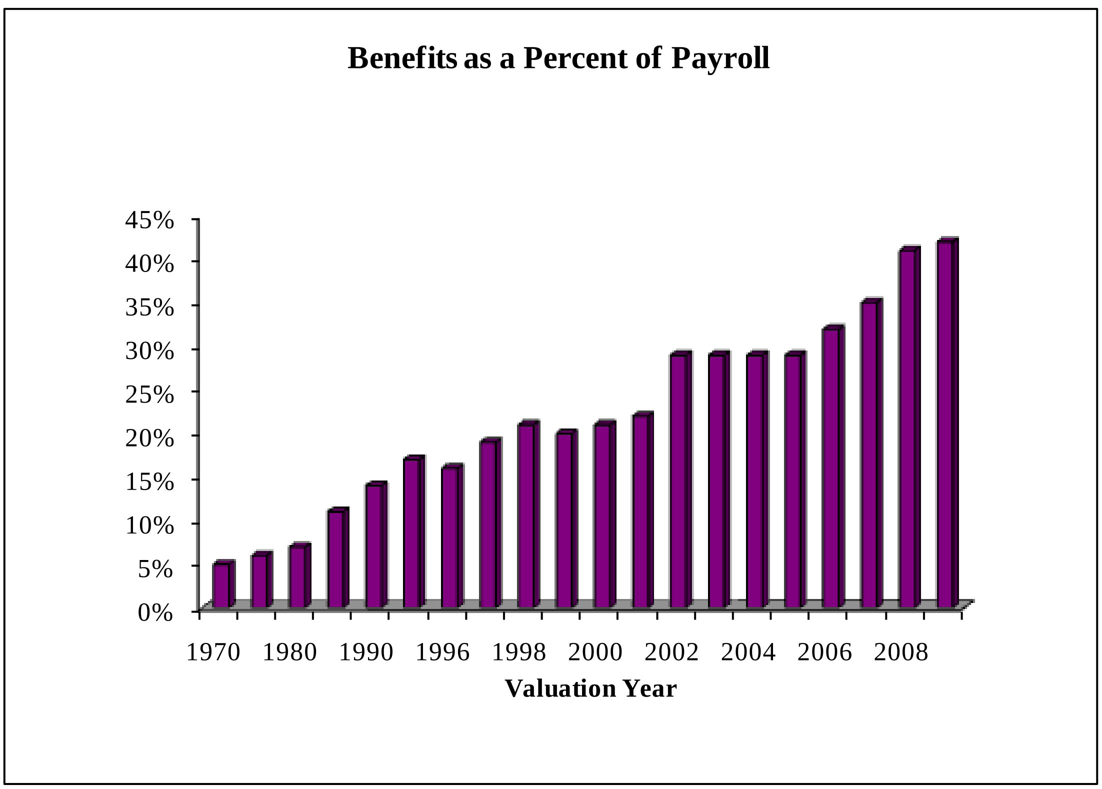
Valuation Date	Fiscal Year	Computed Contributions as %'s of Active Member Payroll		
		Member	Employer	Total
9/30/77*	78/79	4.00%	15.30%	19.30%
9/30/78	79/80	4.00%	14.94%	18.94%
9/30/79	80/81	4.00%	14.13%	18.13%
9/30/80*	81/82	4.00%	14.01%	18.01%
9/30/81@	82/83	4.00%	12.87%	16.87%
9/30/82*	83/84	4.00%	14.82%	18.82%
9/30/83	84/85	4.00%	14.07%	18.07%
9/30/84	85/86	4.00%	13.62%	17.62%
9/30/85	86/87	4.00%	13.61%	17.61%
9/30/86	87/88	4.00%	13.13%	17.13%
6/30/87	88/89	4.00%	13.05%	17.05%
6/30/88	89/90	4.05%	12.63%	16.68%
6/30/89	90/91	4.02%	12.30%	16.32%
6/30/90*	91/92	3.28%	13.85%	17.13%
6/30/91	92/93	3.28%	13.91%	17.19%
6/30/92@	93/94	3.28%	16.42%	19.70%
6/30/93	94/95	3.30%	16.34%	19.64%
6/30/94	95/96	3.21%	16.85%	20.06%
6/30/95*	96/97	3.24%	16.91%	20.15%
6/30/96@	97/98	3.25%	11.75%	15.00%
6/30/97	98/99	3.25%	10.33%	13.58%
6/30/98@	99/00	3.25%	5.20%	8.45%
6/30/99	00/01	3.25%	0.43%	3.68%
6/30/00	01/02	3.25%	0.00%	3.25%
6/30/01*@	02/03	3.18%	2.55%	5.73%
6/30/02	03/04	3.17%	12.05%	15.22%
6/30/03*	04/05	3.17%	16.30%	19.47%
6/30/04	05/06	3.24%	16.24%	19.48%
6/30/05*	06/07	3.95%	16.41%	20.36%
6/30/06@	07/08	3.94%	11.86%	15.80%
6/30/07*	08/09	3.98%	7.70%	11.68%
6/30/08*	09/10	4.18%	9.29%	13.47%
6/30/09	10/11	3.93%	13.12%	17.05%

* *Retirement System amended.*
@ *Revised actuarial assumptions.*

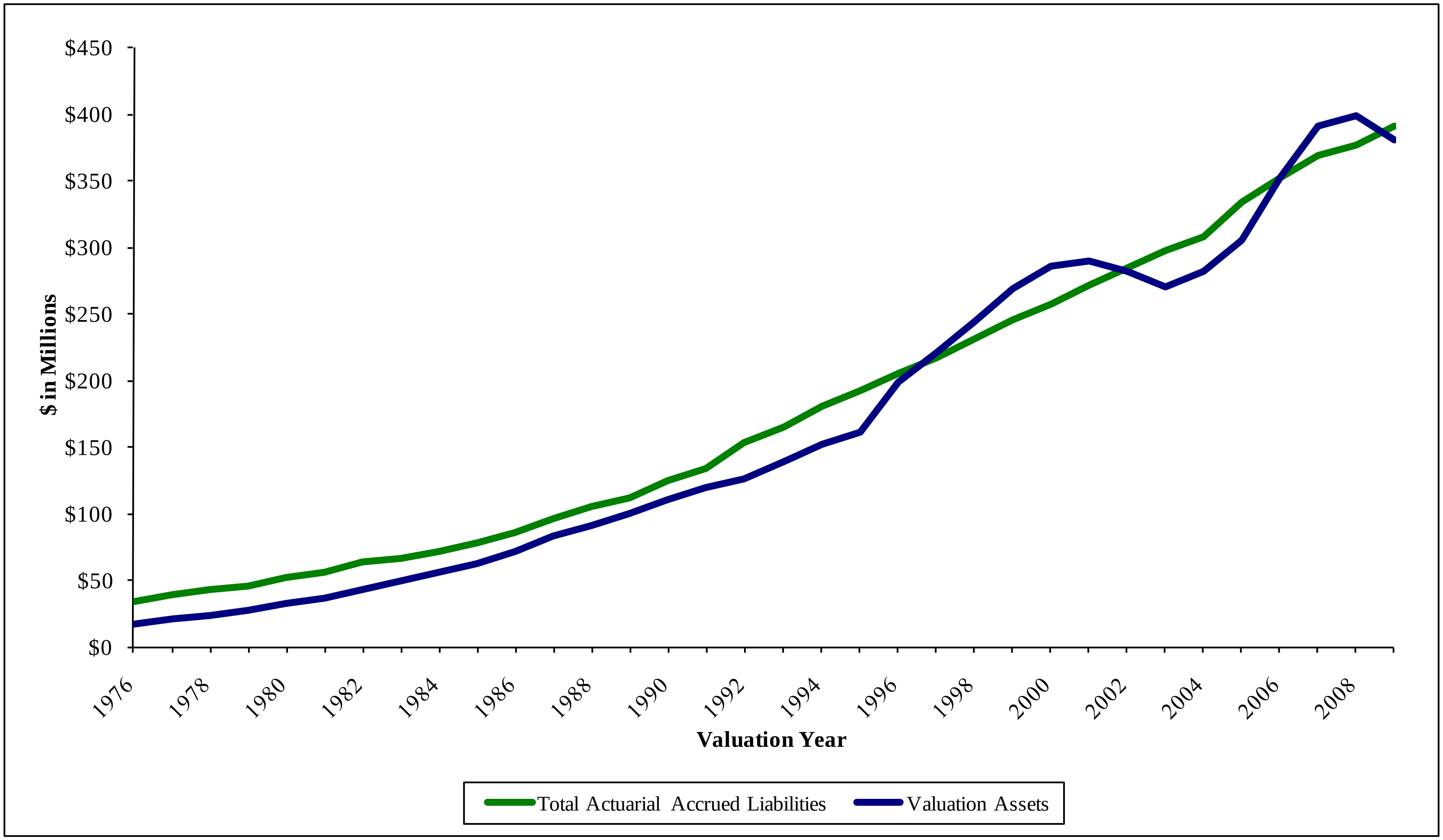
ACTIVE MEMBERS AND RETIRED LIVES
HISTORICAL COMPARATIVE SCHEDULE

	Active Members				Retired Lives			
		Valuation Payroll				Active	Annual Benefits	
Valuation Date	No.	$ Millions	Average	% Incr.	No.	per Retired	$ Millions	As a % of Pay
9/30/80	1,337	$ 21.5	$ 16,065	7.3 %	560	2.4	$ 1.4	6.6%
9/30/81	1,239	23.8	19,242	19.8 %	593	2.1	1.8	7.4%
9/30/82	1,191	23.3	19,585	1.8 %	615	1.9	2.0	8.5%
9/30/83	1,122	22.0	19,627	0.2 %	626	1.8	2.2	9.8%
9/30/84	1,127	23.2	20,553	4.7 %	645	1.7	2.4	10.3%
9/30/85	1,115	24.7	22,175	7.9 %	657	1.7	2.6	10.7%
9/30/86	1,137	26.5	23,315	5.1 %	679	1.7	3.0	11.5%
6/30/87	1,164	27.4	23,550	1.0 %	663	1.8	3.2	11.5%
6/30/88	1,161	29.4	25,337	7.7 %	682	1.7	3.5	11.9%
6/30/89	1,115	29.5	26,499	4.6 %	683	1.6	4.0	13.4%
6/30/90	1,099	30.6	27,804	4.9 %	696	1.6	4.3	14.1%
6/30/91	1,168	33.9	29,031	4.4 %	715	1.6	4.7	13.9%
6/30/92	1,208	37.7	31,208	7.5 %	702	1.7	4.9	13.1%
6/30/93	1,171	38.9	33,214	6.4 %	707	1.7	5.4	13.8%
6/30/94	1,137	39.8	34,977	5.3 %	725	1.6	6.2	15.5%
6/30/95	1,153	41.0	35,573	1.7 %	741	1.6	6.8	16.6%
6/30/96	1,176	43.3	36,790	3.4 %	728	1.6	7.1	16.4%
6/30/97	1,148	43.2	37,597	2.2 %	760	1.5	8.2	18.9%
6/30/98	1,150	43.9	38,145	1.5 %	782	1.5	9.1	20.7%
6/30/99	1,177	47.6	40,479	6.1 %	774	1.5	9.5	20.0%
6/30/00	1,162	48.9	42,051	3.9 %	795	1.5	10.4	21.3%
6/30/01	1,210	52.3	43,259	2.9 %	811	1.5	11.3	21.6%
6/30/02	1,135	49.2	43,357	0.2 %	879	1.3	14.5	29.4%
6/30/03	1,139	51.0	44,781	3.3 %	859	1.3	14.7	28.9%
6/30/04	1,142	51.8	45,317	1.2 %	847	1.3	14.9	28.7%
6/30/05	1,108	53.5	48,241	6.5 %	857	1.3	15.5	29.0%
6/30/06	1,056	52.8	50,036	3.7 %	888	1.2	17.1	32.3%
6/30/07	1,050	52.4	49,930	(0.2)%	901	1.2	18.1	34.6%
6/30/08	997	50.0	50,121	0.4 %	943	1.1	20.6	41.2%
6/30/09	1,012	51.8	51,194	2.1 %	961	1.1	21.7	41.9%
20-Year Average				3.3 %				


Active Members and Benefit Recipients
Valuation Year
2007
2004
2001
1998
1990
1975
0
200
400
600
800
1,000
1,200
1,400
Covered Persons
Benefit Recipients
Active Members


Benefits as a Percent of Payroll
45%
40%
35%
30%
25%
20%
15%
10%
5%
0%
1970
1980
1990
1996
1998
2000
2002
2004
2006
2008
Valuation Year

ACTUARIAL ACCRUED LIABILITIES & ASSETS



SECTION B

VALUATION DATA

SUMMARY OF BENEFIT PROVISIONS EVALUATED (JUNE 30, 2009)

Voluntary Retirement. A member may retire after 30 years of service regardless of age, or after attaining age 62 and completing 8 years of service. Effective January 1, 2001, members covered by the Emergency Communications Operators Bargaining Unit, after attaining age 55 and completing 8 years of service.

Final Average Salary (FAS). The average of member's highest annual salary rates, all before completion of the calendar year in which the member attains 40 years of service or reaches the benefit cap, during the three calendar years of credited service when such salary rates were the highest.

Members of the Crime Scene Technicians group have an additional sum added to their FAS, effective July 1, 2000. The sum is calculated based on an average of the group's additional compensation items during the previous three calendar years and the average of the group's valuation payroll as of June 30 for the five-year period immediately preceding the valuation.

Emergency Communication Operators I and II also have an additional sum added to their FAS, effective July 1, 2005. The sum is calculated based on an average of the group's additional compensation items during the previous five calendar years and the average of the group's valuation payroll as of June 30 for the five-year period immediately preceding the valuation.

Full Age and Service Allowance. The members' benefit multipliers, used to compute full age and service allowance, are shown in the tables on the following page.

In lieu of this single life-level amount form of payment, a retiring member may elect from several optional forms of payment, each of which is the actuarial equivalent of this single life-level payment form.

SUMMARY OF BENEFIT PROVISIONS EVALUATED
(JUNE 30, 2009)

Covered Employee Group	Date of Termination	Benefit Multiplier	Allowance Cap
Non – Represented Supervisors, Administrative, Clerical and Executive Classifications, Appointed, Elected officials, and Judges only	**January 1, 2005**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005** **35 years for employees hired on or after January 1, 2005**
G.R. Museum full-time Supervisory and Administrative staff	**January 1, 2005**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005** **35 years for employees hired on or after January 1, 2005**
G.R. Public Museum Non-Supervisory staff (not covered by Management Compensation & Fringe Benefits Handbook)	**January 1, 2005**	**2.7%**	**36 years and 1 month for employees hired prior to January 1, 2005** **35 years for employees hired on or after January 1, 2005**
Emergency Communications Operators I and II represented by POLC	**January 1, 2002**	**2.7%**	**37 years for employees hired on or before May 6, 2002** **33 years and 4 months applicable for all employees entering this unit on or after May 7, 2002**
Emergency Communication Supervisors	**January 1, 2006**	**2.7%**	**37 years for employees hired on or before June 30, 2004** **33 years and 4 months applicable for all employees entering this unit on or after July 1, 2004**
Crime Scene Techs/Latent Print Examiners represented by the GRPOLC	**July 1, 2002**	**2.7%**	**37 years for employees hired prior to January 1, 2002** **33 years and 4 months applicable for all employees entering this unit on or after January 1, 2002**

SUMMARY OF BENEFIT PROVISIONS EVALUATED (JUNE 30, 2009)

Covered Employee Group	Date of Termination	Benefit Multiplier	Allowance Cap
GREIU	January 1, 2005	2.7%	36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005
Library Rank and File & Supervisory Employees	January 1, 2006	2.7%	36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005
Library Management and Confidential Employees	January 1, 2005	2.7%	40 years
GREIU-61st District Court	January 1, 2005	2.7%	36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005
61st District Court Management Non-represented and APAGR 61st District Court Management	January 1, 2005	2.7%	36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005
Association of Public Administrators (APA)	January 1, 2005	2.7%	36 years and 1 month for employees hired prior to January 1, 2005 35 years for employees hired on or after January 1, 2005

Early Allowance. If a member leaves covered employment after either (i) completing 20 years of credited service, or (ii) both attaining age 55 and completing 10 years or more of credited service, he can receive an immediate early allowance, computed in the same manner as an age and service allowance based upon salary and service to time of termination but actuarially reduced to reflect the fact that the age when payments begin is younger than age 62.

Deferred Retirement. A member with 8 or more years of credited service who terminates employment before voluntary retirement age and does not withdraw accumulated contributions will be eligible for a deferred allowance beginning at age 62, based upon service and final average salary at time of termination.

Death Benefit. If the member's termination of employment is because of death, a benefit equal to the termination benefit is payable to a beneficiary or estate, as follows:

A refund of accumulated contributions. In addition, a "termination bonus" equivalent to a certain percent of member contributions without interest may be payable. Such percent is 25%, plus 7.5% for each whole year of credited service in excess of 10 years, to a maximum of 100% for 20 or more years service, times an age-based Termination Bonus Percent.

If the member was eligible for normal or early retirement at the time of death, in lieu of the lump sum death benefit an eligible beneficiary will begin receiving a B-100 joint and survivor pension computed in the same manner as a service retirement pension as if the member had retired the last day of his life.

Or, if the member was not represented by any collective bargaining unit or was represented by the Association of Public Administrators, the Grand Rapids Employees Independent Union or the 61st District Court Employee's Association, and the primary beneficiary was the surviving spouse, the benefit will be computed in the manner described in the preceding paragraph, except that the member will have been assumed to have reached the age for minimum service retirement at the date of his death.

The total amount of death benefit payable cannot exceed 90% of the member's annual rate of compensation at the time of death reduced by any worker's compensation or social security payments.

Disability Benefit. If a member has 10 or more years of credited service before attaining the minimum service retirement age and becomes totally and permanently disabled, a benefit computed in the same manner as a full age and service benefit is payable. If disablement is a result of performance of duty, the 10-year minimum credited service requirement is waived and the benefit is computed as above with a minimum benefit of 50% (62% for those represented by police bargaining units) of final average salary.

The total amount of benefit payable due to disablement cannot exceed 90% of the member's annual rate of compensation at the time of disablement reduced by any worker's compensation payments, Social Security benefits, (disability benefits), and remuneration from any gainful employment.

Member Contributions. The contribution rates used are defined in the following table:

Member Classification	Period	Contribution Rate *
Non – Represented Supervisors, Administrative, Clerical and Executive Classifications, Appointed, Elected Officials, and Judges only	**January 1, 1997 to December 31, 2004** **On and after January 1, 2005**	**3.28%** **4.93%**
G.R. Museum full-time Supervisory and Administrative staff	**January 1, 1997 to December 31, 2004** **On and after January 1, 2005**	**3.28%** **4.93%**
G.R. Public Museum Non-Supervisory staff (not covered by Management Compensation & Fringe Benefits Handbook)	**January 1, 1997 to December 31, 2004** **On and after January 1, 2005**	**3.28%** **4.93%**
Emergency Communications Operators I and II represented by POLC	**January 1, 1997 to June 30, 2005** **On and after July 1, 2005**	**2.28%** **5.36%**
Emergency Communication Supervisors	**On or before December 31, 2005** **On or after January 1, 2006**	**3.28%** **6.27%**
Crime Scene Techs/Latent Print Examiners represented by the GRPOLC #	**After July 1, 1990**	**2.00%**

* *0.00% in the year following the calendar year in which the employee attains 40 years of service, 39 years for APA members*.

\# *The member contribution rate drops by 1.00% of pay if the City makes no contribution.*

SUMMARY OF BENEFIT PROVISIONS EVALUATED (JUNE 30, 2009)

Member Classification	Period	Contribution Rate *
GREIU	**On or after January 1, 1997**	**3.28%**
	On or after January 1, 2005	**3.89%**
Library Rank and File & Supervisory Employees	**January 1, 1997 to December 31, 2005**	**3.28%**
	On or after January 1, 2006	**3.63%**
Library Management and Confidential Employees	**January 1, 1997 to December 31, 2004**	**3.28%**
	On or after January 1, 2005	**4.93%**
GREIU-61st District Court	**January 1, 1997 to May 31, 2005**	**3.28%**
	On or after June 1, 2005	**4.00%**
61st District Court Management Non-represented and APAGR 61st District Court Management	**January 1, 1997 to December 31, 2004**	**3.28%**
	On or after January 1, 2005	**4.00%**
Association of Public Administrators (APA)	**January 1, 1997 to December 31, 2004**	**3.28%**
	On or after January 1, 2005	**3.99%**

If a member terminates employment before any allowance is payable, accumulated contributions (contributions plus regular interest) are refunded.

Employer Contributions. The City contributes the remainder amounts necessary to maintain the Retirement System in sound financial condition in accordance with its funding objectives.

13th Check. One-half of net investment income over 8% which is attributable to retired life assets is distributed annually (in January) to retired members and beneficiaries who have been on the retirement rolls for 5 years in the form of a 13th check. Net investment income is based on a book value rate of return averaged over the preceding 5 plan years. The distribution is in proportion to points. An individual's points are determined by multiplying (i) the number of full years of retirement, to a maximum of 15, by (ii) the number of years, and fractions thereof, of service at retirement.

Compensation. Compensation recognized for retirement system purposes includes base pay and longevity pay.

SUMMARY OF CURRENT ASSET INFORMATION FROM AUDIT REPORT FURNISHED FOR VALUATION (MARKET VALUE)

Balance Sheet

Reserves for	
Member contributions (MDF)	$ 27,060,059
Employer contributions (EAF)	100,224,596
Retired benefit payments (BRF)	222,676,313
Undistributed Income (IEF)	(84,568,703)
Total Reserves	$265,392,265

Revenues and Expenditures

	2008-09	2007-08
1. Balance - Beginning of Year	$354,324,784	$398,122,103
2. Revenues		
a. Employees' contributions	2,357,338	2,721,459
b. Employer contributions	3,833,164	6,008,558
c. Investment income	(72,306,082)	(31,223,319)
d. Other	0	0
e. Total revenues	(66,115,580)	(22,493,302)
3. Expenditures		
a. Benefit payments	21,159,567	19,302,192
b. Supplemental pension distribution	0	0
c. Refund of member contributions	211,298	159,177
d. Expenses	1,446,074	1,842,648
e. Total expenditures	22,816,939	21,304,017
4. Balance - End of Year (1) + (2e) - (3e)	$265,392,265	$354,324,784
Net Investment Income divided by mean assets	-20.85%	-7.95%

The derivation of valuation assets can be found on page B-8.

DERIVATION OF SECTION 1.192(25) VALUATION ASSETS

Valuation Date June 30:	2008	2009	2010	2011	2012	2013
A. Funding Value Beginning of Year	$391,693,895	$398,766,770				
B. Market Value End of Year	354,324,784	265,392,265				
C. Market Value Beginning of Year	398,122,103	354,324,784				
D. Non-Investment Net Cash Flow	(10,731,352)	(15,180,363)				
E. Investment Return:						
E1. Market Total: B-C-D	(33,065,967)	(73,752,156)				
E2. Assumed Rate	7.50%	7.50%				
E3. Amount for Immediate Recognition	28,974,616	29,338,244				
E4. Amount for Phased-In Recognition	(62,040,583)	(103,090,400)				
F. Phased-In Recognition of Investment Return:						
F1. Current Year: 0.20 x E4	$(12,408,117)	$(20,618,080)				
F2. First Prior Year	2,715,025	(12,408,117)	$(20,618,080)			
F3. Second Prior Year	(1,477,297)	2,715,025	(12,408,117)	$(20,618,080)		
F4. Third Prior Year	0	(1,477,297)	2,715,025	(12,408,117)	$(20,618,080)	
F5. Fourth Prior Year	0	0	(1,477,298)	2,715,025	(12,408,115)	$(20,618,080)
F6. Total Recognized Investment Gain (Loss)	(11,170,389)	(31,788,469)	(31,788,470)	(30,311,172)	(33,026,195)	(20,618,080)
G. Funding Value End of Year: A+D+E3+F6	398,766,770	381,136,182				
H. Difference Between Market & Funding Values	(44,441,986)	(115,743,917)				
I. Recognized Rate of Return	**4.6%**	**-0.6%**				
J. Market Value Rate of Return	-7.9%	-21.3%				
K. Ratio of Funding Value to Market Value	112.5%	143.6%				

The Funding Value of Assets recognizes assumed investment return (line E3) fully each year. Differences between actual and assumed investment return (line E4) are phased in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, Funding Value of Assets will tend to be less than market value. During periods when investment performance is less than the assumed rate, Funding Value of Assets will tend to be greater than market value. If assumed rates are exactly realized for 4 consecutive years, funding value will become equal to market value.

RETIRANTS AND BENEFICIARIES ADDED TO AND REMOVED FROM ROLLS
HISTORICAL COMPARISON

Year Ended	Added No.	Added Annual Pensions	Removed No.	Removed Annual Pensions	End of Year No.	End of Year Annual Pensions	Average Pension	Expected Removals No.	Expected Removals Annual Pensions
9/30/83	42	$ 261,561	31	$ 77,737	626	$ 2,161,177	$ 3,452	27.3	$ 60,240
9/30/84	46	293,891	27	70,675	645	2,384,393	3,697	28.0	66,336
9/30/85	40	350,674	28	89,288	657	2,645,779	4,027	29.4	73,320
9/30/86	42	439,648	20	41,268	679	3,044,159	4,483	29.9	80,412
6/30/87	32	251,875	48	140,244	663	3,155,790	4,760	31.2	91,080
6/30/88	47	450,961	28	57,478	682	3,549,273	5,204	31.0	94,704
6/30/89	46	523,674	45	113,383	683	3,959,564	5,797	29.7	96,216
6/30/90	36	478,476	23	91,316	696	4,346,724	6,245	29.0	104,160
6/30/91	47	448,851	28	98,091	715	4,697,484	6,570	30.3	115,320
6/30/92	27	395,824	40	155,608	702	4,937,700	7,034	31.8	126,600
6/30/93	37	535,622	32	97,778	707	5,375,544	7,603	27.4	112,404
6/30/94	60	944,667	42	159,327	725	6,160,884	8,498	28.3	124,500
6/30/95	47	827,242	31	150,977	741	6,836,960	9,227	27.7	141,312
6/30/96	20	377,498	33	157,618	728	7,056,840	9,693	27.6	156,864
6/30/97	63	1,338,277	31	229,628	760	8,165,489	10,744	30.7	193,368
6/30/98	57	1,181,896	35	198,155	782	9,149,230	11,700	31.6	213,648
6/30/99	36	676,928	44	287,106	774	9,539,052	12,324	30.7	206,712
6/30/00	54	1,141,359	33	245,499	795	10,434,912	13,126	31.9	228,360
6/30/01	55	1,135,541	39	271,229	811	11,299,224	13,932	32.3	249,564
6/30/02@	110	3,475,394	42	329,522	879	14,445,096	16,434	33.0	273,432
6/30/03#	26	617,049	46	332,733	859	14,729,412	17,147	29.0	258,660
6/30/04	31	500,033	43	376,241	847	14,853,204	17,536	28.0	271,956
6/30/05	46	1,035,362	36	362,462	857	15,526,104	18,117	28.0	286,716
6/30/06	61	1,786,905	30	253,197	888	17,059,812	19,212	29.0	309,804
6/30/07	46	1,437,154	33	382,354	901	18,114,612	20,105	27.1	308,136
6/30/08	81	2,847,207	39	381,593	943	20,580,226	21,824	27.4	364,236
6/30/09	47	1,517,771	29	403,847	961	21,694,150	22,575	27.4	363,900

@ *Includes participants in early retirement window who retired July 1, 2002.*

\# *Includes participants in early retirement window who retired July 1, 2003.*

Retirants and Beneficiary Data as of June 30, 2009
Tabulated by Type of Pensions Being Paid

Type of Pensions Being Paid	No.	Annual Pension	Annual Liability
AGE AND SERVICE PENSIONS			
Regular pension - benefit terminating at death of retirant	358	$ 7,794,034	$ 71,985,624
Option B-100 - 100% joint & survivor (including pop-ups)	207	5,875,266	68,751,216
Option B- 75 - 75% joint & survivor (including pop-ups)	28	541,363	4,600,500
Option B- 50 - 50% joint & survivor (including pop-ups)	190	5,448,639	58,383,984
Survivor beneficiary of deceased retirant	107	1,041,240	8,707,788
Total age and service pensions	890	20,700,542	212,429,112
DISABILITY PENSIONS			
Regular pension - benefit terminating at death of retirant	15	272,842	2,909,496
Option B-100 - 100% joint & survivor (including pop-ups)	8	179,882	2,262,504
Option B- 75 - 75% joint & survivor (including pop-ups)	0	0	0
Option B- 50 - 50% joint & survivor (including pop-ups)	6	83,366	860,844
Survivor beneficiary of deceased retirant	10	63,594	483,624
Total disability pensions	39	599,684	6,516,468
DEATH IN SERVICE PENSIONS	32	393,924	4,108,812
Total Pensions Being Paid	**961**	**$21,694,150**	**$223,054,392**

PENSIONS BEING PAID - JUNE 30, 2009
TABULATED BY ATTAINED AGES

Attained Ages	Age & Service* No.	Age & Service* Annual Pensions	Disability @ No.	Disability @ Annual Pensions	Death-in-Service No.	Death-in-Service Annual Pensions
Under 40			1	$ 4,518	2	$ 30,789
40-44			2	25,944	2	32,659
45-49	4	$ 71,193	2	29,411	1	7,365
50-54	32	1,160,536	1	49,062	2	34,832
55-59	110	3,861,666	9	174,538	3	27,663
60-64	156	5,102,549	4	92,396	7	121,530
65-69	162	4,250,196	4	76,014	2	58,669
70-74	113	2,360,153	4	61,597	2	16,359
75-79	113	1,974,300	7	48,162	4	40,007
80-84	95	1,259,017	3	22,122	3	14,331
85-89	66	503,299	2	15,919	2	7,028
90-94	29	136,950			2	2,692
95-99	8	17,892				
Over 100	2	2,791				
Totals	**890**	**$20,700,542**	**39**	**$599,684**	**32**	**$393,924**

	Service*	Disability@	Total
Averages			
Retirement Age	58.8 years	53.9 years	58.6 years
Current Age	70.9 years	65.4 years	70.5 years

* *Includes survivor beneficiaries of age and service retirees.*
@ *Includes survivor beneficiaries of disability retirees.*

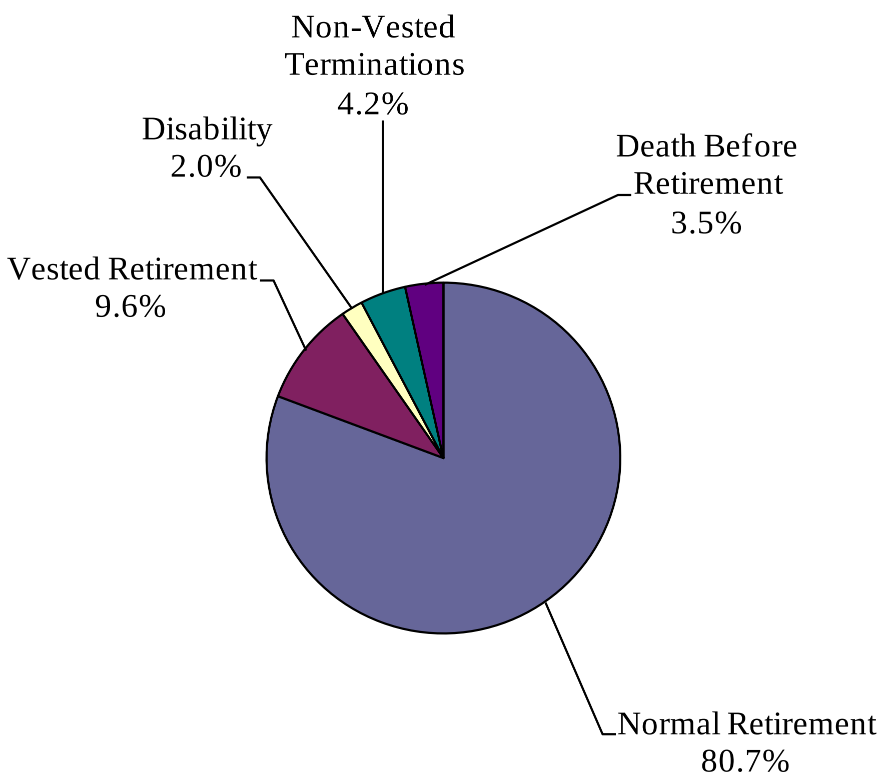
INACTIVE VESTED MEMBERS - JUNE 30, 2009
ELIGIBLE FOR DEFERRED PENSIONS
TABULATED BY ATTAINED AGES

Attained Ages	No.	Estimated Annual Pensions
30-34	1	$ 9,952
35-39	4	60,705
40-44	10	160,491
45-49	16	323,219
50-54	20	274,957
55-59	24	336,556
60-64	7	76,235
65-69	1	10,324
Total	**83**	**$1,252,439**

ACTIVE MEMBERS INCLUDED IN VALUATIONS
HISTORICAL SCHEDULE

Year Ended	No.	Annual Payroll $ Millions	Group Averages: Annual Pay $	Group Averages: Annual Pay Change	Group Averages: Age Now	Group Averages: Service Years
9/30/85	1,115	24.7	22,175	7.9 %	42.4	12.0
9/30/86	1,137	26.5	23,315	5.1 %	42.3	11.9
6/30/87	1,164	27.4	23,550	1.0 %	42.3	11.9
6/30/88	1,161	29.4	25,337	7.7 %	42.6	12.1
6/30/89	1,115	29.5	26,499	4.6 %	43.1	12.7
6/30/90	1,099	30.6	27,804	4.9 %	43.5	12.9
6/30/91	1,168	33.9	29,031	4.4 %	43.4	12.5
6/30/92	1,208	37.7	31,208	7.5 %	43.7	12.5
6/30/93	1,171	38.9	33,214	6.4 %	44.1	13.0
6/30/94	1,137	39.8	34,977	5.3 %	44.5	13.4
6/30/95	1,153	41.0	35,573	1.7 %	44.3	13.1
6/30/96	1,176	43.3	36,790	3.4 %	44.9	13.5
6/30/97	1,148	43.2	37,597	2.2 %	45.0	13.4
6/30/98	1,150	43.9	38,145	1.5 %	44.8	13.0
6/30/99	1,177	47.6	40,479	6.1 %	44.8	13.0
6/30/00	1,162	48.9	42,051	3.9 %	45.0	13.3
6/30/01	1,210	52.3	43,259	2.9 %	44.9	12.8
6/30/02	1,135	49.2	43,357	0.2 %	44.8	12.1
6/30/03	1,139	51.0	44,781	3.3 %	45.4	12.5
6/30/04	1,142	51.8	45,317	1.2 %	46.1	13.1
6/30/05	1,108	53.5	48,241	6.5 %	46.7	13.7
6/30/06	1,056	52.8	50,036	3.7 %	47.0	13.8
6/30/07	1,050	52.4	49,930	(0.2)%	47.1	13.8
6/30/08	997	50.0	50,121	0.4 %	47.1	13.5
6/30/09	1,012	51.8	51,194	2.1 %	47.4	13.3
20-Year Average				3.3 %		

ULTIMATE DISPOSITION OF CURRENT ACTIVE MEMBERS AS OF JUNE 30, 2009



ADDITIONS TO AND REMOVALS FROM ACTIVE MEMBERSHIP
ACTUAL AND EXPECTED NUMBERS

Year Ended	Added During Year A	Added During Year E	Normal Retirement A	Normal Retirement E	Disability Retirement A	Disability Retirement E	Death-In Service A	Death-In Service E	Vested & Other Withdrawals A	Vested & Other Withdrawals E	End of Year
6/30/1990	51	67	34	18.4	1	4.4	2	3.3	30	59.7	1,099
6/30/1991	127	58	25	19.2	3	4.3	2	3.3	28	58.8	1,168
6/30/1992	83	43	18	20.7	1	4.6	0	3.3	24	70.3	1,208
6/30/1993	31	68	26	27.9	0	2.3	2	2.7	40	56.3	1,171
6/30/1994	27	61	36	24.1	0	2.4	1	2.6	24	50.3	1,137
6/30/1995	88	72	37	24.6	0	2.4	3	2.5	32	45.1	1,153
6/30/1996	61	38	12	25.2	1	2.1	1	2.8	24	48.7	1,176
6/30/1997	50	78	49	25.2	3	2.2	0	2.8	26	48.8	1,148
6/30/1998	80	78	42	22.5	0	2.2	4	2.6	32	47.3	1,150
6/30/1999	81	54	26	19.8	0	2.2	4	2.5	24	50.8	1,177
6/30/2000	66	81	33	19.8	1	2.2	5	2.5	42	50.8	1,162
6/30/2001	129	81	37	20.0	2	2.3	3	2.7	39	47.5	1,210
6/30/2002	48	123	94	23.0	2	1.4	0	1.3	27	35.9	1,135
6/30/2003	56	52	17	14.4	3	1.3	1	1.1	31	32.2	1,139
6/30/2004	53	50	11	16.2	1	1.4	0	1.2	38	30.9	1,142
6/30/2005	27	61	27	23.5	2	1.4	3	1.4	29	29.3	1,108
6/30/2006	42	94	50	24.4	2	1.5	2	1.5	40	25.8	1,056
6/30/2007	54	60	38	19.5	2	1.5	2	1.6	18	20.6	1,050
6/30/2008	48	101	69	19.5	1	1.4	0	1.5	31	20.4	997
6/30/2009	65	50	29	23.5	3	1.4	1	1.5	17	20.4	1,012
5 Year Totals	**236**	**366**	**213**	**110.4**	**10**	**7.2**	**8**	**7.5**	**135**	**116.5**	
10 Year Totals	**588**	**753**	**405**	**203.8**	**19**	**15.8**	**17**	**16.3**	**312**	**313.8**	

A = Actual

E = Expected

ACTIVE MEMBERS - JUNE 30, 2009
BY ATTAINED AGE AND YEARS OF SERVICE

Attained Age	Years of Service to Valuation Date 0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Totals No.	Valuation Payroll
20-24	6							6	$ 201,937
25-29	35	10						45	1,781,129
30-34	29	30	12					71	3,223,973
35-39	30	44	29	8				111	5,674,073
40-44	26	27	46	22	7			128	6,597,311
45-49	28	37	35	30	31	9		170	8,859,720
50-54	17	33	25	27	54	43	10	209	11,588,731
55-59	25	26	30	34	29	21	11	176	8,960,663
60	1	5	7	5	4	5	1	28	1,465,819
61	1	4	2	4	4	2	3	20	1,003,233
62		4	4	2	5	2		17	926,846
63		2	5	1	2	1	1	12	548,168
64		2	2			1	2	7	379,484
65				2			1	3	175,325
66	1	1						2	72,141
67		1					1	2	78,400
68				2				2	121,258
70	1							1	22,496
71		1						1	76,653
74							1	1	50,781
Totals	**200**	**227**	**197**	**137**	**136**	**84**	**31**	**1,012**	**$51,808,141**

	Average Age	Average Service	Average Pay	Number
Non-vested:	40.2 years	3.7 years	$ 46,218	299
Vested:	50.5 years	17.3 years	53,280	713
Totals:	47.4 years	13.3 years	51,194	1,012

SECTION C

SUMMARY OF VALUATION METHODS AND ASSUMPTIONS

VALUATION METHODS

Age and Service Benefits and Casualty Benefits. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an 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 employment to the date of retirement, are sufficient to accumulate the 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 were amortized by level (principal & interest combined) percent-of-payroll contributions over a period of 29 years.

According to City Code Section 1.221, "The pension reserves so determined less the applicable balance in the employer accumulation fund shall be amortized over a period of years, as determined by the employer, to determine the employer's accrued service contribution."

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION ADOPTED BY THE BOARD OF TRUSTEES

The actuary calculates the contribution requirements and benefit values of the System by applying financial assumptions to the benefit provisions and people information furnished, using the valuation methods 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 System,
(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 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.

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).

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefit amounts will be based.

	Salary Increase Assumptions For an Individual Member		
Sample Ages	**Merit & Seniority**	**Base (Economic)**	**Increase Next Year**
20	4.0%	3.5%	7.5%
25	3.2	3.5	6.7
30	2.8	3.5	6.3
35	2.5	3.5	6.0
40	2.2	3.5	5.7
45	1.7	3.5	5.2
50	1.2	3.5	4.7
55	0.7	3.5	4.2
60	0.2	3.5	3.7
65	--	3.5	3.5

Service at Beginning of Year	Additional Service Based Merit/Seniority Portion of Annual Increases
	Present
1	4.00%
2	3.00%
3	1.75%
4	1.75%
5	1.75%

If the number of active members remains constant, then the total active member payroll will increase 3.5% annually, the base portion of the individual salary increase assumptions. Increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities. This assumption was first used for the June 30, 2006 valuation.

The rate of investment return was 7.5% a year compounded yearly (net after expenses). This assumption is used to make money payable at one point in time equal in value to a different amount of money payable at another point in time. This assumption was first used for the June 30, 1996 valuation.

The mortality tables were the 1983 Group Annuity Male and Female Mortality Tables setback 3 years for males and 2 year for females. (These tables were first used for the June 30, 2006 valuation and benefit computations.)

Sample Ages	Value at Retirement of $1 Monthly for Life: Men	Value at Retirement of $1 Monthly for Life: Women	Future Life Expectancy (Years): Men	Future Life Expectancy (Years): Women
50	$142.39	$149.52	31.90	36.81
55	135.01	143.78	27.42	32.10
60	125.92	136.25	23.13	27.48
65	114.57	126.63	19.02	23.02
70	101.23	114.62	15.23	18.76
75	87.08	100.30	11.92	14.81
80	72.40	85.10	9.08	11.40

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. For purposes of the pre-retirement death benefit, it was assumed that 100% of members were married at the time of death and the probability of death-in-service at any age, that results in a benefit payment, is one half that of the mortality assumption for retirees.

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows. These rates were first used for the June 30, 2001 valuation.

A member is eligible for retirement after completing 30 or more years of service or after both attaining age 62 and completing 8 or more years of service.

Retirement Ages	Percent Retiring	Retirement Ages	Percent Retiring
50	30%	60	30%
51	30	61	30
52	30	62	35
53	30	63	20
54	30	64	20
55	30	65	20
56	30	66	20
57	30	67	20
58	30	68	20
59	30	69	20
		70-79	20
		80	100

Rates of separation from active membership were as follows:

(Rates do not apply to members eligible to retire and do not include separation on account of death or disability.) This assumption measures the probabilities of members remaining in employment. These rates were first used for the June 30, 2006 valuation.

Sample Ages	Years of Service	% of Active Members Separating Within Next Year: Men	Women
ALL	0	9.00%	9.00%
	1	6.00	6.00
	2	5.00	5.00
	3	4.00	4.00
	4	3.00	3.00
20	5 & Over	2.99	4.37
25		2.91	4.25
30		2.79	3.97
35		2.58	3.45
40		2.30	2.83
45		1.95	2.19
50		1.36	1.41
55		0.52	0.52
60		0.05	0.05

The rates of disability were as follows:

Sample Ages	% of Active Members Becoming Disabled Within Next Year
20	0.01%
25	0.01
30	0.01
35	0.03
40	0.05
45	0.13
50	0.24
55	0.36
60	0.47

		Duty-Related	Non-Duty Related
Cause of Disability:	Male	30%	70%
	Female	30%	70%

SUMMARY OF ASSUMPTIONS USED
JUNE 30, 2009
MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	100% of males and females are assumed to be married for purposes of death-in-service benefits.
Pay Increase Timing:	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.
Decrement Timing:	Decrements of all types are assumed to occur in the middle of the year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service:	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity:	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation:	Disability and mortality decrements do not operate during the first 5 years of service. Disability and withdrawal do not operate during retirement eligibility.
Normal Form of Benefit:	The assumed normal form of benefit is the straight life form.
Other Adjustments:	Actuarial accrued liabilities were increased by $39,115 as a provision for subsidized service purchases, pending refunds, and other contingent events. Retirement present values were also adjusted for Crime Scene Technicians and ECO to reflect the "gross up factor".
Incidence of Contributions:	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.

SECTION D

BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

BASIC FINANCIAL OBJECTIVE AND OPERATION OF THE RETIREMENT SYSTEM

Benefit Promises Made Which Must Be Paid For. A retirement program 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 they are, in effect, handed an "IOU" which reads: "The General 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."

This Retirement System meets the constitutional requirement by having the following ***Financial Objective: To establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level*** from year to year and which will not have to be increased for future generations of taxpayers.

Translated into actuarial terminology, a level percent-of-payroll contribution objective means that the contribution rate must be at least:

> ***Normal Cost*** (the current value of benefits likely to be paid on account of members' service being rendered in the current year)
> . . . plus . . .
> ***Interest on the Unfunded Actuarial Accrued Liability*** (the difference between the actuarial accrued liability and current system assets).

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:

B = C + I - E

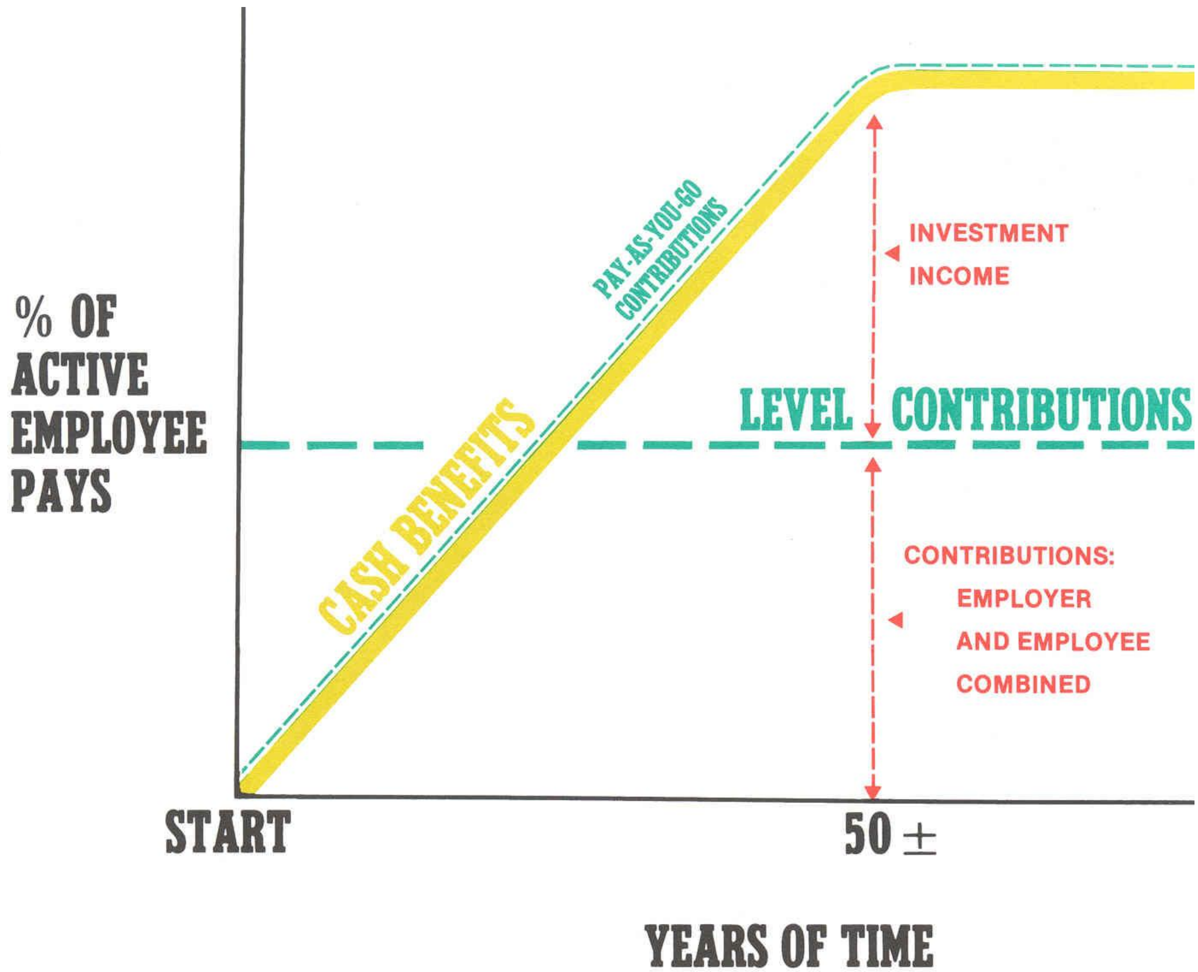
Benefit payments to any group of members and their beneficiaries cannot exceed the sum of:

Contributions received on behalf of the group from members and the City
. . . plus . . .
Investment earnings on plan assets
. . . minus . . .
Expenses incurred in operating the program.

There are retirement programs 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 which may be greatly in excess of the level percent-of-payroll rate -- is ignored. ***This method of financing is prohibited in Michigan by the state constitution***.

A by-product of a 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 the third major contributor to the retirement program.

Computed Contribution Rate Needed To Finance Benefits. From a given schedule of benefits and from the data furnished him/her, 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 program.



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

GLOSSARY

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

***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, turnover 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.

GLOSSARY (CONCLUDED)

***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 a phased-in recognition of all or a portion of market related investment return. Sometimes referred to as Actuarial Value of Assets.

SECTION E

ACTUARIAL AND SUPPLEMENTAL INFORMATION REQUIRED BY STATEMENTS NO. 25 AND NO. 27 OF THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD

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 Date	Actuarial Value of Assets (a)	Entry Age Actuarial Accrued Liability (b)	Unfunded Accrued Liability (UAL) (b)-(a)	Funded Ratio (a)/(b)	Annual Covered Payroll (c)	UAL as a Percentage of Covered Payroll [(b-a)/(c)]
6/30/96	$198,396,734	$205,493,363	$ 7,096,629	97 %	$43,264,682	16 %
6/30/97	220,859,041	217,750,801	(3,108,240)	101 %	43,161,848	-
6/30/98	243,994,040	231,946,020	(12,048,020)	105 %	43,866,714	-
6/30/99	269,088,767	245,445,754	(23,643,013)	110 %	47,643,767	-
6/30/00	286,055,331	257,094,254	(28,961,077)	111 %	48,863,073	-
6/30/01 @	290,531,573	269,527,426	(21,004,147)	108 %	52,313,712	-
6/30/02	282,764,403	285,261,608	2,497,205	99 %	49,209,733	5 %
6/30/03	270,637,794	297,252,524	26,614,730	92 %	51,005,278	44 %
6/30/03 *	270,637,794	297,568,110	26,930,316	91 %	51,005,278	53 %
6/30/04	282,160,341	307,762,043	25,601,702	92 %	51,752,109	50 %
6/30/05	305,533,088	324,034,365	18,501,277	94 %	53,451,352	35 %
6/30/05 *	305,533,088	334,554,231	29,021,143	91 %	53,451,352	54 %
6/30/06	352,522,401	350,958,706	(1,563,695)	100 %	52,838,163	-
6/30/06 @	352,522,401	352,860,547	338,146	100 %	52,838,163	1 %
6/30/07	391,693,895	368,431,434	(23,262,461)	106 %	52,426,527	-
6/30/07*	391,693,895	368,873,096	(22,820,799)	106 %	52,426,527	-
6/30/08	377,266,795	376,984,359	(282,436)	100 %	49,970,419	-
6/30/08*	398,766,770	376,984,359	(21,782,411)	106 %	49,970,419	-
6/30/09	381,136,182	391,339,300	10,203,118	97 %	51,808,141	20 %

* *Retirement System amended.*
@ *Revised actuarial assumptions.*

GASB Statements No. 25 and No. 27
Required Actuarial Information
Schedule of Employer Contributions

Year Ended June 30	Annual Required Contribution	Percent Contributed
1992	$4,582,390	100%
1993	5,347,729	100%
1994	6,139,001	100%
1995	6,503,313	100%
1996	6,940,924	100%
1997	7,321,258	100%
1998	5,958,012	100%
1999	4,601,277	100%
2000	3,180,232	100%
2001	815,441	100%
2002	485,854	100%
2003	1,600,534	100%
2004	5,916,496	100%
2005	8,632,941	100%
2006	8,596,017	100%
2007	8,733,871	100%
2008	6,008,558	100%
2009	3,833,164	100%

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

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

Valuation Date	June 30, 2009
Actuarial Cost Method	Individual Entry Age
Amortization Method	Level percent, closed
Remaining Amortization Period	29 years
Asset Valuation Method	5-year smoothed market
Actuarial Assumptions:	
Investment Rate of Return	7.5%
Projected Salary Increases	8.0% - 4.0%
Including wage inflation at	3.5%
Cost-of-living adjustments	Ad hoc "13th check" tied to plan investments

Membership of the plan consisted of the following at June 30, 2009, the date of the latest actuarial valuation:

Retirees and beneficiaries receiving benefits	961
Terminated plan members entitled to but not yet receiving benefits	83
Active plan members	1,012
Total	2,056

November 17, 2009

Ms. Peggy Korzen
Executive Director
City of Grand Rapids General Retirement System
233 East Fulton, Suite 216
Grand Rapids, Michigan 49503

Re: 42st Annual Actuarial Valuation

Dear Peggy:

Enclosed are 25 copies of this report.

As always, your questions and comments are welcome.

Sincerely,

David L. Hoffman

DLH:bd

cc: Ms. Kelly Springer
Plante & Moran, LLP (one report copy)