

**CITY OF SIOUX FALLS EMPLOYEE'S RETIREMENT SYSTEM  
SIXTIETH ANNUAL ACTUARIAL VALUATION REPORT  
DECEMBER 31, 2010**

# OUTLINE OF CONTENTS

<b>Page</b>	<b>Items</b>
	<b>Cover Letter</b>
<b>A</b>	<b>Valuation Results</b>
1	Financial Objective
2	Computed City-State Contributions
3	Active and Retired Members, Benefits as a Percent of Payroll
4	Computed City Contributions – Comparative Statement
5	Actuarial Balance Sheet
6	Derivation of Actuarial Gain (Loss)
7-8	Comments
9-10	Contribution Summary
<b>B</b>	<b>Summary of Benefit Provisions and Valuation Data</b>
1-2	Summary of Benefit Provisions
3-5	Reported Asset Information
6-8	Retired Life Data
9	Inactive Member Data
10-13	Active Member Data
<b>C</b>	<b>Actuarial Methods and Assumptions and Definitions of Technical Terms</b>
1	Actuarial Cost Methods Used for the Valuation
2-3	Actuarial Assumptions in the Valuation Process
4-8	Actuarial Assumptions Used for the Valuation
9	Miscellaneous and Technical Assumptions
10-11	Definitions of Technical Terms
<b>D</b>	<b>Disclosures Required By GASB Statements No. 25 and No. 27</b>
1	Schedule of Funding Progress and Employer Contributions
2	Required Supplementary Information
<b>Appendix</b>	<b>Retiree Health Valuation Based on Assumptions and Methods Prescribed by the Governmental Accounting Standards Board</b>
1-9	

March 21, 2011

The Board of Trustees  
City of Sioux Falls Employee's Retirement System  
Sioux Falls, South Dakota

Ladies and Gentlemen:

Submitted in this report are the results of the sixtieth annual actuarial valuation of the assets, actuarial values and contribution requirements associated with benefits (pensions and post-retirement health insurance) provided by the City of Sioux Falls Employee's Retirement System. The purpose of the valuation is to measure the System's funding progress and to determine contribution rates for the associated fiscal year.

The date of the valuation was December 31, 2010.

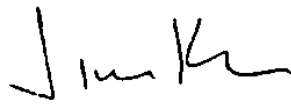
The valuation was based upon information, furnished by your Secretary, concerning Retirement System benefits, financial transactions, individual members, terminated members, retirees and beneficiaries. Data was checked for year-to-year consistency, but was not otherwise audited by us. The appendix of this report includes retiree health valuation results based on assumptions and methods that comply with Governmental Accounting Standards Board (GASB) Statements No. 43 and No. 45 and with current actuarial standards of practice. This report may be provided to parties other than City of Sioux Falls only in its entirety and only with the permission of the Retirement System.

To the best of our knowledge this report is complete, accurate and was made in accordance with standards of practice prescribed by the Actuarial Standards Board and in compliance with the provisions governing the Retirement System. The actuarial assumptions used for the valuation produce results which we believe are reasonable. All actuaries submitting this report are members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

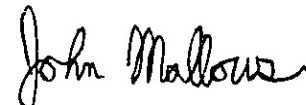
Respectfully submitted,



Louise M. Gates, ASA, MAAA



W. James Koss, ASA, EA, MAAA



John Mallows, ASA, MAAA

LMG/WJK/JM:sc

---

**SECTION A**  
VALUATION RESULTS

---

## **FINANCIAL OBJECTIVE**

The financial objective of the Retirement System is to establish and receive contributions, expressed as percents of active member payroll, which will remain approximately level from year-to-year and will accumulate reserves during members' working lifetimes which will be sufficient to pay promised benefits throughout retirement.

## **CONTRIBUTION RATES**

The Retirement System is supported by member contributions, City contributions and investment income from Retirement System assets.

Contributions which satisfy the financial objective are determined by an annual actuarial valuation and are sufficient to:

- (1) cover the actuarial present value of benefits assigned to the current year by the actuarial cost methods described in Section C (the normal cost); and
- (2) amortize over a period of future years the actuarial present value of benefits not covered by valuation assets and anticipated future normal costs (unfunded actuarial accrued liability).

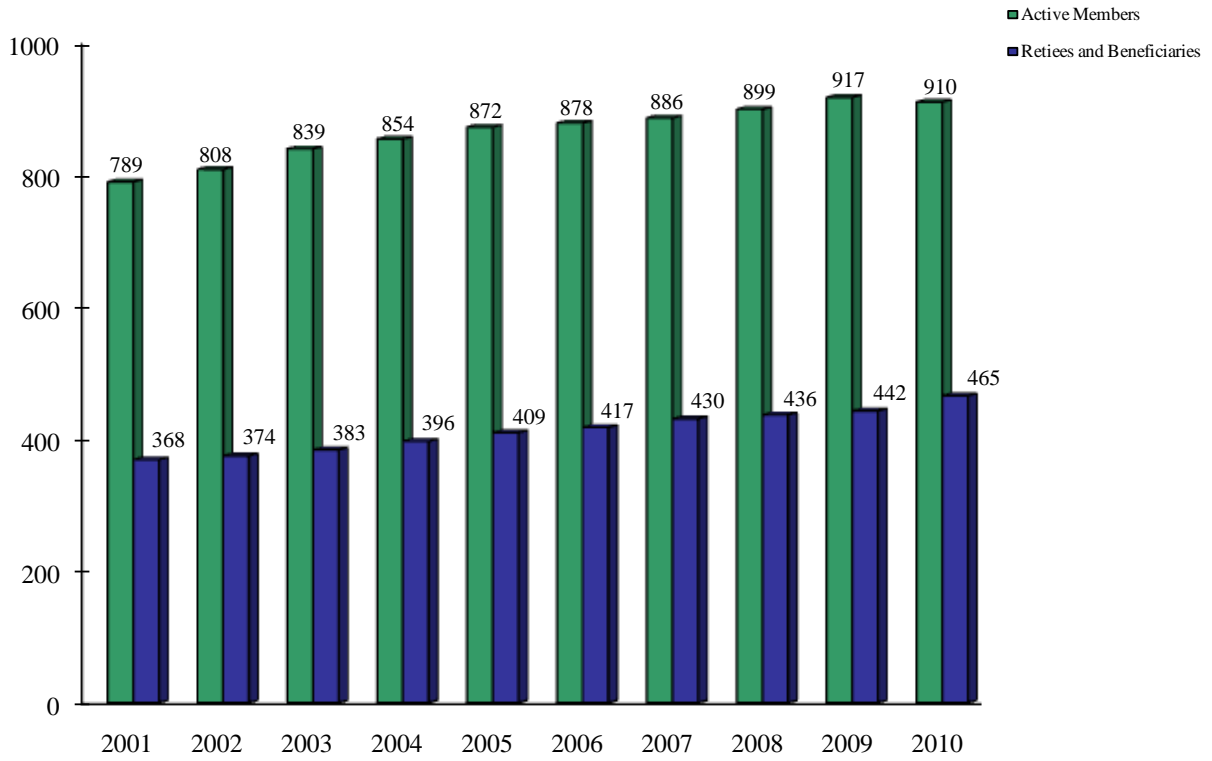
Pension contribution requirements for the year beginning January 1, 2012 are shown on page A-2.

**PENSION CONTRIBUTIONS COMPUTED TO MEET THE FINANCIAL  
OBJECTIVE OF THE RETIREMENT SYSTEM  
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2012**

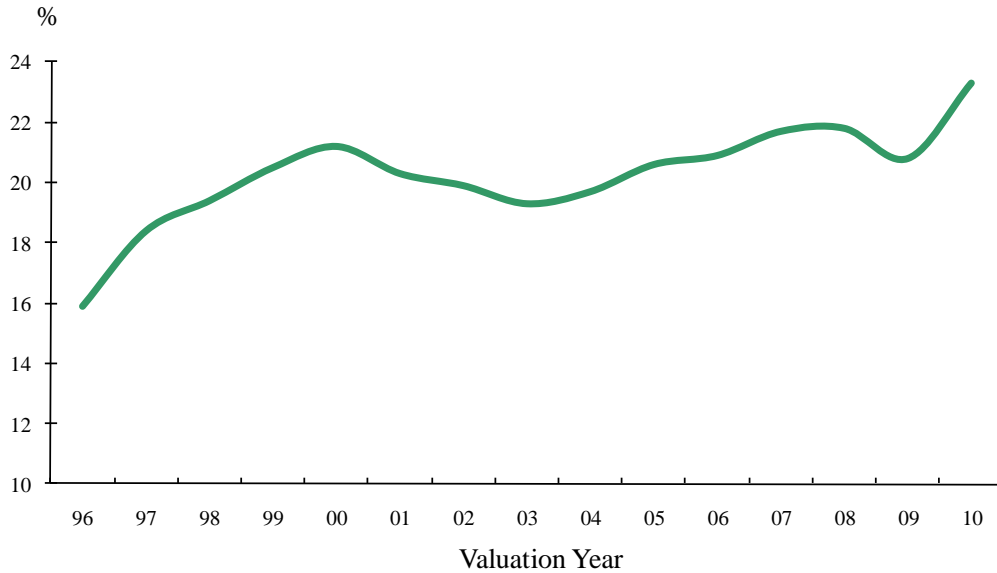
Contributions for	Contributions Expressed As Percents of Payroll	
	General/Management	Police
Normal Cost		
Age & service benefits	9.67%	16.71%
Death and disability benefits	0.99	1.26
Termination benefits		
Deferred age & service benefits	0.49	0.23
Refunds of member contributions	0.47	1.10
Total normal cost	11.62%	19.30%
Unfunded Actuarial Accrued Liabilities <sup>(1)</sup>	4.24%	9.42%
Total Contribution Requirement	15.86%	28.72%
Member portion	3.00%	8.00%
City-State portion	12.86%	20.72%

<sup>(1)</sup> *Unfunded accrued liabilities were amortized as a level percent of active member payroll over a period of 13 years.*

## Active and Retired Members



## Pension Benefits as a Percent of Payroll



## COMPUTED CITY CONTRIBUTIONS COMPARATIVE STATEMENT

Fiscal Year	Valuation	% of Payroll Contributions		Weighted Average
	Date December 31	General	Police	
1998	1996	9.29	17.27	11.20
1999	1997 #	10.33	18.09	12.14
2000	1998 @	9.68	16.85	11.42
2001	1999	8.47	13.90	9.80
2002	2000 **	7.60	15.60	9.67
2003	2001 **	7.77	14.42	9.45
2004	2002	8.68	15.68	10.48
2005	2003	9.43	13.96	10.65
2006	2004 @	9.80	14.84	11.21
2007	2005	10.38	14.96	11.67
2008	2006	9.50	13.36	10.43
2009	2007 **@	9.33	14.58	10.80
2010	2008	10.93	17.66	12.73
2011	2009	13.17	20.78	15.15
2012	2010	12.86	20.72	14.91

@ After changes in actuarial assumptions or methods.

# After changes in benefit provisions.

\*\* Reflects full funding credit.



## ACTUARIAL BALANCE SHEET - DECEMBER 31, 2010

### Present Pension Resources and Expected Future Pension Resources

	General	Police	Total
A. Valuation assets	\$168,014,807	\$ 90,960,499	\$258,975,306
B. Actuarial present value of expected future employer contributions			
1. For normal costs	27,160,951	16,029,110	43,190,061
2. For unfunded actuarial accrued liabilities	16,543,217	13,996,845	30,540,062
3. Total	43,704,168	30,025,955	73,730,123
C. Actuarial present value of expected future member contributions	9,731,169	11,411,846	21,143,015
D. Total actuarial present value of present and expected future resources	\$221,450,144	\$132,398,300	\$353,848,444

### Actuarial Present Value of Expected Future Pension Benefit Payments and Reserves

A. To retirees and beneficiaries	\$ 85,419,550	\$ 55,574,057	\$140,993,607
B. To vested terminated members	3,583,141	777,284	4,360,425
C. To present active members			
1. Allocated to service rendered prior to valuation date	95,555,333	48,606,003	144,161,336
2. Allocated to service likely to be rendered after valuation date	36,892,120	27,440,956	64,333,076
3. Total	132,447,453	76,046,959	208,494,412
D. Reserves			
1. Allocated to retirants and beneficiaries	0	0	0
2. Unallocated investment income	0	0	0
3. Total	0	0	0
E. Total actuarial present value of expected future benefit payments and reserves	\$221,450,144	\$132,398,300	\$353,848,444

**DERIVATION OF ACTUARIAL GAIN (LOSS)  
YEAR ENDED DECEMBER 31, 2010**

The actuarial gains or losses realized in the operation of the Retirement System provide an experience test. Gains and losses are expected to cancel each other over a period of years (in the absence of double-digit inflation) and sizable year-to-year fluctuations are common. Details of the derivation of the actuarial gain (loss) are shown below.

	<u>General</u>	<u>Police</u>
(1) UAAL* at start of year	\$19,590,847	\$15,232,056
(2) Normal cost	4,190,618	2,657,205
(3) Actual contributions	5,232,043	3,600,425
(4) Interest accrual	1,477,935	1,143,935
(5) Expected UAAL before changes	20,027,357	15,432,771
(6) Change from benefit increases		
(7) Change from revised actuarial assumptions		
(8) Expected UAAL after changes	20,027,357	15,432,771
(9) Actual UAAL at end of year	16,543,217	13,996,845
(10) Gain (loss) (8) - (9)	3,484,140	1,435,926
(11) Gain (loss) as percent of AAL at start of year	1.92%	1.40%

\* *Unfunded actuarial accrued liability.*

## COMMENTS

**Comment A:** Retirement System experience overall was favorable during the 2010 plan year. During calendar year 2010 the return on the market value of assets was higher than long term expectations. However, the market smoothing techniques used in this valuation of the System recognize both past and present investment experience. Due to the large investment loss from the 2008 plan year, the recognized rate of return for the year was 5.1% on trust assets. Details of this asset smoothing method are shown on page B-4. Lower than expected pay increases, due to the change in the number of pay periods over the prior year and lower than expected post retirement COLA payments offset the unfavorable investment experience.

Given the current state of capital markets, and unrecognized investment losses from 2008, contribution increases are likely in the near term in the absence of significant offsetting favorable experience.

**Comment B:** Effective with this valuation of the Retirement System, the City has provided the market value of both pension and retiree health plan assets. This information was used in the development of valuation assets as shown on page B-4 of this report.

**Comment C:** The appendix of this report includes the results of the actuarial valuation of the retiree health program using assumptions and methods required by the Governmental Accounting Standards Board (GASB). The City's policy is to make contributions to the retiree health plan at the recommended rates using methods and assumptions that comply with the GASB Statements No. 43 and No. 45. The appendix of this report includes additional information about this valuation.

**Comment D:** The Internal Revenue Code (IRC) Section 401(h) allows a pension plan to establish a separate account within the pension trust to pay benefits for sickness, accident, hospitalization and medical expenses of retired employees, their spouses and their dependents. In order for a pension plan to maintain its qualified status, the IRC Section 401(h) account must meet certain requirements, established by the code. An important (and often, the most restrictive) requirement is that employer contributions for medical benefits must be "subordinate" to the contributions for pension benefits. As a result of this requirement the maximum permissible employer health contribution may be insufficient to actuarially fund the promised benefits.

## COMMENTS (CONCLUDED)

The results of the most recent analysis conducted in 2008 indicate that the retiree health contributions are subordinate to pension contributions as of December 31, 2007. As a result, the plan has not violated the limit imposed by IRC Section 401(h). We recommend that this analysis be performed in 2011 to ensure continued compliance.

**Comment E:** During the 2010 plan year, retiree health cost increases were a bit higher than expectations. In addition, the recognized rate of return on plan assets was lower than long term expectations. In the Police division, there were more retirements from City employment with retiree health benefits than expected. Finally, the assumed rates of medical inflation used in this valuation of the retiree health plan were modified to better reflect plan experience. Page 5 of the appendix includes a summary of medical and dental rates of inflation used in this valuation of the plan.

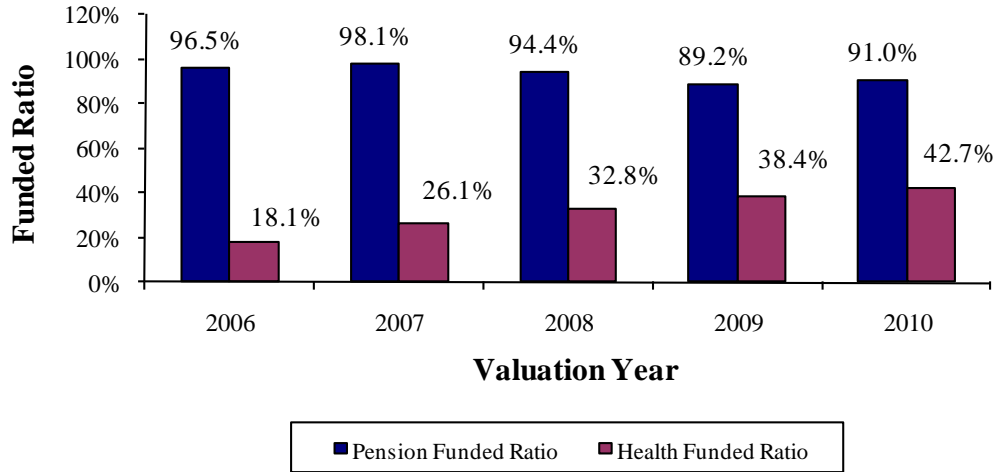
**CONTRIBUTIONS COMPUTED TO MEET THE FINANCIAL OBJECTIVE  
OF THE RETIREMENT SYSTEM  
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2012**

<b>Contributions for</b>	<b>General Management Contributions Expressed as Percents of Payroll</b>		
	<b>Pension</b>	<b>Health</b>	<b>Total</b>
Total Normal Cost	11.62%	3.25%	14.87%
Unfunded Actuarial Accrued Liabilities	4.24%	2.28%	6.52%
Total Contribution Requirement	15.86%	5.53%	21.39%
Member portion	3.00%	0.00%	3.00%
City-State portion	12.86%	5.53%	18.39%

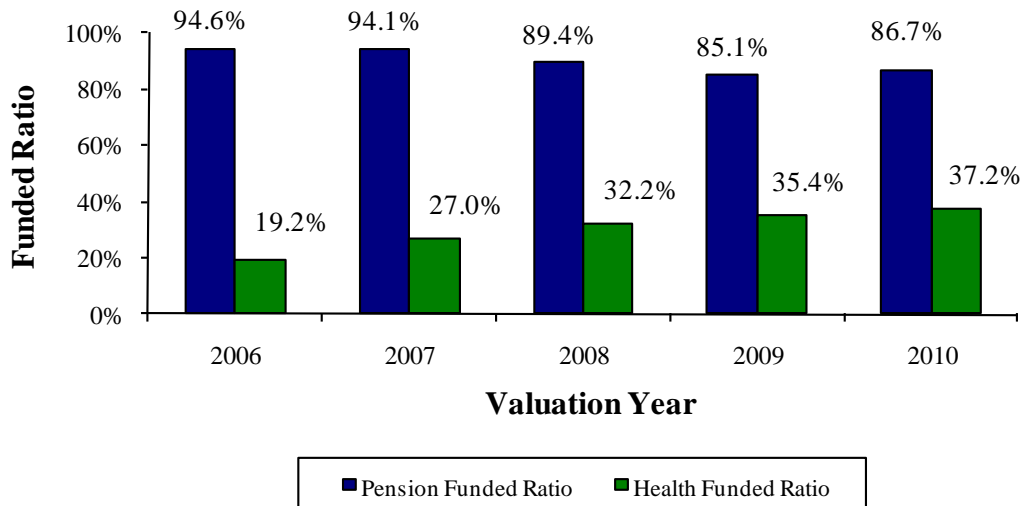
<b>Contributions for</b>	<b>Police Contributions Expressed as Percents of Payroll</b>		
	<b>Pension</b>	<b>Health</b>	<b>Total</b>
Total normal cost	19.30%	4.81%	24.11%
Unfunded Actuarial Accrued Liabilities	9.42%	4.14%	13.56%
Total Contribution Requirement	28.72%	8.95%	37.67%
Member portion	8.00%	0.00%	8.00%
City-State portion	20.72%	8.95%	29.67%

# FUNDED RATIO HISTORY PENSION AND RETIREE HEALTH

## General/Management



## Police



---

**SECTION B**  
**SUMMARY OF BENEFIT PROVISIONS AND**  
**VALUATION DATA**

---

**BENEFIT PROVISIONS EVALUATED  
AND/OR CONSIDERED  
(DECEMBER 31, 2010)**

**Regular Unreduced Retirement:**

*Eligibility* - General members: age 55 with 30 or more years of service, or age 60 with 5 years of service.

Police: age 50 with 25 years of service, or age 60 with 15 years of service.

*Mandatory Retirement Age* - Police: age 60 (age 65 with employer consent).

*Annual Amount* - General members: 1.8% of final average pay times years of service.

Police: final average pay times the sum of a) 2.5% times the first 25 years of service, plus b) 1.5% times service in excess of 25 years.

*Type of Final Average Pay* - Highest 3 consecutive years out of last 10. Some lump sums are included.

**Early Reduced Retirement:**

*Eligibility* - 20 or more years of service.

*Annual Amount* - Same as regular retirement except that the benefit is actuarially reduced.

**Deferred Retirement (vested benefit):**

*Eligibility* - General Members: 5 years of service. Benefit commences at age 60.

Police: 15 years of service. Benefit commences at deferred retirement age.

*Annual Amount* - Computed as a regular retirement benefit based on service and final average pay at termination.

**Duty Disability Retirement:**

*Eligibility* - No age or service requirement.

*Annual Amount* - Computed as a regular retirement benefit. If disabled before eligible for regular retirement, additional service is credited for the period between disability and the time member would have been eligible for regular retirement if he had not been disabled. Minimum benefit is 12.5% of final average pay for general members and 20% of final average pay for police. Worker's Compensation payments are offset.



**BENEFIT PROVISIONS EVALUATED  
AND/OR CONSIDERED  
(DECEMBER 31, 2010)**

**Non-Duty Disability Retirement:**

*Eligibility* - 10 years of service.

*Annual Amount* - Computed as a regular retirement benefit based on service and final average pay at time of disability. Worker's Compensation payments are offset.

**Duty Death Before Retirement:**

*Eligibility* - No age or service requirement. Worker's Compensation must be payable.

*Annual Amount* - Refund of accumulated contributions. Spouse receives pension of 1/3 of final average pay until death. Unmarried children under age 18 or an eligible handicapped child each receive an equal share of 1/6 of final average pay (if no spouse each child receives 1/4 to a maximum of 1/2). If no spouse or eligible children, dependent parents each receive 1/6 of final average pay (each parent's pension limited to \$600 annually). Worker's Compensation payments are offset.

**Non-Duty Death Before Retirement:**

*Eligibility* - 10 years of service.

*Annual Amount* - Spouse (or some other dependent if an Option B election was in force) receives a benefit computed as regular retirement benefit but actuarially reduced in accordance with a 100% joint and survivor election. Minimum benefit is \$360 annually. If no Option B election is in force, each unmarried child under age 18 or an eligible handicapped child receives \$2,400 annually. If no Option B election is in force and there is no eligible spouse, member contributions are refunded.

**Post-Retirement Cost-of-Living Adjustments:** Annual increase equal to 100% of the June CPI of each year (with a cap of 3%) applied to the member's current benefit. The first increase will be granted after 36 months of retirement.

**Member Contributions:** Police: 8% of compensation.  
Elected officials, appointed officers and management employees: 3.0% of compensation.  
Other members: 3.0% of compensation.

## REPORTED FUND BALANCES (MARKET VALUE)

<u>Reserves</u>	<u>Reported Fund Balances</u> <u>December 31, 2010</u>
Annuity Savings Fund	
General division	\$ 21,824,122
Police division	<u>14,572,407</u>
Totals	36,396,529
Employer Reserve Fund	
General division	73,140,094
Police division	<u>33,431,218</u>
Totals	106,571,312
Retirement Reserve Fund	
General division	58,534,421
Police division	<u>47,287,324</u>
Totals	105,821,745
IRC 401(h)	
General division	10,716,307
Police division	<u>5,147,586</u>
Totals	15,863,893
Income Fund	0
Expense Fund	<u>192,509</u>
Total Balances	\$264,845,988

## DERIVATION OF VALUATION ASSETS

	Pensions	Health	Grand Total
A. Funding Value, 12/31/09	\$248,954,926	\$13,473,646	\$262,428,572
B. Market Value, Beginning of Year	220,758,156	11,863,715	232,621,871
C. Non-Investment Net Cash Flow	(2,515,647)	2,176,643	(339,004)
D. Net Investment Income (Market total)	30,739,586	1,823,535	32,563,121
E. Market Value, End of Year	248,982,095	15,863,893	264,845,988
F. Phase-in Factor	20%	20%	20%
G. Expected Income	19,196,525	1,128,552	20,325,077
H. Market Value Gain (Loss): [(D) – (G)]	11,543,061	694,983	12,238,044
I. Method Change			
J. Recognition of Gain/(Loss)			
J1. Year One	2,308,612	138,997	2,447,609
J2. Year Two	4,996,892	268,537	5,265,429
J3. Year Three	(17,524,943)	(768,317)	(18,293,260)
J4. Year Four	342,450	12,053	354,503
J5. Year Five	<u>3,216,491</u>	<u>85,861</u>	<u>3,302,352</u>
J6. Total (J1...J5)	(6,660,498)	(262,869)	(6,923,367)
K. Funding Value, 12/31/10 [(A) + (C) + (G) + (J6)]	258,975,306	16,515,972	275,491,278
L. Net Funding Value Rate of Return	5.1%	5.9%	5.1%
M. Net Market Value Rate of Return	14.0%	14.1%	14.0%

**MARKET VALUE OF ASSETS REPORTED FOR VALUATION  
COMPARATIVE STATEMENT**

Year Ended Dec. 31	Assets Beginning of Year	Revenues			Expenses			Assets Year-End
		Employee Contrib.	Employer Contrib.	Investment Income	Retirement Benefits	Contrib. Refunds	Misc. Expenses*	
1996	\$ 96,411,343	\$1,485,256	\$3,369,320	\$ 12,535,654	\$3,782,793	\$ 83,772	\$ 510,740	\$ 109,424,268
1997	109,424,268	1,540,007	3,341,706	17,474,254	4,202,853	189,073	533,763	126,854,546
1998	126,854,546	1,462,159	3,723,334	14,571,870	4,998,076	114,099	504,691	140,995,043
1999	140,995,043	1,193,764	3,746,140	20,287,090	5,421,649	160,909	394,037	160,245,442
2000	160,245,442	1,249,943	3,667,166	(539,610)	5,847,524	177,771	438,219	158,159,427
2001	158,159,427	1,359,825	3,537,191	(1,535,524)	6,190,412	237,070	541,518	154,551,919
2002	154,551,919	1,442,154	3,896,795	(14,929,083)	6,600,911	182,350	664,456	137,514,068
2003	137,514,068	1,593,939	4,373,347	36,238,185	6,915,649	132,505	703,505	171,967,880
2004	171,967,880	1,718,969	5,261,202	24,644,820	7,403,924	188,094	758,667	195,242,186
2005	195,242,186	1,829,649	5,769,159	17,035,074	8,014,168	182,999	1,055,818	210,623,083
2006	210,623,083	1,907,951	5,975,325	33,030,851	8,662,750	189,338	1,253,516	241,431,606
2007	241,431,606	2,001,290	7,896,489	19,937,351	9,262,791	199,779	1,416,037	260,388,129
2008	260,388,129	2,065,615	7,710,786	(71,138,091)	10,005,006	275,474	1,429,420	187,316,539
2009	187,316,539	2,272,170	8,433,917	46,453,891	10,471,659	90,776	1,292,212	232,621,870
2010#	232,621,871	2,241,213	9,554,056	32,715,573	11,150,501	197,614	938,610	264,845,988

\* Includes retiree health benefits.

# Reflects a reported, adjusted beginning of year asset value.

**ADDITIONS TO AND REMOVALS FROM RETIRED/SURVIVOR MEMBERSHIP  
COMPARATIVE STATEMENT**

<b>Year Ended Dec. 31</b>	<b>Additions Annual No. Benefits</b>	<b>Removals Annual No. Benefits</b>	<b>End of Year Annual No. Benefits</b>	<b>Average Annual Benefits</b>	<b>Present Value of Benefits</b>	<b>Expected Removals</b>
1996	25 \$ 516,018	13 \$ 163,629	308 \$ 4,070,250	\$ 13,215	\$ 48,501,396	11.6
1997	29 761,054	10 89,454	327 4,741,850	14,501	59,459,496	11.6
1998	25 594,946	5 38,762	347 5,298,034	15,268	66,486,000	9.8
1999	25 507,219	16 133,245	356 5,672,008	15,933	71,686,116	7.8
2000	27 544,081	14 59,225	369 6,156,864	16,685	76,925,868	10.9
2001	22 561,207	23 274,403	368 6,443,668	17,510	80,195,604	11.3
2002	21 397,601	15 140,349	374 6,700,920	17,917	82,787,796	11.2
2003	37 566,899	28 280,190	383 6,987,629	18,244	85,924,411	11.2
2004	24 749,117	11 159,821	396 7,576,925	19,134	90,336,864	11.3
2005	33 1,007,507	20 246,108	409 8,338,324	20,387	100,153,352	12.4
2006	25 802,970	17 281,824	417 8,859,470	21,246	105,705,500	12.5
2007	25 920,591	12 100,174	430 9,679,887	22,511	116,479,480	12.7
2008	21 707,365	15 251,647	436 10,135,605	23,247	124,265,687	13.0
2009	16 715,776	10 155,652	442 10,695,729	24,198	130,284,387	13.5
2010	39 1,183,836	16 258,781	465 11,620,784	24,991	140,993,607	14.3

**RETIREES AND BENEFICIARIES AS OF  
DECEMBER 31, 2010  
TABULATED BY TYPE OF BENEFITS BEING PAID**

<u>Type of Benefits Being Paid</u>	<u>No.</u>	<u>Annual Benefits</u>
Age and Service Retirement Benefits	362	\$ 9,831,577
Disability Retirement Benefits	19	375,808
Survivor Retirement Benefits	<u>84</u>	<u>1,413,399</u>
Total Retirement Benefits Being Paid	465	\$11,620,784

**RETIREES AND BENEFICIARIES BY ATTAINED AGES  
AS OF DECEMBER 31, 2010**

<b>Attained Ages</b>	<b>No.</b>	<b>Annual Benefits</b>
40 - 44	1	\$ 11,869
45 - 49	3	55,217
50 - 54	15	420,071
55 - 59	53	1,930,415
60 - 64	101	2,923,430
65 - 69	88	2,405,193
70 - 74	72	1,708,456
75 - 79	52	969,696
80 - 84	41	682,950
85 - 89	28	402,554
90 & Over	11	110,933
<b>Totals</b>	<b>465</b>	<b>\$11,620,784</b>

**VESTED FORMER MEMBERS  
AS OF DECEMBER 31, 2010  
TABULATED BY ATTAINED AGES**

<u>Attained Ages</u>	<u>No.</u>	<u>Monthly Benefits</u>
Under 40	8	\$ 53,757
40 - 44	8	53,765
45 - 49	10	124,795
50 - 54	14	159,939
55 - 59	18	191,359
60 & Over	<u>1</u>	<u>19,924</u>
<b>Totals</b>	<b>59</b>	<b>\$ 603,539</b>



**ACTIVE MEMBERS  
AS OF DECEMBER 31, 2010  
TABULATED BY VALUATION DIVISIONS**

<b>Valuation Groups</b>	<b>No.</b>	<b>Annual Payroll</b>	<b>Age</b>	<b>Average Service</b>	<b>Pay</b>
General/Management Members	687	\$36,126,017	45.6 yrs.	12.8 yrs.	\$52,585
Police Members	<u>223</u>	<u>13,767,900</u>	39.4	11.8	61,739
<b>Total Active Members</b>	<b>910</b>	<b>\$49,893,917</b>	<b>44.1</b>	<b>12.6</b>	<b>\$54,828</b>

## ACTIVE MEMBERS INCLUDED IN VALUATION COMPARATIVE SCHEDULE

Valuation Date	Active Members			Valuation Payroll	Average			
	General	Police	Totals		Age	Service	Pay	% Incr.
December 31								
1996	575	160	735	\$25,525,258	42.0	11.8	\$34,728	3.3 %
1997	571	158	729	25,830,779	42.2	11.8	35,433	2.0
1998	573	161	734	27,295,184	42.2	11.7	37,187	5.0
1999	588	162	750	27,623,182	42.4	11.7	36,830	(1.0)
2000	587	174	761	29,068,666	42.4	11.7	38,198	3.7
2001	611	178	789	31,751,356	42.6	11.7	40,243	5.4
2002	626	182	808	33,718,220	43.0	11.8	41,730	3.7
2003	636	203	839	36,244,556	42.8	11.7	43,200	3.5
2004	642	212	854	38,539,387	43.1	11.7	45,128	4.5
2005	654	218	872	40,492,380	43.0	11.6	46,436	2.9
2006	664	214	878	42,456,531	43.4	11.9	48,356	4.1
2007	669	217	886	44,646,848	43.5	11.9	50,391	4.2
2008	676	223	899	46,433,304	43.8	12.2	51,650	2.5
2009	698	219	917	51,510,466	44.1	12.5	56,173	8.8
2010	687	223	910	49,893,917	44.1	12.6	54,828	(2.4)

## ADDITIONS TO AND REMOVALS FROM ACTIVE MEMBERSHIP ACTUAL AND EXPECTED NUMBERS

Year Ended	Number Added										Active Members End of Year
	During Year		Normal Retirement		Disability Retirement		Died-In- Service		Other Terminations		
	A	E	A	E	A	E	A	E	A	E	
Dec. 31											
1996	45	33	17	8.3	0	2.1	1	2.2	15	30.3	735
1997	38	44	21	8.3	1	2.1	0	2.2	22	30.3	729
1998	45	50	21	7.8	1	1.6	0	0.9	23	26.8	734
1999	56	46	14	7.5	1	1.6	2	0.9	23	27.5	750
2000	68	57	17	11.0	2	1.1	0	1.0	38	27.9	761
2001	64	36	11	10.0	1	1.2	1	1.0	23	29.2	789
2002	66	47	11	13.7	0	1.3	0	1.1	36	30.2	808
2003	74	43	19	15.3	2	1.3	0	1.1	22	31.5	839
2004	65	50	17	15.1	1	1.3	1	1.2	31	33.2	854
2005	65	47	19	13.9	3	1.1	1	1.2	24	31.2	872
2006	56	50	14	14.0	0	1.1	0	1.2	36	31.4	878
2007	57	49	22	16.7	0	1.1	1	1.3	26	29.9	886
2008	54	41	11	18.5	1	1.2	0	1.3	29	29.9	899
2009	48	30	12	24.8	0	1.2	0	1.4	18	29.4	917
2010	51	58	30	27.6	0	1.2	0	1.5	28	29.3	910
5 Year Totals	266	228	89	101.6	1	5.8	1	6.7	137	149.9	

A represents actual number.

E represents expected number based on assumptions outlined in Section C.

**GENERAL/MANAGEMENT ACTIVE MEMBERS - DECEMBER 31, 2010**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	5							5	\$ 198,517
25-29	40	7						47	1,861,547
30-34	51	34	12					97	4,645,239
35-39	29	19	12	4				64	3,224,991
40-44	18	24	22	10	4			78	4,250,707
45-49	16	25	18	17	18	14	1	109	6,098,544
50-54	13	25	24	12	25	13	18	130	7,113,457
55-59	5	9	11	22	15	15	20	97	5,495,223
60	1	2	2	1	2	1	3	12	615,450
61		2	1	1	2		1	7	402,839
62	1			3	1	1	4	10	551,578
63	1	2	2	3	2	1	3	14	736,589
64		4	2	1			1	8	445,869
65				1	1			2	97,762
66			1			1		2	126,774
67			1	2				3	171,114
68				1				1	46,798
72			1					1	43,019
<b>Totals</b>	<b>180</b>	<b>153</b>	<b>109</b>	<b>78</b>	<b>70</b>	<b>46</b>	<b>51</b>	<b>687</b>	<b>\$36,126,017</b>

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

Age: 45.6 years  
Service: 12.8 years  
Annual Pay: \$52,585

**POLICE ACTIVE MEMBERS - DECEMBER 31, 2010**  
**BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Years of Service on Valuation Date							Totals	
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	6							6	\$ 275,643
25-29	18	8						26	1,276,211
30-34	12	23	2					37	2,048,829
35-39	4	24	17	4				49	2,981,812
40-44		8	13	14	4			39	2,471,730
45-49		3	2	11	18			34	2,491,078
50-54		3	2	5	7	6	1	24	1,649,103
55-59				2	6			8	573,494
<b>Totals</b>	<b>40</b>	<b>69</b>	<b>36</b>	<b>36</b>	<b>35</b>	<b>6</b>	<b>1</b>	<b>223</b>	<b>\$13,767,900</b>

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

Age: 39.4 years  
Service: 11.8 years  
Annual Pay: \$61,739

---

## **SECTION C**

### **ACTUARIAL METHODS AND ASSUMPTIONS AND DEFINITIONS OF TECHNICAL TERMS**

---

## **ACTUARIAL COST METHODS USED FOR THE VALUATION**

Normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were 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 member's actual date of employment to projected 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.

### **Amortization of Unfunded Actuarial Accrued Liabilities for Pension Benefits**

The unfunded actuarial accrued liability (UAAL) was determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment (one component of the contribution requirement), is the level percent of pay required to fully amortize the UAAL over a 13 year period beginning on the date contributions determined by this report are scheduled to begin. This UAAL payment does not reflect any payments expected to be made between the valuation date and the date contributions determined by this report are scheduled to begin.

Active payroll was assumed to increase 4.25% a year for the purpose of determining the level percent contributions.

## ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS

The actuary calculates contribution requirements and actuarial present values of a retirement system by applying actuarial assumptions to the benefit provisions and census information of the system, using the actuarial cost methods described in this report.

The principal areas of risk which require assumptions about future experience 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, retirees and beneficiaries
- (iv) rates of withdrawal of active members
- (v) rates of disability among active members
- (vi) the age patterns of actual retirements

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.

---

The employer contribution rate has been computed to remain level from year-to-year so long as benefits and the basic experience and make-up of members do not change. Examples of favorable experience which would tend to reduce the employer contribution rate are:

- (1) Investment returns in excess of 7.75% per year
- (2) Member non-vested terminations at a higher rate than outlined in this report
- (3) Mortality among retirees and beneficiaries at a higher rate than indicated by the 1983 Group Annuity Mortality Table
- (4) Increases in the number of active members

## **ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS**

Examples of unfavorable experience which would tend to increase the employer contribution rate are:

- (1) Pay increases in excess of the rates outlined in this report.
- (2) An acceleration in the rate of retirement from the rates outlined in this report.
- (3) A pattern of hiring employees at older ages than in the past.

---

Actual experience of the system will not coincide exactly with assumed experience, regardless of the choice of the assumptions, or the skill of the actuary and the precision of the calculations. 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 one or more of the assumptions are modified to reflect experience trends (but not random or temporary year-to-year fluctuations).

Valuation assets are equal to reported market value of assets, with investment gains and losses spread over a period of 5 years, (with 20% recognition in 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 in Section B of this report.



## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

**Investment Return** (net of expenses).

7.75% per year, compounded annually. This rate consists of a net real rate of return of 3.5% a year plus a long-term rate of wage inflation of 4.25% a year.

This assumption is used to equate the value of payments due at different points in time and was first used for the December 31, 2007 valuation. Approximate rates of investment return, for the purpose of comparisons with assumed rates, are shown below.

	Year Ended December 31,				
	2010	2009	2008	2007	2006
Rate of Investment Return	5.1 %	4.2 %	3.0 %	12.8 %	10.2 %

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

These rates of return should not be used for measurement of an investment advisor's performance or for comparisons with other systems -- *to do so will mislead.*

**Pay Projections:** These assumptions are used to project current pays to those upon which benefits will be based.

Sample Ages	Annual Rate of Pay Increase for Sample Ages		
	Base (Economic)	General/Management	
		Merit and Longevity	Totals
20	4.25 %	1.70 %	5.95 %
25	4.25	1.60	5.85
30	4.25	1.20	5.45
35	4.25	0.90	5.15
40	4.25	0.40	4.65
45	4.25	0.30	4.55
50	4.25	0.20	4.45
55	4.25	0.20	4.45
60	4.25	0.00	4.25
65	4.25	0.00	4.25

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

Years of Service	Annual Rate of Pay Increase for Indicated Years of Service		
	Base	Police	
	(Economic)	Merit and Longevity	Total
1	4.25 %	4.00 %	8.25 %
2	4.25	4.00	8.25
3	4.25	4.00	8.25
4	4.25	4.00	8.25
5	4.25	4.00	8.25
6	4.25	3.00	7.25
7	4.25	3.00	7.25
8	4.25	2.00	6.25
9	4.25	2.00	6.25
10	4.25	1.00	5.25
11	4.25	1.00	5.25
12	4.25	1.00	5.25
13	4.25	1.00	5.25
14	4.25	1.00	5.25
15	4.25	0.00	4.25

The base economic assumptions were first used in the December 31, 2007 valuation.

**Lump sum payments** included in the calculation of the average pay upon which benefits are computed were assumed to increase benefits by 12% for members of the Police, General and Management divisions.

**Active Member Group Size:** The number of active members was assumed to remain constant. This assumption is unchanged from previous valuations.

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

If the number of active members remains constant, the total active member payroll is expected to increase 4.25% annually, the base portion of the individual pay increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

Changes actually experienced in average pay and total payroll have been as follows:

Increase in	Year Ended December 31,				
	2010	2009	2008	2007	2006
Average pay	(2.4) %	8.8 %	2.5 %	4.2 %	4.1 %
Total payroll	(3.1)	10.9	4.0	5.2	4.9

**Mortality Table:** The 1983 Group Annuity Mortality Table. This table was first used for the December 31, 1997 valuation. Sample values follow:

Sample Ages	Actuarial Present Value of		Future Life	
	\$1 Monthly for Life		Expectancy (Years)	
	Men	Women	Men	Women
55	\$127.14	\$137.81	24.82	30.24
60	117.18	129.90	20.64	25.67
65	104.97	119.83	16.69	21.29
70	91.48	107.29	13.18	17.13
75	77.33	92.89	10.15	13.37
80	63.28	78.10	7.64	10.20

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

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

**Rates of separation from active membership:** The 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.

Sample Ages	Years of Service	Percent Separating Within Next Year	
		General/Management	Police
ALL	0	12.00 %	13.00 %
	1	11.00	8.00
	2	9.00	5.00
	3	7.00	4.00
	4	5.00	3.50
25	5 & Over	5.00	3.50
30		5.00	3.00
35		4.50	2.50
40		3.50	2.00
45		2.50	1.00
50		1.50	1.00
55		1.00	0.50
60	0.50	0.50	

These rates were first used for the December 31, 2004 valuation.

**Rates of Disability:** These assumptions represent the probabilities of active members becoming disabled.

Sample Ages	Percent Becoming Disabled within Next Year
20	0.08 %
25	0.08
30	0.08
35	0.08
40	0.20
45	0.26
50	0.49
55	0.89

## ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

**Rates of Retirement:** These rates are used to measure the probabilities of an eligible member retiring under the Regular and Early Reduced retirement provisions during the next year.

Retirement Ages	Regular Retirement Rates		Early Retirement Rates		
	General/ Management	Police	Years of Service	General/ Management	Police
50		40%	20	2%	2%
51		20	21	2	2
52		20	22	2	2
53		20	23	2	2
54		20	24	2	2
55	25%	20	25	2	2
56	25	20	26	2	2
57	20	20	27	2	2
58	20	20	28	2	2
59	20	20	29	2	2
60	25	100	30	2	2
61	25	100	31		2
62	30	100	32		2
63	20	100	33		2
64	20	100	34		2
65	40	100	35		2
66	30	100			
67	30	100			
68	30	100			
69	30	100			
70	100	100			

General and Management members were assumed to be eligible for regular retirement after attaining age 55 with 30 years of service, or age 60 with 5 years of service. These members were assumed to be eligible for early reduced retirement after completing 20 years of service.

A Police member was assumed eligible for retirement after attaining age 50 with 25 years of service, or, after attaining age 60 with 15 or more years of service. Police members were assumed to be eligible for early reduced retirement after completing 20 years of service.

The current rates were first used for the December 31, 2004 valuation of the System.

## MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

<b>Marriage Assumption:</b>	80% of participants are assumed to be married for purposes of death and retiree health benefits. In each case the male was assumed to be 3 years older than the female.
<b>Pay Increase Timing:</b>	Beginning of year.
<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>Other:</b>	Disability and turnover decrements do not operate during retirement eligibility.
<b>Miscellaneous Loading Factors:</b>	The calculated retirement benefits were increased by 12% to account for the inclusion of unused sick leave and vacation time in the calculation of Final Average Compensation and by 1% to account for the impact of subsidized optional forms of payment.
<b>Disability Assumption:</b>	Fifty percent of disabilities for Police were assumed to be duty related. Fifty percent were assumed to be unrelated to duty. Twenty-five percent of disabilities for General/Management were assumed to be duty related. Seventy-five percent were assumed to be unrelated to duty. The recovery rate from disability was assumed to be 0 (i.e., no disabled individual was assumed to recover and return to work.)
<b>Death Assumption:</b>	Fifty percent of Police deaths were assumed to be duty related and fifty percent were assumed to be unrelated to duty. Twenty-five percent of General/Management deaths were assumed to be duty related and seventy-five percent were assumed to be unrelated to duty.
<b>Non-forfeiture Assumption:</b>	All vested terminated Police members were assumed to elect a deferred retirement benefit. General and Management members who terminate close to retirement were assumed to elect a deferred retirement while those terminating with less service were assumed to elect a refund of their contributions in lieu of deferred retirement benefits.

## DEFINITIONS OF TECHNICAL TERMS

***Accrued Service*** - Service credited under the system which was rendered before the date of the actuarial valuation.

***Actuarial Accrued Liability*** - The difference between the actuarial present value of system benefits and the actuarial present value of future normal costs. Also referred to as “past service liability.”

***Actuarial Assumptions*** - Estimates of future 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 benefit” between future normal costs and actuarial accrued liability. Sometimes referred to as the “actuarial funding method.”

***Actuarial Equivalent*** - One series of payments is said to be actuarially equivalent to another series of payments if the two series have the same actuarial present value.

***Actuarial Gain (Loss)*** - The difference between actual unfunded actuarial accrued liabilities and anticipated unfunded actuarial accrued liabilities -- during the period between two valuation dates. It is a measurement of the difference between actual and expected experience.

## DEFINITIONS OF TECHNICAL TERMS

***Actuarial Present Value*** - The amount of funds currently required to provide a payment or series of payments in the future. It is determined by discounting future payments at predetermined rates of interest, and by probabilities of payment.

***Amortization*** - Paying off an interest-discounted amount with periodic payments of interest and (generally) principal -- as opposed to paying it off with a lump sum payment.

***Normal Cost*** - The portion of the actuarial present value of future benefits that is assigned to the current year by the actuarial cost method. Sometimes referred to as “current service cost.”

***Unfunded Actuarial Accrued Liabilities*** - The difference between actuarial accrued liabilities and valuation assets. Sometimes referred to as “unfunded past service liability” or “unfunded supplemental present value.”

Most retirement systems have unfunded actuarial accrued liabilities. They arise each time new benefits are added and each time an actuarial loss occurs. The existence of unfunded actuarial accrued liabilities is not in itself bad, any more than a mortgage on a house is bad. Unfunded actuarial accrued liabilities do not represent a debt that is payable today. What is important is the ability to amortize the unfunded actuarial accrued liabilities and the trend in their amount (after due allowance for devaluation of the dollar).



---

**SECTION D**

**DISCLOSURES REQUIRED BY GASB STATEMENTS  
NO. 25 AND NO. 27**

---

## REQUIRED SUPPLEMENTARY INFORMATION

### Schedule of Pension Funding Progress (Police & General Combined)

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (\$ millions) (c)	UAAL as a % of Covered Payroll ((b-a)/c)
2001	\$ 164,995,804	\$ 167,764,361	\$ 2,768,557	98.3	\$31,751,356	8.7 %
2002	168,572,303	176,313,178	7,740,875	95.6	33,718,220	23.0
2003	175,891,684	184,882,463	8,990,779	95.1	36,244,556	24.8
2004	184,053,333	197,268,600	13,215,267	93.3	38,539,387	34.3
2005	195,203,944	210,940,503	15,736,559	92.5	40,492,380	38.9
2006	213,015,364	222,363,698	9,348,334	95.8	42,456,531	22.0
2007	238,029,788	246,147,797	8,118,009	96.7	44,646,848	18.2
2008	241,784,990	261,167,456	19,382,466	92.6	46,433,304	41.7
2009	248,954,926	283,777,829	34,822,903	87.7	51,510,466	67.6
2010	258,975,306	289,515,368	30,540,062	89.5	49,893,917	61.2

### Schedule of Employer Pension Contributions

Valuation Year Ended Dec. 31	Fiscal Year Ended Dec. 31	Contribution Rates as % of Valuation Payroll			Computed Dollar Contributions	Actual Contributions	% Contributed
		General	Police	Wt. Avg.			
2001#	2003	7.77 %	14.42 %	9.45 %	\$3,134,728	\$3,557,438	100 %
2002#	2004	8.68	15.68	10.48	3,693,299	4,270,076	100
2003	2005	9.43	13.96	10.65	4,125,255	4,499,260	100
2004^	2006	9.80	14.84	11.21	4,717,920	4,928,487	100
2005	2007	10.38	14.96	11.67	5,160,605	5,373,132	100
2006	2008	9.50	13.36	10.43	4,907,566	4,889,940	100
2007#^	2009	9.33	14.58	10.80	5,238,815	5,459,718	100
2008	2010	10.93	17.66	12.73	6,470,984	6,591,255	100
2009	2011	13.17	20.78	15.15	8,533,571		
2010	2012	12.86	20.72	14.91	8,149,433		

# Reflects amortization credit.

^ New methods or assumptions adopted.

Computed dollar contributions are based on contribution rates and projected valuation payroll. Actual contributions were based on the financial statements provided by the City. Deviations may be attributable to differences between projected and actual payroll. This information is presented in draft form for review by the City's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the City's financial statements.

## 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 actuarial valuation follows:

Valuation Date	December 31, 2010
Actuarial Cost Method	Entry-Age
Amortization Method	Level percent, closed
Remaining Amortization Period	13 years
Asset Valuation Method	5 year smoothed market
Actuarial Assumption:	
Investment rate of return	7.75%
Projected salary increases*	4.25% - 8.25%
* Includes inflation at	4.25%
Cost-of-living adjustments	Annual increase equal to CPI with a cap of 3% beginning 36 months after retirement.

Membership of the Retirement System is shown below at December 31, 2010, the date of the latest actuarial valuation:

Retirees and beneficiaries receiving benefits	465
Terminated plan members entitled to but not yet receiving benefits	59
Active plan members	<u>910</u>
Total	1,434

---

## **APPENDIX**

### **RETIREE HEALTH VALUATION BASED ON ASSUMPTIONS AND METHODS PRESCRIBED BY THE GOVERNMENTAL ACCOUNTING STANDARDS BOARD**

---

## RETIREE HEALTH PREMIUM RATES

### Background

Health care premiums are an important part of a retiree health valuation. Eligible City retirees (and their spouses) may elect to receive benefits from health plans offered by Sanford and Avera. All benefits provided by the City sponsored retiree health Program (plan) are self-funded. This means that the City pays claims and takes the risk associated with the health care program. The City buys stop loss insurance to help manage this risk. Dental insurance benefits are also self-funded.

Retiree health benefit recipients pay for a portion of their benefits based on premium rates established by the City (illustrative premiums). These premiums were used in the actuarial valuation of the retiree health program. A summary of these premiums is shown in this section of the report.

Retirees who participate in the retiree health program pay 50% of the reported illustrative premiums. The City pays the remaining portion of the retiree health care cost. Health insurance coverage terminates upon attainment of age 65. At this time, each retiree must make their own arrangements for health care coverage.

The current actuarial standard covering the valuation of retiree medical liability became effective for measurements on or after January 1, 2003. The standard includes the development of facsimile premiums based on the actual claims experience and the use of age grading. The combination of these two techniques produces “premiums” at each age during the retiree’s lifetime based on the group’s actual, historical claims experience.

We believe that using illustrative premium rates alone to determine retiree medical liability will likely understate the value of retiree health benefits and will fail to comply with both current actuarial standards of practice and governmental accounting standards. A summary of the facsimile health care “premium” rates used in the December 31, 2010 valuation of the retiree health program are shown on the following page. The actuarial assumptions and methods used in the retiree health program valuation are shown in this section of the report.

## **PREMIUM RATE DEVELOPMENT METHOD MONTHLY PER PERSON HEALTH CARE RATES**

Initial premiums were developed for pre-65 retirees only. These premiums were developed using claims experience from January 2008 to November 2010 in conjunction with exposure data for the retired members of the health care program. These claims were projected on a paid claim basis, adjusted for plan design changes, large claims and loaded for administrative expenses.

Age graded and sex distinct premiums are utilized by this valuation. The premium developed by the preceding process is appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process “distributes” the average premium over all age/sex combinations and assigns a unique premium to each combination. This process more accurately reflects health care costs in the retired population over the projection period. The tables below show the combined medical and prescription drug one-person monthly premiums at selected ages effective January 1, 2011 to December 31, 2011.

### **Facsimile Health Care Premiums Used in the 2010 Valuation**

<b>Age</b>	<b>Monthly Pre-65 Rates at Sample Ages</b>	
	<b>Male</b>	<b>Female</b>
50	\$ 722.94	\$ 819.14
55	944.87	971.24
60	1,187.03	1,141.00

The above rates reflect the total medical and prescription drug retiree cost without considering any applicable retiree contributions.

## PREMIUM RATE DEVELOPMENT METHOD MONTHLY PER PERSON HEALTH CARE RATES

### Monthly Dental Premiums Used in the 2010 Valuation

Coverage for	Monthly Rate
1-person	\$36.88
2-person	73.76

The dental premium rates used in the valuation were not “age graded” since dental claims do not vary significantly by age.

The chart below shows the retiree paid premiums (50% of the weighted average illustrative premiums) reported to the actuary in connection with this valuation of the program.

### Illustrative Monthly Premiums Used in the 2010 Valuation

Coverage for	Monthly Rate
Health Care Premiums (Retiree Only - General)	\$373.62
Health Care Premiums (Retiree Only - Police)	373.62
Health Care Premiums (Retiree & Spouse - General)	792.35
Health Care Premiums (Retiree & Spouse - Police)	792.35
Dental (Retiree only)	19.12
Dental (Retiree & Spouse)	36.51

## HEALTH COST TREND ASSUMPTION

### Background

Retiree health care valuations require an assumption about how the health costs that the plan is absorbing will change over the years. This assumption includes more than just “health inflation”. It includes the impact of

- The introduction of new procedures and medications and how they are priced.
- The utilization of services and products by covered retirees and their dependents and how that utilization changes over the years.

Retiree health valuations use a health cost trend assumption that changes over the years. The near term rates reflect the fact that currently employers are seeing sharp increases in the cost of health goods and services. However, they do not anticipate that health costs will increase at these rates indefinitely. To do so would be to ignore the real world implications of this sort of projection. For example, if health costs represent 20% of disposable income initially and grow at 12% per year for the next 10 years while disposable income increases at 4% would imply that after 10 years health would absorb 40% of our disposable income. Over a 20-year period, these rates of increase would imply that at the end of the 20-year period, health costs would absorb almost 80% of our disposable income.

The valuations attempt to deal with the future by recognizing that it is more reasonable to assume that current trends will have to change in the future before we reach the absurd situation of having little or no money to spend on things that are not related to health (including food, shelter, clothes, etc.). Health costs are assumed to increase at rates greater than general inflation for a temporary “cooling off” period. At the end of the cooling off period, health costs are assumed to increase in line with general inflation. As years elapse, there are fewer remaining years in the cooling off period. A summary of the rates of medical inflation used in this valuation of the program are shown on the next page. Retirees pay the premium rates shown at the bottom of the prior page. These premiums were assumed to increase with medical inflation. The assumed rate of increase is shown on the following page.



# HEALTH COST TREND AND RELATED ASSUMPTIONS

## Rates of Inflation for Medical, Rx and Dental Benefits

<b>Future Health Cost Increases</b>		
<b>Year Beginning December 31,</b>	<b>Medical &amp; Rx</b>	<b>Dental</b>
2011	9.00%	4.25%
2012	8.50	4.25
2013	8.00	4.25
2014	7.50	4.25
2015	7.00	4.25
2016	6.50	4.25
2017	6.00	4.25
2018	5.50	4.25
2019	5.00	4.25
2020 & After	4.25	4.25

## Cumulative Aging Factors at Select Ages

<b>Age</b>	<b>Male</b>	<b>Female</b>
45	0.514	0.673
50	0.696	0.788
55	0.909	0.935
57	1.000	1.000
60	1.142	1.098

**COMPUTED RETIREE HEALTH CONTRIBUTION RATES  
 BASED ON ASSUMPTIONS/METHODS PRESCRIBED BY GASB  
 FOR GENERAL AND MANAGEMENT MEMBERS  
 FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2012**

<b>Contributions for</b>	<b>Contribution Requirements Expressed as Percents of Payroll</b>
Total NC%	3.25 %
-Employee %	<u>0.00</u>
-Employer %	3.25 %
UAL% (25 Year Amortization of UAL*)	<u>2.28</u> %
Total Employer Contribution	5.53 %
First Year \$ Contribution	\$2,171,188

\* *Unfunded accrued liability (UAL) was amortized as a level percent of active member payroll.*

**COMPUTED RETIREE HEALTH CONTRIBUTION RATES  
 BASED ON ASSUMPTIONS/METHODS PRESCRIBED BY GASB  
 FOR POLICE MEMBERS  
 FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2012**

<b>Contributions for</b>	<b>Contribution Requirements Expressed as Percents of Payroll</b>
Total NC%	4.81 %
-Employee %	<u>0.00</u>
-Employer %	4.81 %
UAL% (25 Year Amortization of UAL*)	<u>4.14</u> %
Total Employer Contribution	8.95 %
First Year \$ Contribution	\$1,339,192

\* *Unfunded accrued liability (UAL) was amortized as a level percent of active member payroll.*

**REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF HEALTH FUNDING PROGRESS FOR  
THE RETIREE HEALTH PLAN  
(POLICE & GENERAL COMBINED)**

<b>Actuarial Valuation Date Dec. 31</b>	<b>Actuarial Value of Assets (a)</b>	<b>Actuarial Accrued Liability (AAL) (b)</b>	<b>Unfunded AAL (UAAL) (b-a)</b>	<b>Funded Ratio (a/b)</b>	<b>Covered Payroll (\$ millions) (c)</b>	<b>UAAL as a % of Covered Payroll ((b-a)/c)</b>
2006	\$ 5,747,326	\$ 31,127,424	\$ 25,380,098	18.5 %	\$ 42,456,531	59.8 %
2007 <sup>^</sup>	8,379,519	31,758,969	23,379,450	26.4	44,646,848	52.4
2008	10,718,920	32,930,510	22,211,590	32.6	46,433,304	47.8
2009	13,473,646	36,173,536	22,699,890	37.2	51,510,466	44.1
2010	16,515,972	40,712,275	24,196,303	40.6	49,893,917	48.5

<sup>^</sup> *New methods or assumptions adopted.*

**REQUIRED SUPPLEMENTARY INFORMATION  
SCHEDULE OF EMPLOYER HEALTH CONTRIBUTIONS  
(POLICE & GENERAL)**

<b>Valuation Year Ended Dec. 31</b>	<b>Fiscal Year Ended Dec. 31</b>	<b>Contribution Rate as a % of Valuation Payroll</b>		<b>Annual Required Contribution (ARC)</b>	<b>Actual Contributions</b>	<b>Percentage Contributed</b>
		<b>General</b>	<b>Police</b>			
2005	2007	5.04%	7.23%	\$ 2,501,513	\$ 2,523,357	100.0 %
2006	2008	5.49%	7.57%	2,816,421	2,820,846	100.0
2007 <sup>^</sup>	2009	5.18%	7.36%	2,808,976	2,974,199	100.0
2008	2010	5.03%	7.45%	2,881,839	2,962,801	100.0
2009	2011	4.89%	7.66%	3,160,024		
2010	2012	5.53%	8.95%	3,510,380		

<sup>^</sup> *New methods or assumptions adopted.*

Annual required contributions are based on contribution rates and projected valuation payroll. Actual contributions were based on the financial statements provided by the City. Deviations may be attributable to differences between projected and actual payroll. This information is presented in draft form for review by the City's auditor. Please let us know if there are any items that the auditor changes so that we can maintain consistency with the City's financial statements.

## REQUIRED SUPPLEMENTARY INFORMATION FOR THE RETIREE HEALTH PLAN

The following assumptions and methods were used in the December 31, 2010 actuarial valuation for the Retiree Health Plan:

Valuation Date	December 31, 2010
Actuarial Cost Method	Entry-Age
Amortization Method	Level percent, closed
Remaining Amortization Period	25 years
Asset Valuation Method	5 year smoothed market
Premium Rate Development Method	Please refer to page 1

### **Actuarial Assumptions**

Annual Rate of Return (Discount Rate)	7.75% per year
Dependent Coverage Elections	80% of employees are assumed to cover a spouse at retirement
Coverage Election	All eligible future retirees are assumed to elect benefits
Rates of Inflation for Medical and Dental Benefits	Please refer to page 5

Membership of the Retiree Health Plan is shown below at December 31, 2010, the date of the latest actuarial valuation.

Retirees receiving medical benefits	125
Active plan members	<u>910</u>
Total number of current and former City employees who are members of the Retiree Health Plan	1,035