

**CITY OF SIOUX FALLS FIREFIGHTERS' PENSION FUND
FIFTY-FIFTH ANNUAL ACTUARIAL VALUATION REPORT
DECEMBER 31, 2010**

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March 22, 2011

The Retirement Board
City of Sioux Falls Firefighters' Pension Fund
Sioux Falls, South Dakota

Ladies and Gentlemen:

Presented in this report are the results of the fifty-fifth annual actuarial valuation of the assets, actuarial values and contribution requirements associated with pension and post-retirement health insurance benefits provided by the City of Sioux Falls Firefighters' Pension Fund. The purpose of the valuation is to measure the System's funding progress and to determine a contribution rate 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 Pension Fund benefits, financial transactions, and 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 contains the results of the retiree health plan valuation, including contribution rates that comply with GASB Statements No. 43 and No. 45 and actuarial standards of practice. This report may be provided to parties other than the City of Sioux Falls only in its entirety and only with the permission of the Pension Fund.

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 Pension Fund. 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/CN/JM:mrb

SECTION A
VALUATION RESULTS

FINANCIAL OBJECTIVE

The financial objective of the Pension Fund 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 Pension Fund is supported by member contributions, City contributions, State contributions (insurance premium taxes) and investment income from Pension Fund 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).

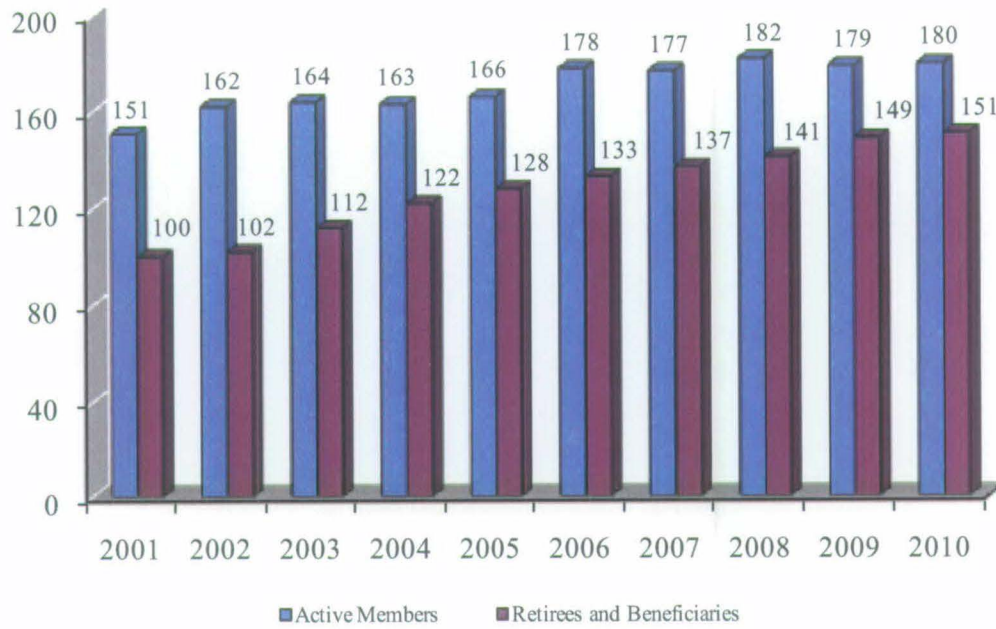
Pension contribution requirements for the year beginning January 1, 2012 are shown on page A-2.

**CONTRIBUTIONS COMPUTED TO MEET THE
FINANCIAL OBJECTIVE OF THE PENSION FUND
FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2012
(INCLUDING STATE CONTRIBUTIONS)**

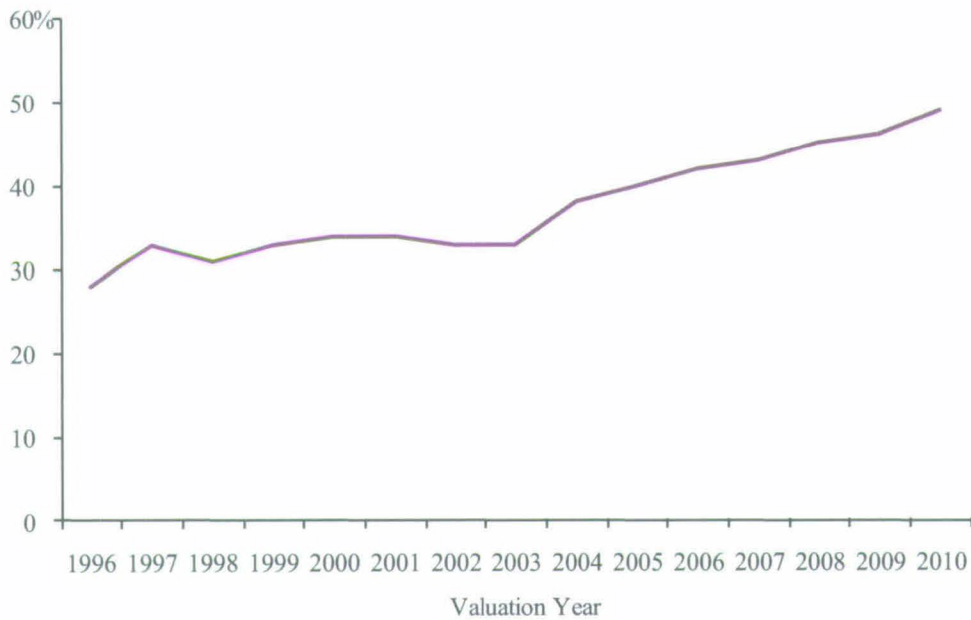
Contributions for	Contribution Requirements Expressed as Percents of Payroll
Normal Cost	
Age & service benefits	18.51 %
Death-in-service benefits	0.89
Disability benefits	0.86
Termination benefits	
Deferred age & service benefits	0.18
Refunds of member contributions	0.57
Total normal cost	21.01 %
Unfunded Actuarial Accrued Liabilities	
Total UAAL Contribution	12.20 %
Total Computed Contribution Rate	
Member portion	8.00
City-State portion	25.21 %

Unfunded actuarial accrued liabilities (UAAL) 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-STATE PENSION CONTRIBUTIONS
COMPARATIVE STATEMENT**

Fiscal Year	Valuation Date December 31	% of Payroll Contributions
1998	1996	19.80
1999	1997 @	16.77
2000	1998 @	14.43
2001	1999 **	10.48
2002	2000 **	7.86
2003	2001 **	7.23
2004	2002 **	9.31
2005	2003	11.12
2006	2004 @	16.21
2007	2005	17.14
2008	2006	15.99
2009	2007 @	16.36
2010	2008	19.97
2011	2009	24.55
2012	2010	25.21

@ After changes in actuarial assumptions or methods.

** Reflects amortization credit.

ACTUARIAL PENSION BALANCE SHEET - DECEMBER 31, 2010

Present Pension Resources and Expected Future Resources

A.	Valuation assets	\$ 96,339,891
B.	Actuarial present value of expected future employer contributions	
	1. For normal costs	15,695,909
	2. For unfunded actuarial accrued liabilities	<u>14,370,042</u>
	3. Total	30,065,951
C.	Actuarial present value of expected future member contributions	<u>9,697,911</u>
D.	Total actuarial present value of present and expected future resources	<u><u>\$136,103,753</u></u>

Actuarial Present Value of Expected Future Pension Benefit Payments and Reserves

A.	To retirees and beneficiaries	\$ 73,447,548
B.	To vested terminated members	1,404,203
C.	To present active members	
	1. Allocated to service rendered prior to valuation date	35,858,182
	2. Allocated to service likely to be rendered after valuation date	<u>25,393,820</u>
	3. Total	<u>61,252,002</u>
D.	Reserves	
	1. Allocated to retirants and beneficiaries	0
	2. Unallocated investment income	0
	3. Total	0
E.	Total actuarial present value of expected future benefit payments and reserves	<u><u>\$136,103,753</u></u>

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

The actuarial gains or losses realized in the operation of the Pension Fund 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. Detail on the derivation of the actuarial gain (loss) is shown below, along with a year by year comparative schedule.

(1) UAAL* at start of year	\$14,797,200
(2) Normal cost	2,291,836
(3) Actual contributions	3,120,473
(4) Interest accrual	1,114,673
(5) Expected UAAL before changes	15,083,236
(6) Change from benefit increases	
(7) Change from revised actuarial methods	
(8) Expected UAAL after changes	15,083,236
(9) Actual UAAL at end of year	14,370,042
(10) Gain (loss) (8) - (9)	713,194
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year	0.7%

* *Unfunded actuarial accrued liability*

Valuation Date December 31	Actuarial Gain (Loss) As % of Beginning Accrued Liabilities
2001	0.9 %
2002	(3.6)
2003	(2.9)
2004	(4.3)
2005	(0.9)
2006	1.8
2007	3.1
2008	(4.6)
2009	(5.7)
2010	0.7

COMMENTS

Comment A: Pension Fund experience was overall 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 Pension Fund 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 Pension Fund, 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 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 retiree health contributions are subordinate to pension contributions as of December 31, 2007. As a result, the plan has not violated the subordination limit imposed by IRC Section 401(h). We recommend that this analysis be conducted in 2011 to ensure continued compliance with the IRC requirements.

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. 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.

CONTRIBUTION SUMMARY FOR THE FISCAL YEAR BEGINNING JANUARY 1, 2012

Contributions for	Computed Employer Contributions Expressed As Percents of Payroll		
	Pension	Health	Total
Total Normal Cost	21.01 %	5.37 %	26.38 %
Unfunded Actuarial Accrued Liability Total UAAL Contribution ⁽¹⁾	12.20	4.28	16.48
Total Computed Contribution Rate	33.21	9.65	42.86
Member Portion	8.00	0.00	8.00
City-State Portion	25.21 %	9.65 %	34.86 %

⁽¹⁾ The pension contribution was based on a 13 year amortization of the UAAL. The retiree health contribution was based on a 25 year amortization of the UAAL.

Pension and Retiree Health Funded Ratio History



SECTION B
SUMMARY OF BENEFIT PROVISIONS
AND VALUATION DATA

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

Regular Retirement:

Eligibility - Age 55 with 20 or more years of service; or the sum of a member's age and years of service equals eighty (80) with a minimum retirement age of 50.

Annual Amount - Final average compensation 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 Compensation - Average of last 3 years before retirement. 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 - 15 years of service; benefit payable at deferred retirement age.

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

Duty Disability Retirement:

Eligibility - No age or service requirements. Must be in receipt of Workers' Compensation.

Annual Amount - Computed as a regular retirement benefit, based on a minimum of 10 years of service. Minimum benefit is 50% of a first-class firefighter's salary. Workers' 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. Minimum benefit is 20% of a first-class firefighter's salary.

Duty Death Before Retirement:

Eligibility - No age or service requirement. Also payable in case of death of duty-disability retiree within 5 years of retirement. Workers' Compensation must be payable.

Annual Amount - Refund of accumulated contributions. Spouse receives a pension of 1/3 of first-class firefighter's salary until death. Unmarried children under age 18 or an eligible handicapped child will receive equal share of 1/4 of a first-class firefighter's salary (if no spouse, each child receives 1/4 to a maximum of 1/2). The minimum monthly benefit for each eligible child is \$200. If there are no spouse or eligible children, dependent parents each receive 1/6 of a first-class firefighter's salary. Workers' Compensation payments are offset.

Non-Duty Death Before Retirement:

Eligibility - 10 years of service.

Annual Amount - Surviving spouse receives a monthly benefit for life computed as a regular retirement benefit but actuarially reduced in accordance with a 100% joint and survivor election. In addition each eligible or handicapped child is paid a minimum monthly benefit of \$200.

Post-Retirement Cost-of-Living Adjustments:

An annual increase equal to 100% of the June CPI change each year with a cap of 3%. The first increase is granted after 36 months of retirement.

Member Contributions:

8% of compensation.

REPORTED FUND BALANCES

Reserves	Reported Fund Balances Market Value 2010
Pension Savings Fund	\$ 9,927,183
Pension Reserve Fund	28,862,712
Retirement Reserve Fund	53,482,565
IRC 401(h)	4,746,328
Income/Expense Fund	123,282
Total Fund Balances	\$97,142,070

In financing pension actuarial accrued liabilities, valuation assets were distributed as follows:

Reserves	Valuation Assets Applied to Actuarial Accrued Liabilities for			Totals
	Active & Inactive Members	Retirees & Beneficiaries	Contingency Reserve	
Pension Savings Fund	\$ 9,927,183			\$ 9,927,183
Pension Reserve and Income/Expense Fund	12,965,160	\$19,964,983		32,930,143
Retirement Reserve Fund		53,482,565		53,482,565
Total	\$22,892,343	\$73,447,548	\$ 0	\$96,339,891

DERIVATION OF VALUATION ASSETS

	<u>Pension</u>	<u>Health</u>	<u>Total</u>
A. Funding Value, 12/31/09	\$93,760,099	\$4,095,878	\$97,855,977
B. Market Value, Beginning of Year	82,903,797	3,634,613	86,538,410
C. Non-Investment Net Cash Flow	(2,125,585)	564,292	(1,561,293)
D. Net Investment Income	11,617,530	547,423	12,164,953
E. Market Value, End of Year	92,395,742	4,746,328	97,142,070
F. Phase-in Factor	20%	20%	20%
G. Expected Income	7,184,041	339,297	7,523,338
H. Market Value Gain (Loss): [(D) – (G)]	4,433,489	208,126	4,641,615
I. Method Change			
J. Recognition of Gain (Loss)			
J1. Year One	886,698	41,625	928,323
J2. Year Two	1,783,548	78,193	1,861,741
J3. Year Three	(6,530,921)	(236,873)	(6,767,794)
J4. Year Four	124,273	3,448	127,721
J5. Year Five	1,257,738	25,668	1,283,406
J6. Total (J1...J5)	(2,478,664)	(87,939)	(2,566,603)
K. Funding Value, 12/31/10 [(A) + (C) + (G) + (J6)]	96,339,891	4,911,528	101,251,419
L. Funding Value Rate of Return	5.08%	5.74%	5.11%
M. Market Value Rate of Return	14.20%	13.98%	14.19%

**ASSET INFORMATION REPORTED FOR VALUATION
COMPARATIVE STATEMENT - MARKET VALUE**

Year Ended Dec. 31	Assets Beginning of Year	Revenues			Expenses			Assets Year-End
		Member Contrib.	Employer Contrib.	Investment Income	Retirement Benefits	Contrib. Refunds	Other Net Expenses*	
1996	\$37,400,456	\$362,418	\$ 1,360,279	\$5,973,417	\$ 1,463,323	\$ 50,390	\$219,510	\$43,363,348
1997	43,363,348	359,362	1,323,058	7,868,506	1,742,134	101,303	234,342	50,836,495
1998	50,836,495	384,425	1,400,438	6,319,530	1,884,691	2,132	240,655	56,813,410
1999	56,813,410	388,242	1,216,206	9,134,505	1,970,490	46,532	213,541	65,321,800
2000	65,321,800	377,237	1,034,177	491,515	2,082,927	9,920	231,827	64,900,056
2001	64,900,056	549,024	878,260	(913,594)	2,275,493	0	263,426	62,874,827
2002	62,874,827	612,637	837,636	(6,425,470)	2,454,162	11,921	336,984	55,096,563
2003	55,096,563	694,919	964,605	14,505,737	2,646,885	12,667	401,224	68,201,048
2004	68,201,048	729,784	1,269,502	9,856,321	3,130,455	27,170	366,281	76,532,749
2005	76,532,749	733,442	1,448,282	6,666,149	3,460,068	1,038	467,077	81,452,439
2006	81,452,439	804,140	2,096,083	12,813,932	3,755,563	133,085	539,948	92,737,998
2007	92,737,998	832,892	2,716,461	7,602,334	4,173,282	42,932	611,256	99,062,215
2008	99,062,215	856,843	2,685,905	(26,092,662)	4,440,801	22,529	633,148	71,415,823
2009	71,415,823	926,257	2,852,790	16,900,840	4,930,354	43,069	583,877	86,538,410
2010	86,538,410	887,101	3,171,070	12,255,865	5,211,418	34,640	464,318	97,142,070

* Includes retiree medical benefits.

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

Year Ended Dec. 31	Additions		Removals		End of Year Totals		Average Annual Benefits	Present Value of Benefits	Expected Removals
	No.	Annual Benefits	No.	Annual Benefits	No.	Annual Benefits			
1996	7	\$200,639	3	\$47,373	91	\$ 1,618,175	\$17,782	\$20,838,557	3.5
1997	10	297,375	2	25,146	99	1,890,404	19,095	25,386,453	3.5
1998	1	61,918	4	28,128	96	1,924,194	20,044	25,677,303	3.1
1999	3	159,701	2	19,218	97	2,064,677	21,285	27,618,722	2.8
2000	4	91,635	2	6,150	99	2,150,162	21,719	28,364,586	3.0
2001	5	204,618	4	38,747	100	2,316,033	23,160	30,488,652	3.2
2002	7	256,583	5	60,380	102	2,512,236	24,630	33,161,976	3.0
2003	17	266,239	7	21,520	112	2,756,955	24,616	36,127,984	2.9
2004	13	538,951	3	39,371	122	3,256,535	26,693	42,695,611	3.1
2005	8	339,439	2	35,965	128	3,560,009	27,813	46,338,790	3.3
2006	9	484,345	4	76,783	133	3,967,571	29,831	52,332,720	3.6
2007	7	371,127	3	31,735	137	4,306,963	31,438	57,295,812	3.7
2008	9	527,492	5	160,035	141	4,674,420	33,152	64,060,877	3.8
2009	14	567,145	6	83,800	149	5,157,765	34,616	70,864,899	3.9
2010	7	299,458	5	108,324	151	5,348,899	35,423	73,447,548	3.9

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

<u>Type of Benefits Being Paid</u>	<u>No.</u>	<u>Annual Benefit</u>
Age and Service Benefits*	115	\$4,688,365
Disability Retirement Benefits*	8	122,029
Survivor Benefits	28	538,505
Total	151	\$5,348,899

* *Includes survivors.*

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

Attained Ages	No.	Annual Pensions
Under 40	2	\$ 4,800
45 - 49	1	37,279
50 - 54	15	624,831
55 - 59	40	1,735,819
60 - 64	30	1,071,737
65 - 69	13	570,548
70 - 74	18	654,588
75 - 79	10	276,714
80 - 84	15	286,237
85 +	7	86,346
Total	151	\$5,348,899

**VESTED DEFERRED RETIREMENTS BY ATTAINED AGES
AS OF DECEMBER 31, 2010**

<u>Attained Ages</u>	<u>No.</u>	<u>Annual Pensions</u>
50-54	2	\$ 91,963
55-59	1	25,174
Totals	3	\$117,137

ACTIVE MEMBERS INCLUDED IN VALUATION

Valn. Date Dec. 31	Active Members			Vested Term.	Valuation	Average			%
	Chiefs	Other	Total	Members	Payroll	Age	Service	Pay	Incr.
1996	6	142	148		\$5,791,398	41	14.4	\$39,131	1.9 %
1997	5	144	149		5,673,224	40	13.4	38,057	(2.7)
1998	13	136	150	2	6,254,807	41	13.9	41,699	9.6
1999	12	137	149	2	6,265,176	42	14.2	42,048	0.8
2000	12	138	150	2	6,236,863	42	14.9	41,579	(1.1)
2001	11	140	151	3	6,860,428	42	14.9	45,433	9.3
2002	13	149	162	3	7,634,337	41	13.7	47,126	3.7
2003	13	151	164	4	8,354,041	41	13.2	50,939	8.1
2004	12	151	163	4	8,624,759	41	12.5	52,913	3.9
2005	12	154	166	4	8,917,110	41	12.3	53,718	1.5
2006	12	166	178	5	9,493,382	40	10.7	53,334	(0.7)
2007	11	166	177	4	9,991,111	40	10.9	56,447	5.8
2008	12	170	182	4	10,461,858	40	10.5	57,483	1.8
2009	13	166	179	3	11,189,155	40	10.4	62,509	8.7
2010	12	168	180	3	10,913,504	40	10.6	60,631	(3.0)

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

Year Ended Dec. 31	Number Added During Year		Active Normal Retirement		Disability Retirement		Died-In- Service		Other Terminations		Members End of Year
	A	E	A	E	A	E	A	E	A	E	
2001	6	5	4	2.5	0	0.3	0	0.2	1	2.8	151
2002	21	10	7	2.5	0	0.2	0	0.3	3	2.7	162
2003	12	10	6	2.9	0	0.3	1	0.2	3	4.5	164
2004	11	12	10	4.1	0	0.2	1	0.2	1	4.7	163
2005	9	6	4	3.9	1	0.1	0	0.2	1	3.1	166
2006	24	12	9	4.0	0	0.2	0	0.2	3	3.0	178
2007	7	8	5	2.9	0	0.1	0	0.2	3	3.9	177
2008	13	8	6	1.5	1	0.2	0	0.2	1	3.4	182
2009	8	11	8	2.0	0	0.2	1	0.2	2	3.6	179
2010	8	7	5	2.4	0	0.2	0	0.2	2	3.3	180
5 Year Totals	60	46	33	12.8	1	0.9	1	1.0	11	17.2	

A represents actual number

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

**ACTIVE FIREFIGHTER 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	2							2	\$ 83,404
25-29	15							15	672,769
30-34	15	18	3					36	1,988,111
35-39	13	11	4	1				29	1,590,854
40-44	8	10	7	6				31	1,795,443
45-49	3	6	7	6	11	1		34	2,263,915
50-54		4	3		5	3		15	1,019,625
55-59		1	1		3	1		6	415,114
Totals	56	50	25	13	19	5		168	\$9,829,235

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

Age: 39.9 years

Service: 9.9 years

Annual Pay: \$58,507

**ACTIVE MEMBER BATTALION CHIEFS
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.	Payroll
40-44			2	2				4	\$ 342,218
45-49					2			2	164,422
50-54	1					4		5	492,499
55-59					1			1	85,130
Totals	1		2	2	3	4		12	\$1,084,269

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

Age: 48.2 years

Service: 20.0 years

Annual Pay: \$90,356

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 payroll payment 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 member 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:

- long-term rates of investment return to be generated by the assets of the system
- patterns of pay increases to members
- rates of mortality among members, retirees and beneficiaries
- rates of withdrawal of active members
- rates of disability among active members
- 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 section of the report.
 - (2) An acceleration in the rate of retirement from the rates outlined in this section of the 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).

Asset Valuation Method

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 this 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 3.50% per year plus a long-term rate of wage inflation of 4.25% per 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 comparison with assumed rates, are shown below.

	Year Ended December 31,				
	2010	2009	2008	2007	2006
Rate of Investment Return	5.1%	4.2%	3.2%	12.9%	10.1%

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

Service (Years)	Annual Rate of Pay Increase for Sample Ages		
	Base (Economic)	Merit and Longevity	Total
1-5	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
10-14	4.25	1.00	5.25
15	4.25	0.00	4.25

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	(3.0) %	8.7 %	1.8 %	5.8 %	(0.7) %
Total payroll	(2.5)	7.0	4.7	5.2	6.5

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	Current Rates Percent Separating within Next Year
ALL	0	7.0 %
	1	6.0
	2	5.0
	3	4.0
	4	3.0
25	5 & Over	2.5
30		2.0
35		1.5
40		1.0
45		0.5
50		-
55		-
60		-

The current rates were first used in 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.

Percents of Active Members Retiring within the Next Year

Retirement Ages	Regular Retirement Rates	Service (Yrs)	Early Retirement Rates
50	40 %	20	2 %
51	40	21	2
52	40	22	2
53	40	23	2
54	40	24	2
55	30	25	2
56	20	26	2
57	15	27	2
58	15	28	2
59	15	29	2
60 & Over	100	30 & Over	2

A member was assumed to be eligible for regular retirement after attaining age 55 and completing 20 or more years of service, or if the sum of age and service equals eighty (80). A member was 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.

Lump sum payments included in the calculation of the average pay upon which benefits are computed were assumed to increase benefits by 15%.

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

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 benefits" 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.

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.

DEFINITIONS OF TECHNICAL TERMS

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).

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Marriage Assumption:	80% of participants are assumed to be married for purposes of death and retiree health benefits. In each case males were assumed to be 3 years older than females.
Pay Increase Timing:	Beginning of year.
Decrement Timing:	Decrements of all types are assumed to occur mid-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.
Other:	Disability and turnover decrements do not operate during retirement eligibility.
Miscellaneous Loading Factors:	The calculated retirement benefits were increased by 15% 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.
Disability Assumption:	Fifty percent of disabilities were assumed to be duty related. Fifty 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).
Death Assumption:	Fifty percent of deaths were assumed to be duty related and fifty percent were assumed to be unrelated to duty.
Non-forfeiture Assumption:	All vested terminated members were assumed to elect a deferred retirement benefit.

SECTION D
DISCLOSURES REQUIRED BY GASB STATEMENTS
NO. 25 AND NO. 27

REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Pension Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a % of Covered Payroll (b-a)/c
2001	\$66,493,766	\$ 63,521,558	\$ (2,972,208)	104.7	\$ 6,860,428	- %
2002	67,851,962	66,935,547	(916,415)	101.4	7,634,337	-
2003	70,428,739	71,553,948	1,125,209	98.4	8,354,041	13.5
2004	72,736,709	78,146,993	5,410,284	93.1	8,624,759	62.7
2005	75,974,775	82,553,914	6,579,139	92.0	8,917,110	73.8
2006	82,154,884	87,164,271	5,009,387	94.3	9,493,382	52.8
2007	91,114,339	95,560,890	4,446,551	95.3	9,991,111	44.5
2008	92,122,034	100,976,694	8,854,660	91.2	10,461,858	84.6
2009	93,760,099	108,557,299	14,797,200	86.4	11,189,155	132.2
2010	96,339,891	110,709,933	14,370,042	87.0	10,913,504	131.7

Schedule of Employer Pension Contributions

Valuation Year Ended December 31	Fiscal Year Ended December 31	Contribution Rates as % of Valuation Payroll	Computed Dollar Contributions	Actual Contributions	% Contributed
2001 #	2003	7.23 %	\$ 518,329	\$ 653,835	100 %
2002 #	2004	9.31	742,741	890,875	100
2003	2005	11.12	992,375	1,053,254	100
2004 ^	2006	16.21	1,526,731	1,683,121	100
2005	2007	17.14	1,669,043	1,826,253	100
2006	2008	15.99	1,657,685	1,695,167	100
2007 ^	2009	16.36	1,776,435	1,877,096	100
2008	2010	19.97	2,270,592	2,233,372	98
2009	2011	24.55	2,985,389		
2010	2012	25.21	2,990,124		

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 can 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 assumptions:	
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 in June with a cap of 3% beginning 3 years after retirement.

Membership of the plan consisted of the following at December 31, 2010, the date of the latest actuarial valuation:

Retirees and beneficiaries receiving benefits	151
Terminated plan members entitled to but not yet receiving benefits	3
Active plan members	<u>180</u>
Total	334

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

Age	Monthly Pre-65 Rates at Sample Ages	
	Male	Female
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
Retiree Only	\$36.88
Retiree & Spouse	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)	\$373.62
Health Care Premiums (Retiree & Spouse)	792.35
Dental Premiums (Retiree Only)	19.12
Dental Premiums (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

Future Health Cost Increases		
Year Beginning December 31,	Medical & Rx	Dental
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

Retiree paid premiums were assumed to increase at the rates shown above.

Cumulative Aging Factors at Select Ages

Age	Male	Female
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 THE FISCAL YEAR BEGINNING JANUARY 1, 2012**

Contributions for	Contribution Requirements Expressed as Percents of Payroll
Total NC%	5.37 %
-Employee %	<u>0.00</u>
-Employer %	5.37 %
UAL%	<u>4.28</u> %
Total Employer Contribution %	9.65 %
First Year \$ Contribution	\$1,144,573

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

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF FUNDING PROGRESS FOR
THE RETIREE HEALTH PLAN**

Actuarial Valuation Date Dec. 31	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
2006	\$1,711,122	\$11,225,140	\$ 9,514,018	15.2 %	\$ 9,493,382	100.2 %
2007 [^]	2,542,036	10,835,013	8,292,977	23.5	9,991,111	83.0
2008	3,296,432	10,706,694	7,410,262	30.8	10,461,858	70.8
2009	4,095,878	11,596,630	7,500,752	35.3	11,189,155	67.0
2010	4,911,528	13,027,364	8,115,836	37.7	10,913,504	74.4

[^] *New methods or assumptions adopted.*

**REQUIRED SUPPLEMENTARY INFORMATION
SCHEDULE OF EMPLOYER HEALTH CONTRIBUTIONS**

Valuation Year Ended Dec. 31	Fiscal Year Ended Dec. 31	Contribution Rate as a % of Valuation Payroll	Annual Required Contribution (ARC)	Actual Contributions	Percentage Contributed
2005	2007	8.91%	\$ 867,630	\$ 890,208	100.0 %
2006	2008	9.47%	981,756	990,738	100.0
2007 [^]	2009	8.72%	946,853	975,694	100.0
2008	2010	8.33%	947,122	937,698	99.0
2009	2011	8.35%	1,015,397		
2010	2012	9.65%	1,144,573		

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	51
Active plan members	<u>180</u>
Total number of current and former City employees who are members of the Retiree Health Plan	231