

**CITY OF JOLIET FIREFIGHTERS' PENSION FUND**  
**ANNUAL ACTUARIAL VALUATION**  
**FOR THE YEAR BEGINNING**  
**JANUARY 1, 2010**

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October 8, 2010

The Pension Board  
City of Joliet Firefighters' Pension Fund  
Joliet, Illinois

Dear Board Members:

We are pleased to provide our formal annual Actuarial Valuation Report as of January 1, 2010, covering the City of Joliet Firefighters' Pension Fund. This report provides, among other things, the minimum annual contribution requirements of the Plan for the Plan Year commencing January 1, 2010, and ending on December 31, 2010 (which directly affects the City's tax levy in the 2011 fiscal year that is collected and deposited into the Pension Trust in fiscal year 2011). This valuation was based on the plan provisions as outlined in Section B of this report, the Plan participant data as provided by the City of Joliet (i.e., Plan Sponsor), and on the actuarial cost method and the set of actuarial assumptions as described in Section C of the report.

Chapter 40, Act 5, Article 4 of the Illinois Compiled Statutes requires an actuarial balance sheet (i.e., actuarial valuation) be prepared by a qualified actuary in order to determine the annual tax levy to meet the annual actuarial requirements of the Pension Fund. Alex Rivera and Lance Weiss of Gabriel, Roeder, Smith & Company have the following qualifications:

**Alex Rivera** is a Fellow of the Society of Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary with over 20 years of responsible experience in the actuarial and pension consulting field.

**Lance Weiss** is a Fellow of the Conference of Consulting Actuaries, a Member of the American Academy of Actuaries, and an Enrolled Actuary with over 30 years of responsible experience in the actuarial and pension consulting field.

It is our understanding, in accordance with the Illinois Compiled Statutes, that the undersigned more than satisfy the minimum requirements as set forth in the referenced Pension Code as recently amended.

In addition, it is also our understanding that the Pension Code requires that a member of the American Academy of Actuaries perform the required annual actuarial valuation and does not mandate that the Illinois Department of Insurance's annual actuarial valuation of the Pension Fund be controlling or that the Department of Insurance accept or approve another actuarial valuation of the Pension Fund.

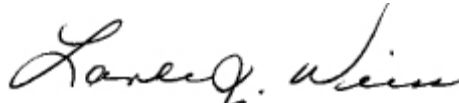
Both of the undersigned are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries (MAAA) to render the actuarial opinion contained herein.

We will be pleased to review this report with you at your convenience.

Sincerely,



Alex Rivera, F.S.A., M.A.A.A.  
Senior Consultant



Lance Weiss, F.S.A., M.A.A.A.  
Senior Consultant

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**SECTION A**

VALUATION RESULTS

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## SUMMARY OF ACTUARIAL VALUATION RESULTS

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	Prior Year Results	Current Year Results
<b>Employee</b> Number of Active Firefighters	211	207
<b>Data</b> Number of Service Retirees	72	75
Number of Disabled Lives	28	27
Number of Widow Beneficiaries	30	29
Number of Children Beneficiaries	1	0
Number of Separated Deferred Firefighters	1	1
Number of Handicapped Beneficiaries	0	0
<b>TOTAL</b>	343	339
Total Annual Salaries of Firefighters	\$ 17,828,326	\$ 19,834,928
<b>Plan</b> Gross Annual Normal Cost	\$ 5,300,910	\$ 5,884,807
<b>Liabilities</b> Less Expected Member Contributions (for Applicable Plan Year)	1,685,668	1,875,392
Net Annual Normal Cost (Municipality Paid)	\$ 3,615,242	\$ 4,009,415
Net Annual Normal Cost (As a percentage of pay) <sup>1</sup>	20.3 %	20.2 %
Gross Actuarial Accrued Liability:		
Active Firefighters	\$ 67,227,851	\$ 76,399,818
Retirees, Beneficiaries & Disabled	95,840,009	99,812,325
<b>TOTAL</b>	\$ 163,067,860	\$ 176,212,143
Actuarial Value of Assets at Valuation Date	\$ 79,540,394	\$ 77,020,328
Unfunded (Overfunded) Actuarial Accrued Liability	\$ 83,527,466	\$ 99,191,815
<b>Funded Position of Plan's Gross Actuarial Accrued Liability</b> <sup>2</sup>	48.8 %	43.7 %

<sup>1</sup> Percents above represent annual plan contributions expressed as percentages of covered Firefighters' salaries.

<sup>2</sup> Equals the ratio of the actuarial value of assets to the total gross actuarial accrued liability.

**SUMMARY OF ACTUARIAL VALUATION RESULTS  
(CONTINUED)**

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		<b>Prior Year Results</b>	<b>Current Year Results</b>
<b><i>Minimum Annual Contribution Requirements</i></b>	Net Annual Normal Cost (Municipality Paid)	\$3,615,242	\$4,009,415
	Annual Amortization Payments for Funding Unfunded Actuarial Accrued Liability Over 40 Years from July 1, 1993 as a level percentage of payroll	4,667,087	5,705,747
	Interest Adjustment to Expected Date of Payment into the Fund (Optional)	884,690	1,037,741
	Total Minimum Annual Contribution Requirement for the Current Plan Year	\$9,167,019	\$10,752,903
	Minimum Annual Contribution (As a percentage of pay)	51.4%	54.2%

**DERIVATION OF EXPERIENCE GAIN (LOSS)  
YEAR ENDED JANUARY 1, 2010**

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Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is expected that gains and losses will cancel each other over time, but year-to-year fluctuations are not uncommon. Detail on the derivation of the experience gain (loss) is shown below, along with a year-by-year comparative schedule.

1. Unfunded Actuarial Accrued Liability at 01/01/2009		\$ 83,527,466
2. Normal Cost Due at 01/01/2009		5,300,910
3. Interest on (1) and (2) to 12/31/2009 (at 7.00% per annum)		6,217,986
4. Contributions (Employer and Employee) applicable to the 2009 Plan Year, with interest to 12/31/2009		10,827,487
5. Expected Unfunded Actuarial Accrued Liability at 01/01/2010 [(1) + (2) + (3) - (4)]		\$ 84,218,875
6. Actual Unfunded Actuarial Accrued Liability at 01/01/2010		\$ 99,191,815
7. Gain (Loss) for the 2009 Plan Year [(5) - (6)]		\$ (14,972,940)

<b>Valuation Date January 01</b>	<b>Experience Gain (Loss) As % of Accrued Liability at the Prior Valuation Date <sup>1</sup></b>
2000	(6.08)%
2001	1.15 %
2002	(0.13)%
2003	(6.65)%
2004	(2.42)%
2005	(0.88)%
2006	(0.89)%
2007	(9.08)%
2008	(2.66)%
2009	(4.45)%
2010	(9.18)%

<sup>1</sup> Excluding Plan and assumption changes.



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## COMMENTS AND ANALYSIS

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The valuation results pertaining to the current Plan Year are analyzed and discussed in the following paragraphs.

### *Plan History*

The following table provides a summary of the Plan's rate of return on assets and salary increase experience over the last 20 actuarial valuations performed by Gabriel, Roeder, Smith & Company:

<b>Plan Year Ending</b>	<b>Rate of Return On Plan Assets</b>	<b>Salary Scale Increase</b>
12/31/1990	8.0 %	2.6 %
12/31/1991	8.1	7.6
12/31/1992	7.3	6.3
12/31/1993	6.4	5.7
12/31/1994	4.5	7.7
12/31/1995	12.0	9.1
12/31/1996	5.9	8.2
12/31/1997	11.3	5.5
12/31/1998	9.7	11.1
12/31/1999	7.9	15.5
12/31/2000	(1.2)	4.5
12/31/2001	(1.0)	7.3
12/31/2002	(1.4)	6.4
12/31/2003	9.4	7.2
12/31/2004	6.8	10.9
12/31/2005	4.4	7.8
12/31/2006	7.8	6.9
12/31/2007	5.7	10.0
12/31/2008	(13.3)	5.8
12/31/2009	8.2	14.2

The Salary Scale increase has averaged 8.0% over the last 20 years. We believe the 5.25% salary scale continues to be a reasonable long-term assumption. The salary scale recognizes that members with less than three years of service receive higher pay increases.

As part of each annual valuation, we will review salary scale increases and determine whether the current assumption continues to be appropriate.

Over the same 20-year period, the Plan's assets have averaged an annual rate of investment return of 5.2%. We believe the 7.00% annual rate of return on Plan assets is within the range of reasonable assumptions. However, we recommend that the City monitor this assumption for continuing reasonableness at each future valuation.

**COMMENTS AND ANALYSIS  
(CONTINUED)**

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<b><i>Analysis of the Experience Gain (Loss)</i></b>	The experience gain(loss) reported on page A-3, is the net result of the following:	
	(a) From plan asset performance	\$ (11,202,644)
	(b) Other sources ("net effect" of salary increases, terminations, new entrants, retirements, etc.)	(3,770,296)
	Total Gain/(Loss): [(a) + (b)]	\$ (14,972,940)

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***Changes in the Annual Contribution***      The dollar amount of the plan's annual minimum required contribution (\$10,752,903) is approximately 17.3% higher than the level for the prior plan year (\$9,167,019). As a percentage of payroll, the contribution requirement is higher than last year (i.e., increasing from 51.4% to 54.2%). The important factors producing this change are summarized as follows:

1.	Minimum Annual Contribution Requirement for prior plan year without amendatory Act of the 93rd General Assembly	\$ 8,404,530
2.	Actual Asset Performance (based on actuarial value of assets)	713,235
3.	Increase in Normal Cost and Amortization Amount due to anticipated pay increases	366,681
4.	Changes in Plan Provisions due to the <sup>1</sup> amendatory Act of the 93rd General Assembly	765,339
5.	Other Sources (demographic (gains)/losses)	503,118
6.	Minimum Annual Contribution Requirement for current plan year (sum of items 1 through 6)	\$ 10,752,903

<sup>1</sup>(P.A. 93-0689, effective 7-1-04.)

## COMMENTS AND ANALYSIS (CONTINUED)

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*Comments on  
Actuarial Value of  
Assets*

Government accounting standards mandate the use of market value of assets or market-related value of assets for accounting purposes. The Pension Fund used market-related value of assets for both government accounting and funding purposes. This market-related value of assets will recognize gains and losses due to return on plan assets over a four-year period. Hence, only a portion of this year's investment loss (see Section B for details) is included in the current year actuarial value of assets. The remainder of the gain or loss will be incorporated into Pension Fund assets over the next three years. The purpose of this technique is to minimize contribution volatility due to fluctuations in the market value of assets. Finally, receivables for plan years prior to the current plan year which are not in Plan assets by December 31, 2009, are not included in assets for Government accounting standards purposes but are included in assets for funding purposes.

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*GASB Statements  
No. 25 and 27*

GASB Statement No. 25 is applicable to fiscal years beginning after June 15, 1996. It was adopted by the City of Joliet Firefighters Pension Fund in the January 1997 report. GASB Statement 27 is applicable to fiscal years beginning after June 15, 1997. It was adopted by the City of Joliet Firefighters Pension Fund in the January 1998 report. A transition pension liability (asset) has been developed under Statement No. 27 equal to the cumulative difference between the actuarially determined funding requirement and the actual amount contributed for fiscal years 1987 to the date GASB 27 is adopted. As of the adoption date, all outstanding pension liabilities (assets) are adjusted to equal the transition NPO. Section D of this report provides further details and explanations on these regulations.

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**SECTION B**

**BENEFIT PROVISIONS AND VALUATION DATA**

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**BRIEF SUMMARY OF PLAN PROVISIONS**  
**(JANUARY 1, 2010)**

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***Plan*** Firefighters Pension Fund as Incorporated in Chapter 40, Act 5, Article 4 of the Illinois Compiled Statutes.

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***Effective Date*** Enacted: March 18, 1963

Last Amended Effective: August 28, 2009

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***Eligibility to Participate*** Generally, any person who is in the Firefighters Department of a city, village or incorporated town (whose population is 500,000 or less) which has adopted the provisions of Chapter 40, Act 5, Article 4 of the Illinois Compiled Statutes concerning Firefighters' pensions, is eligible to participate, subject to the following:

- (a) The person has attained age 18 but not age 35 at the time of the first appointment; and
- (b) Within three months after receiving his/her first appointment (or within three months after any re-appointment), the person makes written application to the Board to be covered under the provisions of the Article.

**NOTE:**

If the person had been regularly enrolled as a volunteer Firefighter for 5 years immediately preceding the time that the municipality began employing him/her full time, the age limitation in (a) above does not apply.

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## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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***Employee  
Contributions  
(Mandatory)***

In order to participate in the plan, each Firefighter must contribute 9.455% of his/her regular salary. "Salary" in this instance excludes overtime pay, holiday pay, bonus pay, merit pay or any other cash benefit over and above the salary established by the appropriation ordinance. Prior to July 1, 2004, each Firefighter had to contribute 8.455% of his/her regular salary.

***Creditable Service***

"Creditable Service" is the time period during which a person serves as a Firefighter of a municipality. Furloughs and Leave of Absences without pay exceeding 30 days in any one year are not counted unless such periods are attributable to illness or accident. Time attributable to disability absence for which the Firefighter does not receive disability pension benefits will be counted as "Creditable Service".

Furloughs and Leave of Absence less than 30 days in any one year may be included in "Creditable Service" if the Firefighter makes the regular employee contributions to the Fund he/she would have made if he/she had not been on the furlough or leave of absence. Such contributions must be made not more than 90 days following the end of the furlough or leave of absence.

In addition, all periods of service in the Military, Naval or Air Forces of the United States of America, entered into when the person was an active Firefighter and up to eight Years of Service as an officer in a statewide firefighters' association while on leave of absence from a municipality's payroll, shall be counted as "Credited Service", provided that the Firefighter contributes to the Fund the amount he/she would have paid had he/she been a regular contributor during such military service; in general, not more than five years may be counted under this provision. Credited Service shall not include time spent as a volunteer Firefighter whether or not compensation was received.

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***Eligibility For and  
Amount of Regular  
Retirement Benefits***

***I. Eligibility —  
Age 50 (or  
More) and 20  
or More Years  
of Creditable  
Service***

Benefit: A Firefighter who is age 50 (or more) and has 20 years or more of Creditable Service and is no longer a Firefighter is entitled to 1/2 of the monthly salary attached to the rank held by him/her at the date of actual retirement.

For Creditable Service over 20 years, the monthly pension is increased as follows:

- 1/12 of 2.5% of the Firefighter's monthly salary for each additional year over 20 to the limitation that the monthly pension does not exceed 75% of his/her monthly salary.

**BRIEF SUMMARY OF PLAN PROVISIONS**  
**(CONTINUED)**

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Notwithstanding the above, as of January 1, 1999, no Pension in effect or granted with 20 or more Years of Service after May 1, 1993 is to be less than \$600.00 per month. This minimum is increased to \$800.00 per month on January 1, 2000, \$1,000.00 per month on January 1, 2001, \$1,030.00 per month on July 1, 2004, \$1,060.90 per month on July 1, 2005, \$1,092.73 per month on July 1, 2006, \$1,125.51 per month on July 1, 2007, \$1,159.27 per month on July 1, 2008.

**II. Eligibility—  
Age 60 (or  
More) and 10  
(but Less than  
20) Years of  
Creditable  
Service**

A Firefighter who is age 60 or more and has at least 10 Years (but less than 20) of Creditable Service and who is no longer a Firefighter, is entitled to a monthly pension payable for life based on the monthly salary attached to the rank held by him/her at the date of retirement or separation from service according to the following schedule:

For 10 Years of Service —	15.0% of salary;
For 11 Years of Service —	17.6% of salary;
For 12 Years of Service —	20.4% of salary;
For 13 Years of Service —	23.4% of salary;
For 14 Years of Service —	26.6% of salary;
For 15 Years of Service —	30.0% of salary;
For 16 Years of Service —	33.6% of salary;
For 17 Years of Service —	37.4% of salary;
For 18 Years of Service —	41.4% of salary;
For 19 Years of Service —	45.6% of salary;

Notwithstanding the foregoing, a Firefighter affected by the above shall not be entitled to a pension benefit if the option for a refund of employee contributions was exercised when the Firefighter last separated from service or if he/she is entitled to a disability pension benefit.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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### *III. Pension Allowance Increases*

- A Firefighter who retired from service with 20 or more years of Creditable Service on or before May 1, 1971, is entitled to an increase of 2% of his/her original monthly pension for each year the Firefighter was in receipt of pension payments; such increase takes effect in the January of the year following the year in which he/she attains age 65, or January of 1972, if then age 65. Each subsequent January, the monthly pension is increased by 2% of the original monthly pension amount. Beginning January, 1976, the rate of such increases was raised to 3% of the original monthly pension.
  
- A Firefighter who retired from service after May 1, 1971 and prior to January 1, 1986 is entitled to an increase of 2% of his/her original monthly pension either upon: (a) the first of the month following the first anniversary of his/her date of retirement if he/she was age 60 or more on that date, or (b) the first of the month following the Firefighter's attainment of age 60 (if such occurs after the first anniversary of his/her retirement date). Each subsequent January, the monthly pension is increased by 2% of the original monthly pension amount. Beginning January, 1976, the rate of such increase was raised to 3% of the original monthly pension. . In July 2009, a Firefighter who retired before July 1, 1977 had his/her benefit recalculated and increased to reflect the amount that he/she would have received in July 2009 had he/she been receiving a 3% compounded increase for each year he/she received pension payments after January 1, 1986, plus any increases in pension received for each year prior to January 1, 1986. In each January thereafter, he or she shall receive an additional increase of 3% of the amount of the pension then being paid.
  
- A Firefighter who retired from service on or after January 1, 1986 is entitled to an increase of 3% of his/her original monthly pension for each full year that has elapsed since the pension began. This occurs either upon: (a) the first of the month following the anniversary of his/her date of retirement if he/she was age 55 or older on that date, or (b) the first of the month following the Firefighter's attainment of age 55 (if such occurs after the first anniversary of his/her retirement date). Each subsequent January, the monthly pension is increased by 3% of the immediately preceding year's pension amount.



**BRIEF SUMMARY OF PLAN PROVISIONS  
(CONTINUED)**

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- Notwithstanding the provisions of the second paragraph listed above, a Firefighter who retired from service after January 1, 1977 and prior to January 1, 1986 and did not receive a pension increase before May 1, 1987, is entitled to a 3% increase of his/her original monthly pension for each full year that has elapsed since the pension began. This occurs on the first day of the month following either: (a) the first anniversary of the date of retirement, or (b) the attainment of age 55, or (c) May 1, 1987. Each subsequent January, the monthly pension is increased by 3% of the immediately preceding year's pension amount.

***Eligibility For and  
Amount of Disability  
Benefits***

***I. Disability  
Incurred in the  
Line of Duty***

- a) If a Firefighter is injured or suffers an accident or sickness as the result of carrying out his/her duties as a Firefighter (even if those duties take him/her to a place away from the municipality in which he/she serves as a Firefighter, and assuming such duties are related to the fire protection service of such municipality), then such a disabled Firefighter is entitled to a disability retirement pension equal to the greater of: (i) the Firefighter's accrued pension benefit at the date of disability or (ii) 65% of the monthly salary attached to the rank held by him/her in the Fire Department at the date he/she is removed from the municipality's Fire Department payroll.
- b) A Firefighter who is entitled to disability payments, as discussed in (a) above, also has the right to receive a benefit of \$20 per month for every unmarried child less than 18 years of age.

The total amount of the benefits described in both (a) and (b) above shall not exceed 75% of the amount of salary the Firefighter was receiving at the time of the grant of the disability benefit.

***II. Disability on  
Account of  
Occupational  
Hazards***

- a) If a Firefighter who has completed 5 or more Years of Service is unable to perform his/her duties in the Fire Department by reason of heart disease, tuberculosis, disabling cancer, or any disease of the lungs or respiratory tract, resulting solely from his/her service as a Firefighter, then he/she is entitled to an occupational disease disability pension equal to the greater of: (i) the Firefighter's accrued pension benefit at the date of disability or (ii) 65% of his/her salary at the time of his/her removal from the Fire Department payroll.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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- a) A Firefighter who is entitled to a disability payments as described in (a) above also has the right to receive a benefit of \$20.00 per month for every unmarried child less than 18 years of age and who is dependent upon the Firefighter for financial support.

The total amount of the benefits described in both (a) and (b) above are not to exceed 75% of the amount of salary the Firefighter was receiving at the time of the grant of the disability benefit.

### ***III. Disability Due to Occurrences Unrelated to Duties***

If a Firefighter, who has 7 years of Creditable Service, becomes mentally or physically disabled as the result of any cause other than the performance of an act or acts of duty, he/she is entitled to a disability pension equal to 50% of the monthly salary attached to the rank held by him/her in the Fire Department at the date he/she is removed from the municipality's Fire Department payroll.

### ***IV. Special Disability Pension Option***

A Firefighter who is receiving any form of disability pension and whose Creditable Service plus years of disability equals 20 or more and who is age 50 or older may elect to retire from the Fire Department by submitting a written application to the Board. His/her lifetime retirement pension will be equal to the same amount he/she was entitled to as a disabled Firefighter as of the date he/she was removed from Municipality's payroll for disability. A Firefighter who exercises this option is entitled to the automatic 3% per annum increase in benefits.

If a Firefighter who is on any form of disability pension accumulates enough Creditable Service to be eligible for a pension (at least 10 years at age 60 or at least 20 years at age 50 or more), he/she may elect to permanently retire from the Fire Department by submitting a written application to the Board. The Firefighter would be entitled to a lifetime pension based on the salary attached to the rank he/she held in the Fire Department as of the date of his/her election to retire. A Firefighter who exercises this option is entitled to the automatic 3% per annum increase in benefits.

### ***V. Disability Pension Allowance Increase***

A Firefighter who is receiving a disability pension is entitled to receive an automatic increase effective January 1, 1974 and upon the attainment of age 60. At this date, the monthly pension is increased by 2% of the original monthly pension for each year the Firefighter was in receipt of monthly pension payments. Each subsequent January, the monthly pension is again increased by 2% of the original monthly pension amount. Effective January, 1976, the rate of such increase was raised to 3% of the original monthly pension.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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### ***Death Benefits to Surviving Spouse or Dependents***

#### ***I. Surviving Spouse's Benefit***

If an active Firefighter dies while in the line of duty as a result of any injuries or if a Firefighter sustains injuries from which he/she thereafter dies, then the surviving spouse is entitled to a monthly pension equal to 100% of the monthly salary attached to the rank the Firefighter held on his/her last day of service with the Fire Department. The benefit is payable to the surviving spouse for life.

If an active Firefighter dies as a result of any illness or accident unrelated to duty or if a Firefighter dies from any cause while receiving disability pension benefits, or if a Firefighter dies during his/her retirement (after 20 years of service), then his/her surviving spouse is entitled to a monthly pension equal to 100% of the monthly retirement pension earned by the deceased firefighter at the time of death. This benefit is payable to the surviving spouse for life. Previously, the surviving spouse was entitled to a monthly pension equal to 54% of the monthly salary attached to the rank the Firefighter held on his/her last day of service with the Fire Department.

Beginning January 1, 1999, the minimum amount payable under this provision is \$600.00 per month for both current and future surviving spouses. This minimum is increased to \$800.00 per month on January 1, 2000, \$1,000.00 per month on January 1, 2001, \$1,030.00 per month on July 1, 2004, \$1,060.90 per month on July 1, 2005, \$1,092.73 per month on July 1, 2006, \$1,125.51 per month on July 1, 2007, \$1,159.27 per month on July 1, 2008.

#### ***II. Dependent's Benefit***

The dependent's benefit is applicable in the event of the death of the Firefighter under the conditions enumerated above for the surviving spouse's benefit. The guardian (spouse or otherwise) of any minor child (or children), including a child who had been conceived but not yet born, is entitled to a monthly benefit equal to 12% of the monthly salary attached to the rank the Firefighter held on his/her last day of service with the Fire Department prior to his/her death. Such benefit is payable for each such child until the child attains age 18 or marries, if earlier.

If the deceased Firefighter leaves no surviving spouse or unmarried minor children under age 18, but leaves a dependent father or mother, each one is entitled to a monthly benefit equal to 18% of the monthly salary attached to the rank the Firefighter held on his/her last day of service with the Fire Department.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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Notes: (a) The aggregate above monthly death benefits are not to exceed 75% of the monthly salary of the deceased Firefighter.

(b) Adopted children are entitled to the same benefits as provided for natural children, if adopted before the Firefighter attained age 50.

(c) If the Firefighter leaves no surviving spouse, unmarried children under the age of 18 or dependent father or mother, the Board will refund to his/her estate the amount of his/her accumulated contributions, less any amount of pension payments made to the deceased Firefighter while he/she was living.

### ***Termination of Employment Benefits.***

#### ***I. Refund of Employee Contributions***

A Firefighter who has less than 20 Years of Service and who resigns or is discharged (and has not received any disability payments), is entitled to a refund of his/her total amount contributed to the fund during his/her period of service. If the Firefighter should be subsequently re-employed, he/she must repay to the fund the amount of refund which he/she received before commencing service. When repayment is made, the Firefighter will receive credit for the previous Years of Service for which he/she received his/her refund.

#### ***II. Re-entry Into Service***

- If a retired Firefighter (who is receiving pension benefits) re-enters active service, his/her pension benefits will cease while in active service. If he/she again retires, his/her monthly payments will resume in the same amount as he/she had received as a pensioner.
- If a "deferred" pensioner reenters service and remains in service for less than three years, and then again retires or is discharged, his/her pension will be based on the salary attached to the rank he/she held in the Fire Department at the date of his/her earlier retirement. Conversely, if the pensioner re-enters service and remains in service for three or more years, and again retires or is discharged, his/her pension will be based on the salary attached to the rank he/she held in the Fire Department at the date of his/her last retirement.

## BRIEF SUMMARY OF PLAN PROVISIONS (CONTINUED)

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Notwithstanding the foregoing, if a pensioner or deferred pensioner returns to active service and is subsequently injured (and the injury is not relate to an injury for which the member was previously receiving benefits), the 3 year requirement does not apply in order for the member to receive his/her pension based on his/her rate of pay at the time of his/her new injury.

### ***Financing of Pension Benefits***

Pension benefits are to be funded by "employee" deductions from wages and salaries of Firefighters and by a property tax levied by the Municipality. The amount derived from these two sources should equal the sum sufficient to meet the annual actuarial requirements of the pension fund as stated below:

- (1) Provide actuarial reserves for the pensions and benefits earned by the Firefighters during the year (the reserve requirement is to be computed at a rate of not less than 17.5% of the salaries and wages earned by the Firefighters during the year),

And

- (2) Provide for the amortization of the unfunded accrued liabilities, including liabilities on account of pensions and benefits in force on May 1, 1993, or which come into force at a later date in the case of liabilities created after said date, over a period of 40 years subsequent to May 1, 1993 paid as a level percent of future payroll.

### ***Administration***

The Firefighters' Pension Fund is administered by a Board of Trustees located in each municipality maintaining a Pension Fund for its Firefighters. Its duties are: to control and manage the pension fund, to enforce the collection of the contributions, to hear and determine applications for pensions, to authorize payment of pension, to establish rules, to pay expenses, to invest funds, and to keep records.

**ACTIVE MEMBERS AS OF JANUARY 1, 2010  
BY ATTAINED AGE AND YEARS OF SERVICE**

Attained Age	Years of Service to Valuation Date									Totals	
	0	1-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 35	Totals	Valuation Payroll
<b>Under 20</b>										<b>0</b>	<b>\$ 0</b>
<b>20-24</b>		2								<b>2</b>	<b>149,315</b>
<b>25-29</b>		25	5							<b>30</b>	<b>2,500,579</b>
<b>30-34</b>		24	18	2						<b>44</b>	<b>3,895,435</b>
<b>35-39</b>		11	21	16	1					<b>49</b>	<b>4,579,194</b>
<b>40-44</b>			7	14	14	4				<b>39</b>	<b>4,002,275</b>
<b>45-49</b>				5	12	10				<b>27</b>	<b>2,971,825</b>
<b>50-54</b>				2	8	5	1			<b>16</b>	<b>1,736,304</b>
<b>55-59</b>										<b>0</b>	<b>0</b>
<b>60-64</b>										<b>0</b>	<b>0</b>
<b>65-69</b>										<b>0</b>	<b>0</b>
<b>Over 70</b>										<b>0</b>	<b>0</b>
<b>Total</b>	<b>0</b>	<b>62</b>	<b>51</b>	<b>39</b>	<b>35</b>	<b>19</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>207</b>	<b>\$19,834,927</b>

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

Age: 38.4 years  
Service: 10.6 years  
Annual Pay: \$95,821

## DEVELOPMENT OF ACTUARIAL (MARKET-RELATED) VALUE OF ASSETS

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<b>Expected Return on Market Value of Assets for Prior Year</b>	1. Market value of assets at 01/01/2009	\$ 54,885,140
	2. Actual income and disbursements in prior year weighted for timing:	

Item	Amount	Weight for Timing	Weighted Amount
(a) Member Contributions	\$ 1,900,019	50.00%	\$ 950,010
(b) City Contributions	8,168,225	50.00%	4,084,113
(c) Miscellaneous Revenue	-	50.00%	-
(d) Benefit Payments	(7,456,184)	50.00%	(3,728,092)
(e) Administration	(124,651)	50.00%	(62,326)
(f) Total			\$ 1,243,705

3. Market value of assets adjusted for actual income disbursements [(1) + (2)(f)]	\$ 56,128,845
4. Assumed rate of return on plan assets for the year	7.00%
5. Expected return [(3) * (4)]	\$ 3,929,019

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<b>Actual Return on Market Value of Assets for Prior Year</b>	6. Market value of assets at 01/01/2009	\$ 54,885,140
	7. Income (less investment income) for prior plan year	10,068,244
	8. Disbursements paid in prior year	7,580,835
	9. Market value of assets at 01/01/2010	61,973,173
	10. Actual Return [(9) + (8) - (7) - (6)]	4,600,624

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<b>Gain/(Loss)</b>	11. Investment Gain/(Loss) for Prior Year [(10) - (5)]	\$ 671,605
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**DEVELOPMENT OF ACTUARIAL (MARKET-RELATED) VALUE OF ASSETS  
(CONTINUED)**

<b>Actuarial Value of Assets as of 01/01/2010</b>	12. Market value of assets at 01/01/2010	\$ 61,973,173																									
	13. Deferred investment gains and (losses) for last 3 years:																										
	<table border="0" style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="width: 10%;"></th> <th style="width: 20%; text-align: center;"><b>Plan Year Beginning</b></th> <th style="width: 20%; text-align: center;"><b>Gain/(Loss)</b></th> <th style="width: 15%; text-align: center;"><b>Percent Deferred</b></th> <th style="width: 35%; text-align: center;"><b>Deferred Amount</b></th> </tr> </thead> <tbody> <tr> <td>a)</td> <td style="text-align: center;">2007</td> <td style="text-align: right;">\$ (1,046,414)</td> <td style="text-align: center;">25.00%</td> <td style="text-align: right;">\$ (261,604)</td> </tr> <tr> <td>b)</td> <td style="text-align: center;">2008</td> <td style="text-align: right;">(12,854,326)</td> <td style="text-align: center;">50.00%</td> <td style="text-align: right;">(6,427,163)</td> </tr> <tr> <td>c)</td> <td style="text-align: center;">2009</td> <td style="text-align: right;">671,605</td> <td style="text-align: center;">75.00%</td> <td style="text-align: right;">503,704</td> </tr> <tr> <td>d)</td> <td style="text-align: center;">Total</td> <td style="text-align: right;">\$(13,229,135)</td> <td></td> <td style="text-align: right;">\$ (6,185,063)</td> </tr> </tbody> </table>		<b>Plan Year Beginning</b>	<b>Gain/(Loss)</b>	<b>Percent Deferred</b>	<b>Deferred Amount</b>	a)	2007	\$ (1,046,414)	25.00%	\$ (261,604)	b)	2008	(12,854,326)	50.00%	(6,427,163)	c)	2009	671,605	75.00%	503,704	d)	Total	\$(13,229,135)		\$ (6,185,063)	
	<b>Plan Year Beginning</b>	<b>Gain/(Loss)</b>	<b>Percent Deferred</b>	<b>Deferred Amount</b>																							
a)	2007	\$ (1,046,414)	25.00%	\$ (261,604)																							
b)	2008	(12,854,326)	50.00%	(6,427,163)																							
c)	2009	671,605	75.00%	503,704																							
d)	Total	\$(13,229,135)		\$ (6,185,063)																							
	14. Item (12) less item 13(d)	\$ 68,158,236																									
	15. 2010 Tax Year Levy (i.e., the 2009 Plan Year Contributions)	9,167,019																									
	16. Interest Adjustment on item (15) to 01/01/2010	(304,927)																									
	17. Actuarial Value of Plan Assets at 01/01/2010 [(14) + (15) + (16)]	\$ 77,020,328																									

- Notes:
- (1) The calculated value is determined by adjusting the market value of assets to reflect the investment gains and losses (the difference between the actual investment return and the expected investment return) during each of the last four years at the rate of 25% per year.
  - (2) Assumes the 2010 tax year levy is collected and deposited in the Pension Fund on July 1, 2010.



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**SECTION C**

VALUATION PROCEDURES

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## ACTUARIAL COST METHOD

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

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

*Financing of Unfunded Actuarial Accrued Liabilities.* Unfunded actuarial accrued liabilities were amortized by level (principal and interest combined) percent of payroll contributions over 23.5 future years.

*Actuarial Value of Pension Plan Assets.* The current market value of assets (including discounted contributions due for prior Plan Years and not received as of the valuation date) is reduced (increased) for the current year and each of two succeeding years, by a portion of the gain/(loss) in market value during the prior year. Such gain/(loss) is determined as the excess/(deficit) of the current market value of assets over the market value of assets as of the prior year, increased to reflect interest at the actuarial rate and adjusted to reflect contributions and benefit payments during the prior year. The portion of such gain/(loss) by which the current market value of assets is reduced (increased) shall be 75% in the current year; 50% in the first succeeding year and 25% in the second succeeding year.

## ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS

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The contribution and benefit values of the System are calculated by applying actuarial assumptions to the benefit provisions and census information furnished, using the actuarial cost method described on the previous page.

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

- 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 members
- the age patterns of actual retirement.

In a valuation, the monetary effect of each assumption is calculated for as long as a present covered person survives; a period of time which can be as long as a century.

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Actual experience of the System will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments (usually small) to the computed contribution rate.

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

## VALUATION ASSUMPTIONS

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The assumed rate of investment return used was 7.00%, net of expenses, annually.

The mortality table used to measure retirement mortality was based on the 1983 Group Annuity Mortality Table. This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement.

<b>Single Life Retirement Values</b>				
<b>Sample Attained Ages</b>	<b>Present Value of \$1 Monthly for Life</b>		<b>Future Life Expectancy (years)</b>	
<b>Ages</b>	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
50	\$ 144.69	\$ 155.06	29.18	34.92
55	135.45	147.81	24.83	30.24
60	124.06	138.53	20.64	25.67
65	110.40	126.98	16.69	21.29
70	95.57	112.91	13.18	17.13
75	80.25	97.07	10.15	13.38
80	65.26	81.04	7.64	10.20

The disability retirement mortality table was based on 110% of the 1983 Group Annuity Mortality Table.

<b>Single Life Retirement Values</b>				
<b>Sample Attained Ages</b>	<b>Present Value of \$1 Monthly for Life</b>		<b>Future Life Expectancy (years)</b>	
<b>Ages</b>	<b>Men</b>	<b>Women</b>	<b>Men</b>	<b>Women</b>
50	\$ 142.99	\$ 153.90	28.29	34.07
55	133.40	146.34	23.97	29.41
60	121.65	136.71	19.84	24.88
65	107.61	124.76	15.95	20.53
70	92.49	110.28	12.51	16.43
75	77.03	94.11	9.56	12.73
80	62.04	77.93	7.13	9.64

**VALUATION ASSUMPTIONS  
(CONTINUED)**

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*Rates of separation from active membership* are represented by the following table (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 terminating employment.

<b>Years of Service</b>	<b>Sample Employee Withdrawal Rate Per 1,000 Employees</b>	
	<b>Males</b>	<b>Females</b>
0	15.0	15.0
5	11.0	11.0
10	7.0	7.0
15	4.0	4.0
20	3.0	3.0
25	2.0	2.0
30 and Over	0.0	0.0

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

<b>Years of Service</b>	<b>Salary Increase Assumptions For an Individual Member</b>
	<b>Increase</b>
1	25.00%
2	15.00%
3	10.00%
>=4	5.25%

**VALUATION ASSUMPTIONS  
(CONTINUED)**

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*Sample rates of disability* were as follows:

<b>Employee Disablement Rate Per 1,000 Employees</b>		
<b>Age</b>	<b>Male</b>	<b>Female</b>
25	1.0	1.0
30	1.0	1.0
35	1.2	1.2
40	1.5	1.5
45	2.1	2.1
50	7.8	7.8
55	13.6	13.6
60	23.0	23.0
65	33.5	33.5

*Probabilities of retirement* for members eligible to retire during the next year were as follows:

<b>Rates of Retirement</b>			
<b>Age</b>	<b>Rate</b>	<b>Age</b>	<b>Rate</b>
50	5.0 %	60	25.0 %
51	5.0	61	25.0
52	5.0	62	25.0
53	10.0	63	50.0
54	10.0	64	50.0
55	10.0	65	100.0
56	25.0	66	100.0
57	25.0	67	100.0
58	25.0	68	100.0
59	25.0	69	100.0

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**SECTION D**

GASB STATEMENT NOS. 25 AND 27

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**REQUIRED SUPPLEMENTARY INFORMATION**  
**SCHEDULE OF FUNDING PROGRESS**

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<b>Actuarial Valuation Date</b>	<b>GASB Value of Assets (a)</b>	<b>Actuarial Accrued Liability (b)</b>	<b>Unfunded AAL (UAAL) (b – a)</b>	<b>Funded Ratio (a / b)</b>	<b>Covered Payroll (c)</b>	<b>UAAL as a Percentage of Payroll [(b – a)/c]</b>
1/1/2005	\$54,250,492	\$103,060,972	\$48,810,480	52.6%	\$13,582,893	359.4%
1/1/2006	56,913,080	112,702,142	55,789,062	50.5	13,986,542	398.9
1/1/2007	60,375,256	128,989,157	68,613,901	46.8	16,024,475	428.2
1/1/2008	64,196,270	151,255,803	87,059,533	42.4	17,078,653	509.8
1/1/2009	65,005,952	163,067,860	98,061,908	39.9	17,828,326	550.0
1/1/2010	68,158,236	176,212,143	108,053,907	38.7	19,834,928	544.8



## SCHEDULE OF EMPLOYER CONTRIBUTIONS

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<b>Fiscal Year Ended</b>	<b>Annual Required Contribution (a)</b>	<b>Total Employer Contribution (b)</b>	<b>Percentage Contributed (b / a)</b>
12/31/2005	\$ 4,221,276	\$ 3,448,362	81.7%
12/31/2006	4,828,886	3,842,636	79.6
12/31/2007	5,978,716	4,761,086	79.6
12/31/2008	8,198,450	5,434,554	66.3
12/31/2009	9,094,439	8,168,225	89.8
12/31/2010	10,224,930	TBD	TBD

## ANNUAL PENSION COST AND CONTRIBUTIONS

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### *Contribution rates:*

*City* Proceeds from a tax levy equal to the sum of: (a) annual normal cost plus (b) amortization of unfunded liability as a level percent of pay between now and 7/1/2033 plus (c) interest on (a) and (b) to date of payment.

*Plan members* 9.455% of regular salary

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<b><i>Annual Required Contribution for fiscal year ending December 31, 2010:</i></b>	Net Annual Normal Cost (Municipality Paid)	\$	4,009,415
	Annual Amortization Payments for Funding Unfunded Actuarial Accrued Liability Over 40 Years from July 1, 1993 as a level percentage of payroll		6,215,515

	Annual Required Contribution (ARC)	\$	10,224,930
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<b><i>Annual Pension Cost for fiscal year ending December 31, 2010:</i></b>	Annual Required Contribution (ARC)	\$	10,224,930
	Interest on Net Pension Obligation		375,492
	Adjustment to ARC		(308,560)
	Total Annual Pension Cost	\$	10,291,862

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<b><i>Net Pension Obligation (NPO):</i></b>	Net Pension Obligation (NPO) at Beginning of year, January 01, 2009:	\$	4,376,146
	Total Annual Pension Cost from Previous Year:		9,156,252
	Total Employer Contribution for year ended December 31, 2009:		8,168,225
	<b>Net Pension Obligation (NPO) at End of year, December 31, 2009:</b>	\$	5,364,173

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## PENSION COST SUMMARY FOR GASB #27

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<b>Year Ended December 31</b>	<b>Annual Pension Cost</b>	<b>Total Employer Contribution</b>	<b>% of Annual Pension Cost Contributed</b>	<b>Net Pension Obligation</b>
2007	\$ 5,988,629	\$ 4,761,086	79.5%	\$ 1,587,425
2008	8,223,275	5,434,554	66.1	4,376,146
2009	9,156,252	8,168,225	89.2	5,364,173
2010	10,291,862	TBD	TBD	TBD

## SUMMARY OF ACTUARIAL METHODS AND ASSUMPTIONS

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The information requested 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:

<i>Valuation Date</i>	January 1, 2010
<i>Actuarial Cost Method</i>	Entry-Age-Normal
<i>Actuarial Value of Assets</i>	4-year smoothed market
<i>Amortization Method</i>	Level percent closed
<i>Remaining Amortization Period</i>	23 years, 6 months
<i>Actuarial Assumptions:</i>	
<i>Investment Rate of Return</i>	7.00% per year
<i>Projected Salary Increases</i> *	5.25% per year with a three-year service-based select period
<i>*Includes Wage Inflation Increases</i>	4.00% per year
<i>Cost-of-Living Increases</i>	3.00% per year