CITY OF SPRINGFIELD
FIREFIGHTERS' PENSION FUND

ACTUARIAL VALUATION
AS OF FEBRUARY 28, 2011

GOLDSTEIN & ASSOCIATES

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December 7, 2011

Mr. Charles Alsbury
Staff Accountant
Office of Management and Budget
City of Springfield
Room 210 – Municipal Building
Springfield, Illinois 62701

Re: **Actuarial Valuation of the Springfield Firefighters' Pension Fund**

Dear Mr. Alsbury:

I am pleased to submit our actuarial report based on an actuarial valuation of the Springfield Firefighters' Pension Fund as of February 28, 2011.

The report consists of 10 Sections and 2 Appendices as follows:

I would be pleased to discuss any aspects of this report with you and other interested persons.

Respectfully submitted,

Sandor Goldstein, F.S.A.
Consulting Actuary

A. PURPOSE AND SUMMARY

We have carried out an actuarial valuation of the Springfield Firefighters' Pension Fund as of February 28, 2011. The purpose of the valuation was to determine the financial position and the annual actuarial requirements of the pension fund. This report is intended to present the results of the valuation. The results of the valuation are summarized below:

1. Total Actuarial Liability	$ 207,171,970
2. Actuarial Value of Assets	$ 95,280,854
3. Unfunded Actuarial Liability	$ 111,891,116
4. Funded Ratio	46.0%
5. Total Normal Cost For Year Beginning March 1, 2012	$ 4,543,994
6. Total Normal Cost as a Percent of Payroll	30.23%
7. Annual Actuarial Requirements For Year Beginning March 1, 2012	$ 9,206,265
8. Annual Required Contribution For GASB Statement No. 25 For Year Beginning March 1, 2012	$ 10,965,008
9. Employer's Share of Annual Required Contribution For GASB Statement No. 25	$ 9,543,568

B. DATA USED FOR THE VALUATION

Participation Data. The participant data required to carry out the valuation was supplied by the pension fund. The participant data for the pension fund as of February 28, 2011, on which the valuation is based, is summarized in Exhibit 1. It can be seen that there were 202 active members, 1 inactive member and 234 member receiving benefits. The total active payroll as of February 28, 2011 was $14,557,495.

Exhibit 1

Summary of Participant Data

1. Number of Members		
(a) Active Members		
(i) Vested		120
(ii) Non-vested		82
(b) Inactive Members		1
(c) Members Receiving		
(i) Retirement Pensions		153
(ii) Survivor Pensions		53
(iii) Disability Pensions		28
(d) Total		437
2. Annual Salaries		
(a) Total Salary	$	14,557,495
(b) Average Salary		72,067
3. Total Accumulated Contributions of Active Members	$	11,501,976
4. Annual Benefit Payments Currently Being Made		
(a) Retirement Pensions	$	8,417,420
(b) Survivor Pensions		1,585,132
(c) Disability Pensions		1,031,688

Assets. In November of 1994, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 25, which establishes standards of financial reporting for governmental pension plans. Under GASB Statement No. 25, the actuarial value of assets to be used for determining a plan's funded status and annual required contribution needs to be market related.

However, GASB has indicated that current market values should not be used if those values would result in unnecessary fluctuation in the funded status and the annual required contribution. Thus, in determining the actuarial value of assets, smoothing changes in the market value of assets over a period of three to five years is considered appropriate.

The asset values for the valuation were based on the asset information contained in the financial statements of the pension fund as of February 28, 2011. The actuarial value of assets was determined by smoothing unexpected gains or losses from investment return over a five-year period. The resulting actuarial value of assets is $95,280,854. The development of this value is outlined in Exhibit 2.

Exhibit 2

Actuarial Value of Assets

A. Development of Investment Gain/(Loss) for the Year Ended February 28, 2011

1.	Actuarial Value of Assets as of February 28, 2010	$ 91,625,104
2.	Contributions and Miscellaneous Income	9,816,537
3.	Disbursements	10,659,034
4.	Expected Investment Income	6,840,860
5.	Actual Investment Income (Loss)	9,645,130
6.	Investment Gain/(Loss) (5 – 4)	2,804,270

B. Development of Actuarial Value of Assets as of February 28, 2011

7.	Expected Value of Assets (1 +2 – 3 +4)	$ 97,623,467
8.	Investment Gain/(Loss) for Fiscal Year 2007 Recognized in Current Year	162,996
9.	Investment Gain/(Loss) for Fiscal Year 2008 Recognized in Current Year	(731,654)
10.	Investment Gain/(Loss) for Fiscal Year 2009 Recognized in Current Year	(3,829,819)
11.	Investment Gain/(Loss) for Fiscal Year 2010 Recognized in Current Year	1,495,010
12.	Investment Gain/(Loss) for Fiscal Year 2011 Recognized in Current Year (20% of 6)	560,854
13.	Actuarial Value of Assets (7 + 8 + 9 +10 + 11 + 12)	$ 95,280,854

C. FUND PROVISIONS

Our valuation was based on the provisions of the fund in effect as of February 28, 2011 as provided in Article 4 of the Illinois Pension Code. Senate Bill 3538, which was signed into law on December 30, 2010 as Public Act 96-1495, created a "second tier" of benefits for firefighters who first become participants under the fund on or after January 1, 2011. The benefit changes for new participants are as follows:

1. Defines the highest salary for annuity purposes as being the average monthly salary obtained by dividing the participant's total salary during the 96 consecutive months of service within the last 120 months of service in which the total compensation was the highest by the number of months in that period.
2. For 2011, limits the final average salary to the Social Security wage base of $106,800. Limitations for future years shall automatically be increased by the lesser of 3% or one-half

of percentage change in the Consumer Price Index-U during the preceding 12-month calendar year.

3. Allows a participant to retire with unreduced benefits after attainment of age 55 with at least 10 years of service credit. However, a participant may elect to retire at age 50 with at least 10 years of service credit and receive a retirement annuity reduced by one-half of 1% for each month that his or her age is under 55.
4. Provides an initial survivor's annuity equal to 66 2/3% of the participant's earned retirement annuity at the date of death, subject to automatic annual increases of the lesser of 3% or one-half of the increase in the Consumer Price Index-U during the preceding calendar year, based on the originally granted survivor's annuity.
5. Provides for automatic annual increases in the retirement annuity then being paid equal to the lesser of 3% or one-half the annual change in the Consumer Price Index for all Urban Consumers, whichever is less, based on the originally granted retirement annuity.

A summary of the principal provisions of the fund is provided in Appendix 1.

D. ACTUARIAL ASSUMPTIONS AND COST METHOD

For the February 28, 2011 actuarial valuation, the mortality rates assumption was change from the UP-1984 Mortality Table to the UP-1994 Mortality Table for retirement and survivor pensioners and the RP-2000 Mortality Table for Disabled Retirees for disability pensioners. The other actuarial assumptions used for the February 28, 2011 actuarial valuation are the same as those used for the February 28, 2010 actuarial valuation. The actuarial assumptions used for the February 28, 2011 actuarial valuation are summarized below:

Mortality Rates. The UP-1994 Mortality Table was used for retirement and survivor pensioners. For disability pensioners, the RP-2000 Mortality Table for Disabled Retirees was used.

Termination Rates. Termination rates are used to estimate the probability that an employee will terminate employment at a given age. The following is a sample of the termination rates that were used:

Age	Rate of Termination
25	.0175
30	.0110
35	.0045
40	.0005
45	.0066
50 and over	.0088

Disability Rates. Disability rates are used to estimate the probability that an employee will become disabled at a given age. All disabilities were assumed to be in the line of duty. The following is a sample of the disability rates that were used:

Age	Rate of Disability
25	.0001
30	.0001
35	.0013
40	.0063
45	.0107
50	.0167
55	.0261
60	.0411
65	.0635

Retirement Rates. Retirement rates are used to estimate the probability that an employee will retire at each age at which a retirement benefit is available. Rates of retirement for each age from 50 to 66 were used. The following is a sample of the retirement rates that were used for the valuation:

Age	Rate of Retirement
50	.1365
55	.1350
60	.3012
65	.2642
66	1.0000

Salary Progression. 5.0% per year, compounded annually. This can be considered to consist of a 4.0% inflation assumption and 1.0% merit increase assumption.

Investment Return Rate. 7.5% per year, compounded annually.

Marital Status. 80% of participants were assumed to be married.

Spouse's Age. The age of the spouse was assumed to be 4 years younger than the age of the employee.

Actuarial Value of Assets. The actuarial value of assets was determined by smoothing unexpected gains or losses from investment return over a five-year period.

Actuarial Cost Method. Based on the requirements of Public Act 96-1495, the actuarial cost method was changed for the February 28, 2011 actuarial valuation from the entry age normal cost method to the projected unit credit cost method.

E. ACTUARIAL LIABILITY

The actuarial liability as determined under the valuation for the various classes of members is summarized in Exhibit 3. The total actuarial liability is then compared with the actuarial value of assets in order to arrive at the unfunded actuarial liability. (The actuarial terms used in this report are defined in Appendix 2.)

As of February 28, 2011 the total actuarial liability is $207,171,970, the actuarial value of assets is $95,280,854, and the unfunded actuarial liability is $111,891,116. The ratio of the actuarial value of assets to the actuarial liability, or funded ratio, is 46.0%.

Exhibit 3

Actuarial Liability as of February 28, 2011

1. Actuarial Liability For Members Receiving Benefits	
(a) Retirement Pensions	$ 120,486,269
(b) Survivor Pensions	14,116,877
(c) Disability Pensions	12,957,502
(d) Total	$ 147,560,648
2. Actuarial Liability For Inactive Members	294,075
3. Actuarial Liability For Active Members	59,317,247
4. Total Actuarial Liability	$ 207,171,970
5. Actuarial Value of Assets	95,280,854
6. Unfunded Actuarial Liability	$ 111,891,116
7. Funded Ratio	46.0%

F. RECONCILIATION OF CHANGE IN UNFUNDED LIABILTY

The net actuarial experience during the period March 1, 2010 to February 28, 2011 resulted in an increase in the fund's unfunded liability of $17,288,607. This increase in unfunded liability is a result of several kinds of gains and losses, which have an impact on the unfunded liability. The financial effect of the most significant gains and losses is illustrated in Exhibit 4.

The net rate of investment return earned by the fund during the year, based on the actuarial value of assets, was approximately 4.9%, in comparison to the assumed rate of 7.50%. This resulted in an increase in the unfunded liability of $2,342,613. Salaries increased at an average rate of approximately 8.5% in comparison to the assumed rate of 5.00%. Salary increases higher than assumed resulted in an increase in the unfunded liability of $2,175,033.

The contribution required to keep the unfunded liability from increasing was $9,770,118, whereas the actual employer contribution was $8,351,704, resulting in an increase in the unfunded liability of $1,418,414.

The change in the mortality rates assumption resulted in an increase in the unfunded liability of $8,612,538. The change in the actuarial cost method used for the February 28, 2011 valuation had the impact of increasing the unfunded liability by $444.

The various other aspects of the fund's experience resulted in an increase in the unfunded liability of $2,739,565. The aggregate financial experience of the fund resulted in an increase in the unfunded liability of $17,288,607.

Exhibit 4

Reconciliation of Change in Unfunded Liability Over the Period March 1, 2010 to February 28, 2011

1.	Unfunded Liability as of March 1, 2010	$ 94,602,509
2.	Increase in Unfunded Liability Due to Employer Contribution Less Than Normal Cost Plus Interest on the Unfunded Liability	1,418,414
3.	Increase in Unfunded Liability Due to Investment Return Lower Than Assumed	2,342,613
4.	Increase in Unfunded Liability Due to Salary Increases Higher Than Assumed	2,175,033
5.	Increase in Unfunded Liability Due to Changes in Assumptions	8,612,538
6.	Increase in Unfunded Liability Due to Change in Actuarial Cost Method	444
7.	Increase in Unfunded Liability Due to Other Sources	2,739,565
8.	Net Increase in Unfunded Liability for the Year (2 + 3 + 4 + 5 + 6 + 7)	$ 17,288,607
9.	Unfunded Liability as of February 28, 2011 (1 + 8)	$ 111,891,116

G. NORMAL COST

The normal cost for the year beginning March 1, 2011 is developed in Exhibit 5. For the year beginning March 1, 2011, the total normal cost is estimated to be $4,420,367, which can be expressed as 30.36% of payroll.

Exhibit 5

Normal Cost For Year Beginning March 1, 2011

	Dollar Amount	Percent of Payroll
1. Basic Retirement Pension	$ 2,104,658	14.46%
2. Annual Increases in Pension	643,091	4.42
3. Survivor's Pension	532,373	3.65
4. Disability Pension	1,023,955	7.03
5. Refunds	12,888	.09
6. Administrative Expenses	103,402	.71
7. Total Normal Cost	$ 4,420,367	30.36%

Note. The above figures are based on a total active payroll of $14,557,495 as of February 28, 2011.

H. ANNUAL ACTUARIAL REQUIREMENTS FOR YEAR BEGINNING MARCH 1, 2012

According to Section 5/4-118 of the Illinois Pension Code, the city council shall annually levy a tax which, when added to employee contributions, will produce an amount sufficient to meet the annual actuarial requirements of the pension fund.

Senate Bill 3538, which was signed into law as Public Act 96-1495 and became effective on January 1, 2011, made significant changes in the determination of the annual actuarial requirements of the pension fund. Under Public Act 96-1495, the annual requirements of the pension fund are to be determined as a level percent of payroll sufficient to bring the total assets of the pension fund up to 90% of the total actuarial liabilities determined under the projected unit credit actuarial cost method by the year 2040.

It is our understanding that the results of the current valuation will be used to determine the amount of tax to be levied by the City for contribution to the pension fund in the year beginning March 1, 2012. Based on the February 28, 2011 actuarial valuation and the funding provisions of Public Act 96-1495, we have therefore performed funding projections through 2040 in order to determine the required employer contribution for fiscal year 2013 which begins March 1, 2012. We have also estimated the required employer contributions for fiscal years 2014 through 2018. These required employer contributions are as follows:

Fiscal Year	Projected Payroll	Required Employer Contribution as a Percent of Payroll	Required Employer Contribution as a Dollar Amount
2013	$ 15,033,739	61.24%	$ 9,206,265
2014	15,489,820	61.24	9,485,557
2015	15,948,316	61.24	9,766,328
2016	16,409,447	61.24	10,048,713
2017	16,885,016	61.24	10,339,939
2018	17,356,676	61.24	10,628,771

Method of Calculation

The employer contribution requirements shown above have been determined using the actuarial assumptions, membership data and benefit provisions that were used for the regular actuarial valuation. However, in order to determine the contribution requirements, certain calculations needed to be made that are not normally required in a regular actuarial valuation. Benefit payout requirements, normal costs, and payroll were estimated over the 29-year period from 2012 through 2040 by projecting the membership of the system over the 29-year period, taking into account the impact of new entrants to the fund over the 29-year period.

In order to make the required projections, assumptions needed to be made regarding the age and salary distribution of new entrants as well as the size of the active membership of the fund. The assumptions regarding the profile of new entrants to the fund was based on the recent experience of the fund with regard to new entrants. The size of the active membership of the fund was assumed to remain constant over the 29-year projection period.

The year by year results of our funding projections are shown in Exhibit 6 below:

Exhibit 6

Springfield Firefighters' Pension Fund

Funding Projections to End of 2040
Based on Reduced Benefits for Employees Hired after January 1, 2011
and Changes in the Funding Provisions Provided Under Public Act 96-1495

Fiscal Year	Annual Payroll	Total Payout	Employers' Contribution	Employers' Contribution as Percent of Payroll	Actuarial Liability	Assets	Unfunded Liability	Funded Ratio
2011					$207,171,970	$95,280,854	$111,891,116	46.0%
2012	$14,557,495	$12,597,635	$9,231,395	63.41%	213,755,059	97,858,210	115,896,849	45.8%
2013	15,033,739	13,010,857	9,206,265	61.24%	220,516,209	100,959,952	119,556,257	45.8%
2014	15,489,820	13,445,400	9,485,557	61.24%	227,442,627	108,011,110	119,431,517	47.5%
2015	15,948,316	13,882,162	9,766,328	61.24%	234,544,940	113,984,432	120,560,508	48.6%
2016	16,409,447	14,332,830	10,048,713	61.24%	241,828,235	119,719,693	122,108,542	49.5%
2017	16,885,016	14,852,887	10,339,939	61.24%	249,219,776	125,696,930	123,522,846	50.4%
2018	17,356,676	15,330,391	10,628,771	61.24%	256,786,784	131,974,922	124,811,862	51.4%
2019	17,844,530	15,855,910	10,927,520	61.24%	264,480,196	138,538,437	125,941,759	52.4%
2020	18,301,763	16,416,548	11,207,517	61.24%	272,270,530	145,349,399	126,921,131	53.4%
2021	18,807,576	16,980,130	11,517,264	61.24%	280,106,539	152,458,093	127,648,446	54.4%
2022	19,272,146	17,617,788	11,801,754	61.24%	287,902,299	159,773,835	128,128,464	55.5%
2023	19,722,836	18,166,372	12,077,745	61.24%	295,770,331	167,393,244	128,377,087	56.6%
2024	20,236,058	18,777,625	12,392,028	61.24%	303,614,351	175,323,400	128,290,951	57.7%
2025	20,698,246	19,344,504	12,675,060	61.24%	311,504,389	183,592,845	127,911,544	58.9%
2026	21,219,719	19,916,913	12,994,396	61.24%	319,434,578	192,267,430	127,167,148	60.2%

Exhibit 6

Springfield Firefighters' Pension Fund

Funding Projections to End of 2040
Based on Reduced Benefits for Employees Hired after January 1, 2011
and Changes in the Funding Provisions Provided Under Public Act 96-1495

Fiscal Year	Annual Payroll	Total Payout	Employers' Contribution	Employers' Contribution as Percent of Payroll	Actuarial Liability	Assets	Unfunded Liability	Funded Ratio
2027	21,770,257	20,556,943	13,331,531	61.24%	327,271,785	201,330,080	125,941,705	61.5%
2028	22,226,760	21,332,258	13,611,082	61.24%	334,803,904	210,595,332	124,208,572	62.9%
2029	22,704,032	22,051,911	13,903,350	61.24%	342,077,102	220,146,049	121,931,053	64.4%
2030	23,183,031	22,721,347	14,196,677	61.24%	349,144,933	230,053,318	119,091,615	65.9%
2031	23,735,221	23,357,628	14,534,823	61.24%	356,048,405	240,430,328	115,618,077	67.5%
2032	24,339,075	24,029,136	14,904,608	61.24%	362,696,787	251,311,851	111,384,936	69.3%
2033	24,964,762	24,647,959	15,287,762	61.24%	369,151,501	262,801,270	106,350,231	71.2%
2034	25,608,968	25,274,953	15,682,257	61.24%	375,368,705	274,950,265	100,418,440	73.2%
2035	26,303,087	25,781,680	16,107,317	61.24%	381,502,123	287,960,973	93,541,150	75.5%
2036	27,069,342	26,270,601	16,576,551	61.24%	387,576,941	301,967,819	85,609,122	77.9%
2037	27,874,006	26,718,302	17,069,306	61.24%	393,654,097	317,111,889	76,542,208	80.6%
2038	28,773,055	27,103,113	17,619,860	61.24%	399,830,756	333,611,705	66,219,051	83.4%
2039	29,750,152	27,374,052	18,218,209	61.24%	406,258,388	351,738,319	54,520,069	86.6%
2040	30,799,619	27,621,960	18,860,874	61.24%	412,985,972	371,687,391	41,298,581	90.0%

I. ANNUAL REQUIRED CONTRIBUTION FOR GASB STATEMENT NO. 25

GASB Statement No. 25 requires the disclosure of the annual required contribution (ARC), calculated in accordance with certain parameters. Based on the results of the February 28, 2011 actuarial valuation, we have therefore calculated the annual required contribution for the fiscal year beginning March 1, 2012. In accordance with the parameters prescribed in GASB Statement No. 25, in calculating the annual required contribution, we have used smoothed market value for the actuarial value of assets, and have amortized the unfunded liability over 29 years from March 1, 2011 as a level percent of payroll. As can be seen from Exhibit 7 below, the annual required contribution for the fiscal year beginning March 1, 2012 has been determined to be $10,965,008. Employee contributions for the year are estimated to be $1,421,440. Therefore, the employer's share of the annual required contribution is determined to be $9,543,568.

Exhibit 7

Annual Required Contribution for Year Beginning March 1, 2012

	Dollar Amount	Percent of Payroll
1. Total Normal Cost	$ 4,543,994	30.23%
2. Annual Amount Required to Amortize Unfunded Liability Over 29 Years Subsequent to March 1, 2011 as a Level Percent of Payroll	6,421,014	42.71
3. Annual Required Contribution for Year Beginning March 1, 2012 (1 + 2)	$10,965,008	72.94%
4. Employee Contributions for Year	1,421,440	9.46
5. Employer's Share of Annual Required Contribution (3 – 4)	$ 9,543,568	63.48%

Note. The above figures have been based on a projected payroll of $15,033,739.

J. CERTIFICATION

This actuarial report has been prepared in accordance with generally accepted actuarial principles and practices and to the best of our knowledge, fairly represents the financial condition of the Springfield Firefighters' Pension Fund as of February 28, 2011.

Respectfully submitted,

Sandor Goldstein, F.S.A.
Consulting Actuary

Ryan Gundersen
Actuarial Analyst

Appendix 1

Summary of Principal Provisions

Pension Benefits

A firefighter age 50 or over who has at least 20 years of creditable service and is no longer in service as a firefighter is entitled to a monthly pension of 1/2 of the monthly salary attached to the firefighter's rank at the date of retirement. The pension is increased 1/12 of 2.5% of such monthly salary for each additional month over 20 years of service through 30 years of service, to a maximum of 75% of such monthly salary.

Separation Benefits

A firefighter who is separated from service having at least 10 years but less than 20 years of creditable service is entitled upon attainment of age 60 to a pension based on the monthly salary attached to his or her rank in the fire service on the date of separation of 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.

Annual Increases In Pension

The monthly pension of a firefighter who retires after January 1, 1977, shall, upon either the first of the month following the first anniversary of the date of retirement, if 55 years of age or over at retirement date, or upon the first day of the month following attainment of age 55 if it occurs after the first anniversary of retirement, be increased by 1/12 of 3% of the originally granted monthly pension for each full month that has elapsed since the pension began, and by an additional 3% in each January thereafter.

The monthly pension of a firefighter who is receiving a disability pension shall be increased in January of the year following the year the firefighter attains age 60 by 3% of the originally granted monthly pension for each year that pension payments have been made. In each January thereafter, the firefighter shall receive an additional increase of 3% of the original monthly pension.

Disability Pension

If a firefighter, as a result of an act of duty or an occupational disease, is found to be disabled for service in the fire department, the firefighter shall be granted a disability pension equal to the greater of (1) 65% of the firefighter's salary, or (2) the retirement pension that the firefighter would be eligible to receive if he or she retired. If the disability is the result of any cause, and the firefighter has a minimum of 7 years of creditable service, the disability pension is 50% of monthly salary.

In addition, any firefighter disabled by an act of duty or an occupational disease is entitled to receive a child's disability benefit of $20 a month for each dependent minor child, provided that the total benefits received does not exceed 75% of the salary he or she was receiving at the date of removal from the municipality's payroll.

Pension To Survivors

Upon the death of an active firefighter, his or her surviving spouse, is entitled to a survivor's pension of 54% of the firefighter's monthly salary. Upon the death of a disabled, or retired firefighter, his or her surviving spouse, children, or dependent parents are entitled to a survivor's pension as follows: To the surviving spouse, a monthly pension of the greater of 54% of the firefighter's monthly salary or the pension which the firefighter was receiving at the time of death, and to the guardian of each minor child, 12% of such monthly salary for each child, until attainment of age 18.

Beginning July 1, 2004, the total monthly pension payable to the surviving spouse of a firefighter who died while receiving a retirement pension, including the amount payable on account of children, shall be no less than 100% of the monthly retirement pension that the deceased firefighter was receiving at the time of death.

Contributions By Firefighters

Firefighters are required to contribute 9.455% of their salary to the pension fund as a condition of participation in the pension fund.

Persons Who First Become Participants On or After January 1, 2011

The following changes to the above provisions apply to persons who first become participants on or after January 1, 2011:

1. The highest salary for annuity purposes is equal to the average monthly salary obtained by dividing the participant's total salary during the 96 consecutive months of service within the last 120 months of service in which the total compensation was the highest by the number of months in that period.

2. For 2011, the final average salary is limited to the Social Security wage base of $106,800. Limitations for future years shall automatically be increased by the lesser of 3% or one-half of percentage change in the Consumer Price Index-U during the preceding month calendar year.
3. A participant is eligible to retire with unreduced benefits after attainment of age 55 with at least 10 years of service credit. However, a participant may elect to retire at age 50 with at least 10 years of service credit and receive a retirement annuity reduced by one-half of 1% for each month that his or her age is under 55.
4. The initial survivor's annuity is equal to 66 2/3% of the participant's earned retirement annuity at the date of death, subject to automatic annual increases of the lesser of 3% or one-half of the increase in the Consumer Price Index-U during the preceding calendar year, based on the originally granted survivor's annuity.
5. Automatic annual increases in the retirement annuity then being paid are equal to the lesser of 3% or one-half the annual change in the Consumer Price Index for all Urban Consumers, whichever is less, based on the originally granted retirement annuity.

Appendix 2

Glossary of Terms used in Report

1. Actuarial Present Value. The value of an amount or series of amounts payable at various times, determined as of a given date by the application of a particular set of actuarial assumptions.

2. Actuarial Cost Method or Funding Method. A procedure for determining the actuarial present value of pension plan benefits and for determining an actuarially equivalent allocation of such value to time periods. Usually in the form of a normal cost and an actuarial accrued liability.

3. Normal Cost. That portion of the actuarial present value of pension plan benefits which is allocated to a valuation year by the actuarial cost method.

4. Actuarial Accrued Liability or Accrued Liability. That portion, as determined by a particular actuarial cost method, of the actuarial present value of pension benefits which is not provided for by future normal costs.

5. Actuarial Value of Assets. The value assigned by the actuary to the assets of the pension plan for purposes of an actuarial valuation.

6. Unfunded Actuarial Liability. The excess of the actuarial liability over the actuarial value of assets.

7. Projected Unit Credit Actuarial Cost Method. A cost method under which the projected benefits of each individual included in an actuarial valuation are allocated by a consistent formula to valuation years. The actuarial present value of benefit allocated to a valuation year is called the normal cost. The actuarial present value of benefits allocated to all periods prior to a valuation year is called the actuarial liability.

8. Actuarial Assumptions. Assumptions as to future events affecting pension costs.

9. Actuarial Valuation. The determination, as of a valuation date, of the normal cost, actuarial liability, actuarial value of assets, and related actuarial present values for the pension plan.

10. Accrued Benefit or Accumulated Plan Benefits. The amount of an individual's benefit as of a specific date determined in accordance with the terms of a pension plan and based on compensation and service to that date.

11. Vested Benefits. Benefits that are not contingent on an employee's future service.