



500 North Broadway
Suite 1750
St. Louis, MO 63102
USA

Main +1 314 231 3031
Fax +1 314 231 0249

milliman.com

October 22, 2012

Mr. Michael Wooldridge
City of Ladue
9345 Clayton Road
Ladue, MO 63124

***RE: City of Ladue Firement and Policemen's Pension Plan –
Section 105.665 Cost Statement***

Dear Mr. Wooldridge:

The purpose of this letter is to provide the Board Members of the City of Ladue Firemen and Policemen's Pension Plan with a cost statement that may be required under the Missouri Revised Statute Section 105.665.

The proposed "changes in plan benefits" that are subject to this statement are as follows:

1. Exclude lump sum cash-out of unused vacation and sick leave time from retirement calculations, effective for retirements after December 31, 2012.
2. Decrease the final average pay formula to 60% (2% per year of service with a 30 year maximum) for *employees hired after* December 31, 2012.
3. Increase the employee contribution requirement from 3% to 4.5% in 2013 and from 4.5% to 6.0% in 2014. This amount will not be used to lower employer contribution requirements.

The most recent periodic actuarial valuation of the plan was prepared as of January 1, 2012. The cost statement is based on that report.

Our cost statement, numbered to correspond with Section 105.665, follows below:

1. The level normal cost of plan benefits currently in effect is 10.46% of covered payroll, as presented in the January 1, 2012 actuarial valuation.
2. The contribution for unfunded accrued liabilities in the 2012 actuarial valuation is 18.34% of payroll using an open 20 year level-percent amortization.
3. The total contribution rate from items one and two above is 28.80% of covered payroll.
4. The City is currently paying the total contribution rate.

5. The total contribution rate required to fund the proposed plan change is 26.93% of covered payroll.
6. N/A. The total dollar amount of contributions is expected to decrease.
7. As long as the City continues to contribute the full contribution requirement, the proposed changes will not impact the ability of the Plan to meet its obligations.
8. The actuarial assumptions used in the January 1, 2012 actuarial valuation are shown in Exhibit I.
9. In our opinion, the actuarial assumptions, method and techniques used in the January 1, 2012 actuarial valuation produce results which in the aggregate are reasonable.
10. The actuarial cost method used in the January 1, 2012 actuarial valuation is described in Exhibit I.
11. N/A. The total dollar amount of contributions is expected to decrease.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by the City of Ladue. This information includes, but is not limited to, Plan documents and provisions, employee data, and financial information. In our examination of these data, we have found them reasonably consistent and comparable with data used for other purposes.

Since the valuation results are dependent on the integrity of the data supplied, the results can be expected to differ if the underlying data is incomplete or missing. It should be noted that if any data or other information is inaccurate or incomplete, our calculations may need to be revised.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices which are consistent with the principles prescribed by the Actuarial Standards Board and the Code of Professional Conduct and Qualification Standards for Public Statements of Actuarial Opinion of the American Academy of Actuaries. We are members of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Actuarial computations included in this report are for the exclusive purposes cited in this report. Determinations for purposes other than those specifically referenced in this report may be significantly different. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security on a settlement basis.

These cost estimates are subject to the uncertainties of a regular actuarial valuation; the costs are inexact because they are based on assumptions that are themselves necessarily inexact, even though we consider them reasonable. Thus, the emerging costs may vary from those presented in this letter to the extent actual experience differs from that projected by the actuarial assumptions.



We have not explored any legal issues with respect to the proposed plan changes. We are not attorneys and cannot give legal advice on such issues. We suggest that you review this proposal with counsel.

This report has been prepared for the internal use of and is only to be relied upon by the City of Ladue and its' auditors; it is not for the use or benefit of any third party for any purpose. No portion of this report may be disclosed to any other party (other than Missouri State regulatory personnel) without Milliman's prior written consent. In the event such consent is given, the report must be provided in its entirety, unless prior written consent is obtained from Milliman. We recommend that any such party have its own actuary or other qualified professional review this report to ensure that the party understands the assumptions and uncertainties inherent in our estimates. We respectfully submit the following exhibits, and we look forward to discussing them with you.

We are available to address any questions that you may have.

Sincerely,

A handwritten signature in blue ink, appearing to read "Michael J. Zwiener".

Michael J. Zwiener, FSA
Consulting Actuary

MJZ/giy

**The City of Ladue Firemen and
Policemen's Pension Plan**

January 1, 2012 Actuarial Valuation

Actuarial Assumptions and Methods

Interest

7.5% per annum, compounded annually

Salary Increases

4.75% per annum, compounded annually

Inflation

3.0% per annum

Mortality

Healthy Lives: RP-2000 Combined White Collar Mortality Table, male and female rates, projected to 2017 by Scale AA. Active death is assumed to be 50% duty related.

Disabled Lives: Post-1994 Disability Mortality Table as prescribed by IRS Revenue Ruling 96-7, male and female rates.

Withdrawal

Rates vary by age. Rates at selected ages are:

<u>Age</u>	<u>Percent Withdrawing</u>
20	10.0%
25	8.0
30	5.5
35	3.4
40	1.4
45	0.2
50	0.0

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January 1, 2012 Actuarial Valuation

Actuarial Assumptions and Methods

Retirement

Rates vary by age as follows:

<u>Age</u>	<u>Percent Retiring</u>
55	25%
56-58	20
59	50
60	100

Terminated vested participants are assumed to retire at age 55.

Disability

1985 Pension Disability Table – Class 3. Disabilities are assumed to be 75% duty related.
Rates at selected ages are:

<u>Age</u>	<u>Percent Becoming Disabled</u>
20	0.14%
25	0.20
30	0.30
35	0.42
40	0.59
45	0.82
50	1.22
55	2.09
60	3.10

Administrative Expenses

\$25,000 per year

Marriage

80% of members are assumed to be married at the time of withdrawal, retirement, death or disability. Males are assumed to be 4 years older than their spouses.

This work product was prepared solely for the City of Ladue for the purposes described herein and may not be appropriate to use for other purposes. Milliman does not intend to benefit and assumes no duty or liability to other parties who receive this work.

**The City of Ladue Firemen and
Policemen's Pension Plan**

January 1, 2012 Actuarial Valuation

Actuarial Assumptions and Methods

Children of Active Employees

Active members are assumed to have one child. Each child is assumed to be born at a member's age 28.

Form of Payment

All members are assumed to elect the Life Annuity with a 50% postretirement death benefit payable to a spouse and eligible children, with the exception that those who terminate prior to retirement are assumed to elect a return of contributions.

Unused Sick Leave and Vacation Pay

Unused sick leave and vacation pay cashouts are assumed to increase benefits at retirement by 6.5%.

Actuarial Cost Method

The actuarial cost method is the Entry Age Normal Cost Method where Normal Costs are computed as a level percent of pay. The Unfunded Accrued Liability is amortized over 20 years as a level percent of projected payroll. Projected payroll is assumed to increase 3% per year. The amortization period is reset to 20 years each year.

Asset Valuation Method

An asset valuation method is used to help smooth short term fluctuations in market value. The actuarial value of assets is equal to the prior year's actuarial value of assets adjusted as follows:

1. increased with actual contributions for the year;
2. reduced by actual benefit payments and expenses for the year;
3. increased by expected investment income calculated using the assumed rate of return
4. increased by phased in investment gains/(losses)
5. limited to no less than 80% of market value and no more than 120% of market value

Each year, the amount of investment gain/(loss) to be phased in is equal to the excess of the plan's market value over the sum of the expected asset value and the unrecognized balances of investment gains/(losses) for the previous five years. 20% of this amount plus 20% of the similar amounts calculated in each of the four preceding years are summed and recognized

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**The City of Ladue Firemen and
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January 1, 2012 Actuarial Valuation

Actuarial Assumptions and Methods

as the amount of phased-in gains recognized in the current year.

**The City of Ladue Firemen and
Policemen's Pension Plan**

January 1, 2012 Actuarial Valuation

Summary of Plan Provisions

A summary of the current primary provisions of the Plan is presented below. A complete description of the provisions can be found in Ordinance 1932.

Effective Date

Originally effective May 1, 1947; most recently restated effective November 19, 2007 and amended November 21, 2011.

Eligibility

Any salaried uniformed employee of the Fire Department or Police Department of the City of Ladue becomes eligible after his first hour of employment.

Employee Contributions

Each Employee contributes 3% of salary to the Pension Fund. Contributions accumulate at an interest rate of 4% as established by the Board of Trustees.

Earnings

Calendar year compensation paid to an employee by the City of Ladue, including unused sick leave, vacation pay, LTD premiums, temporary disability payments, and employee contributions to an eligible deferred compensation plan, cafeteria plan, or transportation expense program.

Final Average Earnings (FAE)

Average monthly salary during the last 60 months of employment, or average monthly salary during an employee's entire employment if employed less than 60 months. The FAE for a disabled participant is determined as of the Date of Disability.

Career Average Earnings (CAE)

Average monthly salary during an employee's entire employment. The CAE for a disabled participant is determined as of the Date of Disability.

**The City of Ladue Firemen and
Policemen's Pension Plan**

January 1, 2012 Actuarial Valuation

Summary of Plan Provisions

Years of Service

Sum of continuous periods of service from date of hire to date of termination, including periods on LTD, Family and Medical Leave, and absences without pay lasting less than 31 consecutive days. Does not include partial years of service.

Normal Retirement

Eligibility: Age 55 with 10 Years of Service.

Benefit: Less than 20 Years of Service: 2% of CAE multiplied by Years of Service.

At least 20 Years of Service: 40% of FAE + 2.5% of FAE multiplied by Years of Service in excess of 20 up to a maximum of 10.

Disability Benefit

Eligibility: 10 Years of Service including period of Disability.

Benefit: Disability Benefits are paid outside the Plan by the City's Long-Term Disability Plan for disabilities that occur after January 1, 2008. Upon attaining Early or Normal Retirement eligibility, a disabled member is entitled to the Early or Normal Retirement Benefit based on FAE at Date of Disability and Credited Service including the period while on LTD.

Early Retirement

Eligibility: Age 50 with 10 Years of Service.

Benefit: Accrued Benefit based on FAE or CAE and Years of Service at retirement actuarially reduced for early commencement.

Vested Termination Benefit

Less than 10 Years of Service: Refund of contributions with interest.

**The City of Ladue Firemen and
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January 1, 2012 Actuarial Valuation

Summary of Plan Provisions

At least 10 Years of Service: Either refund of contributions with interest or the participant's Accrued Benefit based on FAE or CAE and Credited Service at termination actuarially adjusted for date of retirement.

Deferred Retirement

A member may defer his pension after age 55 upon discretion of the City Council.

Death Benefit

Active Duty: 50% of FAE plus 10% of FAE for each Dependent Child to a maximum of three.

Active Non-Duty: 5% of FAE multiplied by Years of Service up to a maximum of 24% of FAE plus 2% of FAE multiplied by Years of Service up to a maximum of 10% of FAE for each Dependent Child to a maximum of three.

Duty Disability (Disabled prior to January 1, 2008): 40% of FAE plus 10% of FAE for each Dependent Child to a maximum of three.

Non-Duty Disability (Disabled prior to January 1, 2008): Two thirds of the benefit the disabled retiree was receiving plus one third of the benefit the disabled retiree was receiving for each Dependent Child to a maximum of three.

Cost-of-Living Adjustment (COLA)

Benefits commencing on or after April 17, 1972 are adjusted each January 1 for an annual COLA based on the Consumer Price Index on September 30 prior to the adjustment date. COLAs are limited to a maximum annual increase of 2% and a lifetime maximum of 20%. If the CPI is less than 1% during a year, there shall be no adjustment, and if the CPI is negative, there shall be no adjustment unless the decrease is 2% or more. Retirees and disabled members (who became disabled prior to January 1, 2008) first become eligible for the COLA on the second January 1st following retirement.

Normal Form of Payment

Life Annuity with a 50% post retirement death benefit payable to a spouse (who has attained age 50) and eligible children (single and below age 18).