
Tyler Firefighters' Relief and Retirement Fund

Actuarial Report for City's Compliance with GASB Statement No. 68 for the Fiscal Year Ending September 30, 2016

January 4, 2017

Rudd and Wisdom, Inc.

CONSULTING ACTUARIES

Mitchell L. Bilbe, F.S.A.
Evan L. Dial, F.S.A.
Philip S. Dial, F.S.A.
Philip J. Ellis, A.S.A.
Charles V. Faerber, F.S.A., A.C.A.S.
Mark R. Fenlaw, F.S.A.

Brandon L. Fuller, A.S.A.
Christopher S. Johnson, F.S.A.
Oliver B. Kiel, F.S.A.
Robert M. May, F.S.A.
Edward A. Mire, F.S.A.
Rebecca B. Morris, A.S.A.
Amanda L. Murphy, F.S.A.

Michael J. Muth, F.S.A.
Khiem Ngo, F.S.A., A.C.A.S.
Elizabeth A. O'Brien, A.S.A.
Raymond W. Tilotta
Ronald W. Tobleman, F.S.A.
David G. Wilkes, F.S.A.

January 4, 2017

Via E-Mail: phenderson@tylertexas.com

Board of Trustees
Tyler Firefighters' Relief and Retirement Fund
c/o Ms. Paula Henderson
1718 West Houston Street
Tyler, Texas 75702

Re: GASB No. 68 Report for the Tyler Firefighters'
Relief and Retirement Fund for the City's Fiscal
Year Ending September 30, 2016

Dear Board Members:

At your request, we have prepared an actuarial report providing actuarial information for the Tyler Firefighters' Relief and Retirement Fund (the Fund) for the city's fiscal year ending September 30, 2016 based on a measurement date of December 31, 2015 in accordance with Governmental Accounting Standards Board (GASB) Statement No. 68, *Accounting and Financial Reporting for Pensions*. This information will be used in the preparation of the city's September 30, 2016 financial report.

The disclosures, pension expense, and net pension liability in this report are based on (1) the Fund's actuarial valuation as of December 31, 2015, including the actuarial assumptions and census data summarized in our report to the board of trustees dated August 23, 2016, and (2) the statement of changes in plan fiduciary net position for the Fund's audited December 31, 2015 financial report.

Changes in Governmental Accounting Standards

In June 2012, the GASB issued GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*, which amended GASB Statement No. 27 effective for fiscal years beginning after June 15, 2014. For the City of Tyler, GASB 68 first applied in the fiscal year ending September 30, 2015 and made a number of changes to the accounting and financial reporting for the Fund. GASB 68 says the total pension liability should be determined by (a) an actuarial valuation as of the measurement date or (b) the use of update procedures to roll forward to the measurement date amounts from an actuarial valuation as of a date no more than 30 months and one day earlier than the employer's most recent fiscal year end. For this report, the actuarial valuation was as of the measurement date.

Variability in Future Actuarial Measurement

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- Plan experience differing from that anticipated by the economic or demographic assumptions;
- Changes in economic or demographic assumptions;
- Increases or decreases expected as part of the natural operation of the methodology used for these measurements; and
- Changes in plan provisions or applicable law.

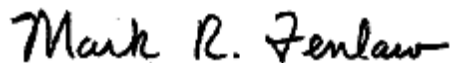
We have not been asked to perform and have not performed any stochastic or deterministic sensitivity analyses of the potential ranges of such future measurements, except as required by GASB 68. If you have an interest in the results of any other such analysis, please let us know.

Required Supplementary Information

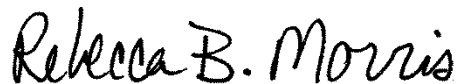
The schedules of required supplementary information (RSI) in Section II of the report do not include the one described in paragraph 46(c) of GASB 68 because the Fund does not have actuarially determined contributions. However there is a schedule for the RSI described in paragraph 46(d), shown as item B on page 11, since the city's contributions are established based on an agreement between the city and the Fund's board of trustees. However, it will be the city's responsibility to complete the entries since they are to be based on the city's fiscal year and not the plan year.

We hereby certify that we are members of the American Academy of Actuaries who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sincerely,



Mark R. Fenlaw, F.S.A.



Rebecca B. Morris, A.S.A.

MRF/RBM:lb
Enclosure

TABLE OF CONTENTS

Page No.

Section I: Information to Comply with GASB Statement No. 68

- A. General Information about the Retirement Plan.....4
- B. Net Pension Liability6
- C. Changes in the Net Pension Liability8
- D. Pension Expense and Deferred Outflows of Resources and
Deferred Inflows of Resources Related to Pensions8

Section II: Schedules of Required Supplementary Information

- A. Changes in the Net Pension Liability and Related Ratios.....10
- B. Employer Contributions11

Section III: Amortization Schedules12

Section I – Information to Comply with GASB Statement No. 68

A. General Information about the Retirement Plan

1. Plan Description

The city contributes to the retirement plan for firefighters in the Tyler Fire Department known as the Tyler Firefighters' Relief and Retirement Fund (the Fund). The Fund is a single employer, contributory, defined benefit plan. The benefit provisions of the Fund are authorized by the Texas Local Fire Fighters' Retirement Act (TLFFRA). TLFFRA provides the authority and procedure to amend benefit provisions. The plan is administered by the Board of Trustees of the Tyler Firefighters' Relief and Retirement Fund. The city does not have access to nor can it utilize assets within the retirement plan trust. The Fund issues a stand-alone report pursuant to GASB Statement No. 67, which may be obtained by writing the Tyler Firefighters' Relief and Retirement Fund at 1718 West Houston, Tyler, Texas 75702. See that report for all information about the plan fiduciary net position.

2. Benefits Provided

Firefighters in the Tyler Fire Department are covered by the Tyler Firefighters' Relief and Retirement Fund which provides service retirement, death, disability, and withdrawal benefits. These benefits fully vest after 20 years of credited service. Firefighters become eligible for normal service retirement at age 50 with 25 years of service or at age 55 with 20 years of service. If a terminated firefighter has a vested benefit but is not eligible for normal retirement, he may elect an actuarially equivalent early retirement benefit or he may wait to retire starting on the date he would have first satisfied both age and service requirements for normal retirement if he had remained a Tyler firefighter. The present plan effective July 1, 2011 provides a monthly normal service retirement benefit, payable in a Joint and Two-Thirds to Spouse form of annuity (except those who had 20 or more years of service as of January 1, 2005 have a normal form of a Joint and 100% to Spouse form), equal to 71.5% of Highest 60-Month Average Salary plus \$113 for each year of service in excess of 20.

A retiring firefighter eligible for normal service retirement with certain minimum combinations of years of service and age has the option to elect the Retroactive Deferred Retirement Option Plan (RETRO DROP) which will provide a lump sum benefit and a reduced monthly benefit. The reduced monthly benefit is based on the service and Highest 60-Month Average Salary as if he had terminated employment on his selected RETRO DROP benefit calculation date, which is no earlier than the later of the date he meets the RETRO DROP eligibility requirements and the date preceding the date he actually retires by the maximum lump sum accumulation period (36 or 60 months, depending upon age and service). Upon retirement, the member will receive, in addition to his monthly retirement benefit, a lump sum equal to the sum of (1) the amount of monthly contributions the member has made to the fund after the RETRO DROP benefit calculation date plus (2) the total of the monthly retirement benefits the member would have received between the RETRO DROP benefit calculation date and the date he retired under the plan. There are no account balances. The lump sum is calculated at the time of retirement and distributed as soon as administratively possible.

There is no provision for automatic postretirement benefit increases. The Fund has the authority to provide, and has periodically in the past provided, ad hoc postretirement benefit increases.

3. Members Covered by the Fund

In the December 31, 2015 actuarial valuation, the following numbers of members were covered by the Fund:

Retirees and beneficiaries currently receiving benefits	99
Inactive employees entitled to but not yet receiving benefits	1
Active employees	<u>154</u>
	254

4. Funding Policy

The contribution provisions of the Fund are authorized by TLFFRA. TLFFRA provides the authority and procedure to change the amount of contributions determined as a percentage of pay by each firefighter and a percentage of payroll by the city.

The funding policy of the Tyler Firefighters' Relief and Retirement Fund requires contributions equal to 13.5% of pay by the firefighters, the rate elected by the firefighters according to TLFFRA. The city currently contributes according to an agreement between the city and the Fund's board of trustees. The city's contribution rate to the Fund is the same percentage of payroll that the city contributes to the Texas Municipal Retirement System for other employees each calendar year. The actual city contribution rate was 21.30% in 2015 and is 20.85% in 2016. The December 31, 2015 actuarial valuation includes the assumption that the city contribution rate will average 19.5% over the UAAL amortization period. The costs of administering the plan are paid from the Fund assets.

Ultimately, the funding policy also depends upon the total return of the Fund's assets, which varies from year to year. Investment policy decisions are established and maintained by the board of trustees. The board selects and employs investment managers with the advice of their investment consultant who is completely independent of the investment managers. For the year ending December 31, 2015, the money-weighted rate of return on pension plan investments was -4.55%. This measurement of the investment performance is net of investment-related expenses, reflecting the effect of the timing of the contributions received and the benefits paid during the year.

While the contribution requirements are not actuarially determined, state law requires that each change in plan benefits adopted by the Fund must first be approved by an eligible actuary, certifying that the contribution commitment by the firefighters and the assumed city contribution rate together provide an adequate contribution arrangement. Using the entry age actuarial cost method, the plan's normal cost contribution rate is determined as a percentage of payroll. The excess of the total contribution rate over the normal cost contribution rate is used to amortize the plan's unfunded actuarial accrued liability (UAAL). The number of years needed to amortize the plan's UAAL is actuarially determined using an open, level percentage of payroll method.

B. Net Pension Liability

The City of Tyler's net pension liability was measured as December 31, 2015, and the total pension liability used to calculate the net pension liability was determined by the actuarial valuation as of December 31, 2015.

Total pension liability	\$ 85,532,494
Plan fiduciary net position	<u>59,949,406</u>
City's net pension liability	\$ 25,583,088
Plan fiduciary net position as a percentage of the total pension liability	70.1%

1. Actuarial Assumptions

The total pension liability in the December 31, 2015 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.50%
Salary increases	3.50%, plus promotion, step and longevity increases that vary by service
Investment rate of return	7.65%, net of pension plan investment expense, including inflation

Mortality rates were based on the RP-2000 Combined Healthy Mortality Tables for males and for females (sex distinct) projected to 2024 by scale AA.

The long-term expected rate of return on pension plan investments is reviewed for each biennial actuarial valuation and was determined using a building-block method in which expected future net real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These components are combined to produce the long-term expected rate of return by weighting the expected future net real rates of return by the target asset allocation percentage (currently resulting in 4.14%) and by adding expected inflation (3.50%). In addition, the final 7.65% assumption was selected by "rounding up". The target allocation and expected arithmetic net real rates of return for each major asset class are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Net Real Rate of Return
Equities		
Large cap domestic	25.0%	5.59%
Mid cap domestic	10.5	5.87
Small cap domestic	9.0	5.97
International developed	7.0	5.88
International developing	5.0	7.29
Alternatives		
Real estate	5.0	3.94
Commodities	5.0	2.10
Fixed income		
Domestic core	23.0	1.36
Domestic high yield	4.0	2.76
Global	5.0	1.71
Cash	1.5	0.24
Total	100.0%	
Weighted Average		4.14%

2. Discount Rate

The discount rate used to measure the total pension liability was 7.65%. No projection of cash flows was used to determine the discount rate because the December 31, 2015 actuarial valuation showed that expected contributions would pay the normal cost and amortize the unfunded actuarial accrued liability (UAAL) in 22 years. Because of the 22-year amortization period of the UAAL, the pension plan's fiduciary net position is expected to be available to make all projected future benefit payments of current active and inactive members. Therefore, the long-term expected rate of return on pension plan investments of 7.65% was applied to all periods of projected benefit payments as the discount rate to determine the total pension liability.

3. Sensitivity of the Net Pension Liability to Changes in the Discount Rate

The following presents the net pension liability of the City of Tyler, calculated using the discount rate of 7.65%, as well as what the city's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.65%) or 1-percentage-point higher (8.65%) than the current rate:

	1% Decrease (6.65%)	Current Discount Rate (7.65%)	1% Increase (8.65%)
City's Net Pension Liability	\$ 34,671,416	\$25,583,088	\$ 17,837,964

4. Plan Fiduciary Net Position

The plan fiduciary net position reported above is the same as reported by the Fund. Detailed information about the plan fiduciary net position is available in the Fund's separately issued audited financial statements, which are reported using the economic resources measurement focus and the accrual basis of accounting in conformity with accounting principles generally accepted in the United States of America. Revenues are recorded when earned, and expenses are recorded when a liability is incurred, regardless of the timing of the related cash flows. Investments are reported at fair value, the price that would be recognized to sell an asset in an orderly transaction between market participants at the measurement date.

C. Changes in the Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Amounts as of September 30, 2015¹	\$ 81,532,160	\$ 64,362,549	\$ 17,169,611
Changes for the year:			
Service cost	2,215,179		2,215,179
Interest	6,277,350		6,277,350
Differences between expected and actual experience	198,165		198,165
Contributions by the city		2,452,070	(2,452,070)
Contributions by the firefighter		1,555,182	(1,555,182)
Net investment income		(2,891,814)	2,891,814
Benefit payments	(5,498,546)	(5,498,546)	0
Administrative expenses		(30,035)	30,035
Assumption changes	808,186		808,186
Other	0	0	0
Net changes	<u>4,000,334</u>	<u>(4,413,143)</u>	<u>8,413,477</u>
Amounts as of September 30, 2016²	\$ 85,532,494	\$ 59,949,406	\$ 25,583,088

¹ Measurements for the fiscal year ended September 30, 2015 were taken as of December 31, 2014.

² Measurements for the fiscal year ended September 30, 2016 were taken as of December 31, 2015.

D. Pension Expense and Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

For the year ended September 30, 2016, the city's GASB 68 pension expense was \$4,196,696. Amounts recognized in the fiscal year represent changes between the current and prior measurement dates.

1. Components of Pension Expense for the Fiscal Year Ended September 30, 2016

Components of Pension Expense	
Service cost	\$ 2,215,179
Interest	6,277,350
Firefighter contributions	(1,555,182)
Projected earnings on pension plan investments	(4,929,146)
Amortization of differences between projected and actual earnings on plan investments	2,040,205
Amortization of changes of assumptions	94,969
Amortization of differences between expected and actual experience	23,286
Pension plan administrative expenses	30,035
Other	0
Total pension expense	\$ 4,196,696

2. Deferred Outflows of Resources and Deferred Inflows of Resources to Be Recognized in Pension Expense in Future Years

	Deferred Outflows of Resources	Deferred Inflows of Resources
Net difference between projected and actual earnings on pension plan investments	\$ 7,684,809	\$ 0
Changes of assumptions	713,217	0
Differences between expected and actual experience	174,879	0
Total	\$ 8,572,905	\$ 0

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year Ended September 30	Net of Deferred Outflows Minus Deferred Inflows
2017	\$ 2,158,460
2018	2,158,461
2019	2,158,461
2020	1,682,447
2021	118,255
Thereafter	296,821
Total	\$ 8,572,905

3. Deferred Outflow of Resources to Be Recognized Next Year

The total of the contributions by the city to the Fund contributed subsequent to the measurement date of the net pension liability, December 31, 2015, through September 30, 2016 is a deferred outflow of resources that will be recognized as a reduction in the net pension liability in the fiscal year ending September 30, 2017. **This amount will be provided by the city.**

Section II – Schedules of Required Supplementary Information

A. Schedule of Changes in the City's Net Pension Liability and Related Ratios for the Last 10 Fiscal Years¹

	Fiscal Year Ending 9/30/2015	Fiscal Year Ending 9/30/2016
1. Total Pension Liability		
a. Service cost	\$ 2,135,428	\$ 2,215,179
b. Interest	5,987,025	6,277,350
c. Changes in benefit provisions	0	0
d. Differences between expected and actual experience	0	198,165
e. Changes of assumptions	0	808,186
f. Benefit payments	<u>(3,413,612)</u>	<u>(5,498,546)</u>
g. Net Change	4,708,841	4,000,334
h. Beginning	<u>76,823,319</u>	<u>81,532,160</u>
i. Ending	\$ 81,532,160²	\$ 85,532,494
2. Plan Fiduciary Net Position		
a. Contributions by the city	\$ 2,407,993	\$ 2,452,070
b. Contributions by the firefighters	1,522,493	1,555,182
c. Net investment income	2,403,790	(2,891,814)
d. Benefit payments	(3,413,612)	(5,498,546)
e. Administrative expenses	<u>(53,740)</u>	<u>(30,035)</u>
f. Net Change	2,866,924	(4,413,143)
g. Beginning	<u>61,495,625</u>	<u>64,362,549</u>
h. Ending	\$ 64,362,549	\$ 59,949,406
3. City's Net Pension Liability – Ending [Item 1(i) – 2(h)]	\$ 17,169,611	\$ 25,583,088
4. Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	78.9%	70.1%
5. Covered Payroll	\$ 11,277,726	\$ 11,519,867
6. City's Net Pension Liability as a Percentage of Covered Payroll	152.2%	222.1%

Notes to Schedule:

¹ Until a full 10-year trend is compiled, only available information is shown. The measurement date is December 31, nine months prior to the fiscal year end. Amounts recognized in the fiscal year represent changes between the current and prior measurement dates.

² Determined from the total pension liability as of December 31, 2013 using the roll forward procedure allowed for GASB 68.

B. Schedule of City Contributions for the Last 10 Fiscal Years¹

	Fiscal Year Ending 9/30/2015	Fiscal Year Ending 9/30/2016
1. Required contributions	\$ _____ ²	\$ _____ ²
2. Contributions in relation to the required contributions	_____ ²	_____ ²
3. Contribution deficiency (excess)	\$ _____ ⁰³	\$ _____ ⁰³
4. Covered payroll for the year	\$ _____ ²	\$ _____ ²
5. Contributions as a percentage of covered payroll	\$ _____ ⁴	\$ _____ ⁴

¹ Until a full 10-year trend is compiled, only available information is shown.

² This amount will be provided by the city.

³ This amount will be item 1 minus item 2. It will be \$0 if the city contributed according to an agreement between the city and the Fund's board of trustees.

⁴ This amount will be the contributions (item 2) divided by the covered payroll (item 4).

Section III – Amortization Schedules

A. Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

First Fiscal Year Difference Recognized	Differences between Projected and Actual Earnings	Amortization Period	Recognized Outflow (Inflow) of Resources					
			Fiscal Year Recognized					
			2016	2017	2018	2019	2020	2021
2015	\$ 2,380,067	5 yrs	\$ 476,013	\$ 476,013	\$ 476,014	\$ 476,014	\$ 0	\$ 0
2016	7,820,960	5 yrs	1,564,192	1,564,192	1,564,192	1,564,192	1,564,192	0
2017								
2018								
2019								

Net increase (decrease) for A \$ 2,040,205

B. Increase (Decrease) in Pension Expense Arising from the Recognition of Changes in Assumptions

First Fiscal Year Difference Recognized	Changes in Assumptions	Amortization Period	Recognized Outflow (Inflow) of Resources					
			Fiscal Year Recognized					
			2016	2017	2018	2019	2020	2021
2015	\$ 0		\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2016	808,186	8.51 yrs	94,969	94,969	94,969	94,969	94,969	94,969
2017								
2018								
2019								

Net increase (decrease) for B \$ 94,969

C. Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience

First Fiscal Year Difference Recognized	Differences between Expected and Actual Experience	Amortization Period	Recognized Outflow (Inflow) of Resources					
			Fiscal Year Recognized					
			2016	2017	2018	2019	2020	2021
2015	\$ 0		\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
2016	198,165	8.51 yrs	23,286	23,286	23,286	23,286	23,286	23,286
2017								
2018								
2019								

Net increase (decrease) for C \$ 23,286

Net for future years (A+B+C) \$2,158,460 \$2,158,461 \$2,158,461 \$1,682,447 \$118,255