

*AUSTIN FIRE FIGHTERS  
RELIEF AND RETIREMENT FUND*

ANNUAL REPORT  
2017





AUSTIN FIRE FIGHTERS  
RELIEF AND RETIREMENT FUND

2017

ANNUAL REPORT

AND

PENSION PLAN GUIDE FOR MEMBERS

DECEMBER 31, 2017

## CONTENTS

Board of Trustees	3
Actuary	3
Auditor	3
Fund Custodian	3
Investment Consultant	3
Investment Managers	3
Legal Counsel	3
Pension Office Staff	3
Chair's Letter to Membership	4
Report of Independent Certified Public Accountants	5
Actuarial Review and Report	29
Pension Plan Guide	82
Fund History – Chronology of Plan Changes	88



While this report and pension plan guide set forth most of the facts about the plan, it does not attempt to describe all provisions or limitations as they apply in individual situations. In case of any conflict between the report/guide and the statute, the pension statute article 6243e.1, Vernon's Texas Civil Statutes, as amended through the 2015 State Legislature Regular Session, will prevail.

If you have any questions about the plan, please contact the Austin Fire Fighters Relief and Retirement Fund Pension Office, at (512) 454-9567. The Pension Office address is 4101 Parkstone Heights Drive, Suite 270, Austin, Texas 78746. Our email address is: *Linda@afrs.org*. You can also visit our web site at *AFRS.ORG*.



BOARD		Mayor Steve Adler, Chair
OF		Keith A. Johnson, Vice Chair
TRUSTEES		Art Alfaro, Treasurer
2017		Jeremy E. Burke, Trustee
		Dimitri J. Nichols, Trustee
ACTUARY		Foster & Foster – Fort Myers, FL
AUDITOR		Montemayor Britton Bender – Austin, TX
FUND CUSTODIAN		State Street – Boston, MA
INVESTMENT CONSULTANT		Meketa Investment Group – Miami, FL
	INVESTMENT MANAGERS	
Aberdeen Asset Mgmt., Inc. Philadelphia, Pennsylvania	Aether Investment Partners Denver, Colorado	Baillie Gifford Edinburgh, Scotland
Blackstone Alternative Asset Mgmt New York, New York	Blue Bay Direct Lending London, England	Clarion Partners Auburn, California
Constitution Capital Partners Andover, Massachusetts	Cross Creek Capital Partners Salt Lake City, UT	Deutsche Alternative Asset Mgmt. London, England
Dimensional Fund Advisors Austin, Texas	Flag Capital. Stamford, CT	57 Stars Washington D.C.
Greenspring Associates Owings Mills, Maryland	HarbourVest Boston, Massachusetts	Highclere International London, England
Intech Palm Beach Gardens, Florida	LGT Capital Partners Inc. New York, New York	Loomis Sales Boston, Massachusetts
Metropolitan Real Estate Mgmt. Boston, Massachusetts	Partners Group (USA) Inc. New York, New York	Portfolio Advisors Darien, Connecticut
Private Advisors Richmond, Virginia	Private Equity Investors New York, New York	Pyramis Global Advisors Smithfield, Road Island
Sanderson Asset Management Chicago, Illinois	State Street Global Advisors Boston, Massachusetts	Vaughan Nelson Investment Mgmt. Houston, Texas
Western Asset Management Pasadena, California	Westfield Capital Management Boston, Massachusetts	Westwood Holdings Group, Inc. Dallas, Texas
LEGAL COUNSEL		Jackson Walker Austin, Texas
PENSION OFFICE STAFF		
William E. Stefka - Administrator	Linda Adney	Premal Amin



# City of Austin

**Steve Adler, Mayor**

301 W. 2nd St., Austin, TX 78701  
(512) 978-2100, Fax (512) 978-2120  
[steve.adler@austintexas.gov](mailto:steve.adler@austintexas.gov)

August 27, 2018

**TO OUR MEMBERSHIP:**

On behalf of the Austin Fire Fighters Relief and Retirement Fund Pension Board of Trustees I am pleased to present the 2017 annual report to our membership. According to the pension plan's investment consultant, the Fund's net investment rate of return for calendar year 2017 was 17.0%, which was top decile performance relative to similar sized public pension plans.

The latest actuarial valuation dated 12/31/17 shows the pension plan has maintained its financially sound position being 88.3% funded with a 16.95 years amortization period. This compares favorably to the prior year's 12/31/16 valuation when the funded ratio was also 88.3%, with a 16.2 years amortization period. These results do include the impact of the most recent cost-of-living adjustments (COLA's), which were approved the past two years as noted below.

With the plan being actuarially sound, the pension board of trustees were able to approve a cost-of-living adjustment (COLA) for all eligible retirees and beneficiaries in the amount of 2.2%, effective January 1, 2018. This follows a COLA approved the prior year in the amount of 1.5%, which was effective January 1, 2017. Those were full-inflation COLA's based on the CPI-U (all items) index for those prior years.

I want to thank all our active and retired firefighters for your dedicated service and the protection you provide to all the residents here in Austin! It has been an honor and privilege serving as the Mayor of our fine city and as Chair of your Austin Firefighters Relief and Retirement Fund for over 3 years now. I look forward to an even bigger and brighter future for the City of Austin and the Austin Firefighters Pension Plan!

Sincerely,

Mayor Steve Adler, Chairman  
Austin Fire Fighters Relief and  
Retirement Fund Board of Trustees

*The City of Austin is committed to compliance with the Americans with Disabilities Act.  
Reasonable modifications and equal access to communications will be provided upon request.*





# Montemayor Britton Bender PC

CERTIFIED PUBLIC ACCOUNTANTS

## AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND

FINANCIAL STATEMENTS  
WITH SUPPLEMENTARY INFORMATION  
AND  
INDEPENDENT AUDITOR'S REPORT

31 DECEMBER 2017



**Montemayor Britton Bender PC**  
CERTIFIED PUBLIC ACCOUNTANTS

Board of Trustees  
Austin Fire Fighters Relief and Retirement Fund

**INDEPENDENT AUDITOR'S REPORT**

We have audited the accompanying statement of fiduciary net position of the Austin Fire Fighters Relief and Retirement Fund (the Fund) as of 31 December 2017, the related statement of changes in fiduciary net position for the year then ended, which collectively comprise the Fund's financial statements, and the related notes to the financial statements.

Management's Responsibility for the Financial Statements

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

Auditor's Responsibility

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free of material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditor's judgement, including the assessment of the risk of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements. We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.

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### Opinion

In our opinion, the financial statements referred to above present fairly, in all material respects, the financial status of the Fund as of 31 December 2017, and the changes in its financial status for the year then ended, in accordance with accounting principles generally accepted in the United States of America.

### Required Supplementary Information

Accounting principles generally accepted in the United States of America require that the management's discussion and analysis on pages 3 through 6 and the supplemental schedules on pages 18 through 23 be presented to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any assurance.

*Montemayor Britton Bender PC*

21 August 2018  
Austin, Texas



## **AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND MANAGEMENT'S DISCUSSION AND ANALYSIS**

Our discussion and analysis of the Austin Fire Fighters Relief and Retirement Fund's (the Fund) financial performance provides an overview of the Fund's activities for the calendar years 2017 and 2016. This information is provided in conjunction with our financial statements that follow.

### **FINANCIAL HIGHLIGHTS**

- Fiduciary net position of the Fund increased by \$124,188,031 or 14.97% in 2017 and by \$44,399,135 or 5.65% in 2016. The increase in 2017 and 2016 were due to positive financial market returns, as well as continued contributions to the Fund.
- Total contributions by the members and the City of Austin increased by 1.64% in 2017 and .63% in 2016. The increase for 2017 over 2016 reflects the increase in the contribution rate by the firefighters from 18.20% to 18.70% for the full year.
- The amount of benefits paid directly to retired members and their beneficiaries increased by \$6,392,773 in 2017 and increased by \$738,835 in 2016. The number of pension recipients increased for both years, and in 2017 there was an increase in lump sum distributions.
- The funding objective of the Fund is to meet long-term benefit obligations through contributions by the members and the City of Austin as well as from the investment income. As of 31 December 2017, the date of the most recent actuarial valuation, the Fund's funded ratio of actuarial assets as a percentage of actuarial liabilities was 88.3% which is equal to the 88.3% ratio as of 31 December 2016.

### **OVERVIEW OF THE FINANCIAL STATEMENTS**

The Fund's financial statements consist of the Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position, with accompanying Notes to the Financial Statements. The information available in each is summarized below:

The Statement of Fiduciary Net Position presents the Fund's assets and liabilities and the resulting net position, which are held in trust for pension benefits. This statement provides a snapshot as of year-end of the Fund's investments, stated at fair value, along with cash and short-term investments, receivables, and other assets and liabilities. Over time, increases or decreases in Fund net position may serve as a useful indicator of whether the financial position of the Fund is improving or deteriorating.

The Statement of Changes in Fiduciary Net Position presents information showing additions to and deductions from the Fund during a twelve-month period, using the accrual basis of accounting. Thus, additions are reported when earned and deductions when incurred, regardless of when cash is received or paid.

The Notes to the Financial Statements provide additional information that is essential to a full understanding of the data provided in the financial statements.

See independent auditor's report.

**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**

**FINANCIAL ANALYSIS**

Our analysis below focuses on the fiduciary net position and changes in fiduciary net position of the Fund.

Summary of Fiduciary Net Position

31 December 2017, 2016 and 2015

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Cash and receivables	\$11,259,588	\$15,896,322	\$9,119,509
Investments	942,833,000	814,420,021	776,648,937
Other assets	<u>235,821</u>	<u>246,201</u>	<u>253,273</u>
Total assets	<u>954,328,409</u>	<u>830,562,544</u>	<u>786,021,719</u>
 Total liabilities	 <u>530,182</u>	 <u>952,348</u>	 <u>810,658</u>
 Fiduciary net position for pension benefits	 <u>\$953,798,227</u>	 <u>\$829,610,196</u>	 <u>\$785,211,061</u>

Net position: The net position of the Fund increased by \$124,188,031 in 2017 and increased by \$44,399,135 in 2016. The increase between 2017 and 2016 and 2016 and 2015 reflects positive investment returns due to stronger financial markets, as well as continued contributions to the Fund.

Liabilities: The Fund's liabilities decreased by \$422,166 in 2017 due to a smaller accounts payable balance at year-end. Year-end liabilities increased in 2016 by \$141,690 due to the increase in funds payable to the investment managers for their investment fees.

See independent auditor's report.



**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**MANAGEMENT'S DISCUSSION AND ANALYSIS**

Summary of Change in Fiduciary Net Position

31 December 2017, 2016 and 2015

	<u>2017</u>	<u>2016</u>	<u>2015</u>
Additions:			
Contributions	\$35,560,974	\$34,988,152	\$34,769,309
Investment income (loss)	141,884,083	55,389,536	6,184,005
Other income	<u>30,917</u>	<u>74,984</u>	<u>67,661</u>
Total additions	<u>177,475,974</u>	<u>90,452,672</u>	<u>41,020,975</u>
Deductions:			
Benefit payments and contribution refunds	51,888,455	45,495,682	44,756,847
Administrative expenses	<u>1,399,488</u>	<u>557,855</u>	<u>486,292</u>
Total deductions	<u>53,287,943</u>	<u>46,053,537</u>	<u>45,243,139</u>
Net increase (decrease)	124,188,031	44,399,135	(4,222,164)
Fiduciary net position for pension benefits			
Beginning of year	<u>829,610,196</u>	<u>785,211,061</u>	<u>789,433,225</u>
End of year	<u>\$953,798,227</u>	<u>\$829,610,196</u>	<u>\$785,211,061</u>

Additions: Total contributions by the members and City of Austin for 2017 and 2016 were \$35,560,974 and \$34,988,152, respectively. The increase of \$572,822 in contributions for 2017 represents a 1.64% increase from 2016. The increase of \$ 218,843 in contributions for 2016 represents a .63% increase from 2015. The net investment income was \$142 million for 2017 and \$55 million for 2016.

Deductions: The expenses paid by the pension plan include the benefit payments, refunds of member contributions, administrative and other expenses. Benefits paid directly to retired members and their beneficiaries in 2017 were \$51,888,455 compared to \$45,495,682 in 2016. The amount of benefits paid increased by \$6,392,773 in 2017 from 2016 and increased by \$738,835 in 2016 from 2015. The increases in both 2017 and 2016 over their prior years were due to the increases in the number of retirees receiving benefits, and in 2017 there was an increase in lump sum distributions.

See independent auditor's report.

**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND  
MANAGEMENT'S DISCUSSION AND ANALYSIS**

Overall Analysis: As of 31 December 2017, fiduciary net position increased by \$124,188,031 or 14.97% over the prior year. Also, as of 31 December 2016, fiduciary net position increased by \$44,399,135 or 5.65% over the prior year. The latest actuarial valuation dated 31 December 2017 shows the Fund's funded ratio to be 88.3% compared to 88.3% from prior year. This was attributed to the assumed rate of return remaining at 7.70% as adopted by the pension board. The 31 December 2017 valuation shows the Fund continues to be actuarially sound and has taken positive steps to continue that course.

**REQUEST FOR INFORMATION**

This financial report is intended to provide a general overview of the Fund's finances and to demonstrate the Fund's accountability for the money it receives. Any questions regarding this report may be addressed to the fund administration at: 4101 Parkstone Heights Dr., Suite 270, Austin, TX 78746.

See independent auditor's report.

**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**

**STATEMENT OF FIDUCIARY NET POSITION**

**31 DECEMBER 2017**

**ASSETS**

Cash and cash equivalents	<u>\$8,756,546</u>
Investments at fair value:	
Public domestic equities	180,734,832
Public international equities	206,838,525
Private equity fund investments	163,730,779
Public fixed income	289,919,619
Real estate fund investments	78,282,492
Private natural resources fund investments	<u>23,326,753</u>
	<u>942,833,000</u>
Due from broker	2,371,068
Interest and dividends receivable	<u>131,974</u>
	<u>954,092,588</u>
Property and equipment, net of depreciation	<u>235,821</u>
	<u>954,328,409</u>

**LIABILITIES**

Due to broker	<u>530,182</u>
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<b>FIDUCIARY NET POSITION RESTRICTED FOR PENSION BENEFITS</b>	<u><b>\$953,798,227</b></u>
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The accompanying notes are an integral part of this financial statement presentation.



**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**

**STATEMENT OF CHANGES IN FIDUCIARY NET POSITION**

**YEAR ENDED 31 DECEMBER 2017**

**ADDITIONS TO FIDUCIARY NET POSITION**

Contributions:

Fire fighters contributions	\$16,318,769
City of Austin contributions	<u>19,242,205</u>
	<u>35,560,974</u>

Net investment income:

Net increase/(decrease) in the fair value of investments	101,367,119
Interest and dividends	4,500,138
Net gain on sale of investments	37,598,507
Investment expenses	<u>(1,581,681)</u>
	<u>141,884,083</u>

Other	<u>30,917</u>
	<u>177,475,974</u>

**DEDUCTIONS FROM FIDUCIARY NET POSITION**

Retirement benefit payments	51,888,455
General and administrative expenses	<u>1,399,488</u>
	<u>53,287,943</u>

<b>NET INCREASE (DECREASE) IN FIDUCIARY NET POSITION</b>	<b>124,188,031</b>
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<b>BEGINNING OF YEAR FIDUCIARY NET POSITION</b>	<b><u>829,610,196</u></b>
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<b>END OF YEAR FIDUCIARY NET POSITION</b>	<b><u>\$953,798,227</u></b>
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The accompanying notes are an integral part of this financial statement presentation.

**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**NOTES TO THE FINANCIAL STATEMENTS**

**NOTE 1: ORGANIZATION**

**A. FUND DESCRIPTION**

The Board of Trustees of the Austin Fire Fighters Relief and Retirement Fund (the Fund) is the administrator of a single-employer defined benefit pension plan covering fire fighters employed by the City of Austin, Texas. The Fund is open solely to active fire fighters in the City of Austin (the City). The Fund is considered a part of the City of Austin's financial reporting entity and is included in the City's financial statements as a pension fund trust. The Fund was originally established, and may be amended, by acts of the Texas Legislature. The current governing statute is Article 6243e.1, Vernon's Texas Civil Statutes. The Fund is governed by a Board of Trustees, which is composed of five members: the mayor of the municipality; the City's treasurer or, if there is no treasurer, a person who by law, charter provision, or ordinance performs the duty of the City Treasurer, and three active members of the retirement Fund elected by vote of the fire fighters and retirees.

The table below summarizes the membership of the Fund as of 31 December 2017:

Retirees and Beneficiaries Currently Receiving Benefits	789
Terminated Members Entitled to Benefits but Not Yet Receiving Them	8
Active Participants (Vested and Nonvested)	<u>1061</u>
	<u>1,858</u>

The Fund provides service retirement, death, disability, and termination benefits. When a member has completed ten years of credited service after entrance into the Fund, the member's account becomes vested and non-forfeitable. Under the terms of the Fund agreement, members or their beneficiaries are eligible for distributions of benefits upon attaining a normal retirement age of 50 with ten years of service, or upon completing 25 years of service regardless of age. In addition, members are eligible for early retirement benefits upon reaching age 45 with at least ten years of service or twenty years of creditable service, regardless of age. Distributions to members or their beneficiaries are also available in the event of total and permanent disability or upon death including survivor (spousal) benefits at 75% of retiree benefits. Members are eligible to enter the Deferred Retirement Option Plan (DROP) upon satisfaction of normal retirement eligibility, not to exceed seven years. DROP provides eligible participants the ability to designate benefits to be disbursed in a single payment or not more than four payments upon leaving active service.

The term of benefit payments are determined by the member's level of earnings and length of service. With the exception of payments under the DROP feature, distributions of payments are made in a series of equal installments over a period of time. Payments to members or their beneficiaries may be increased annually by the amount of increase in the Consumer Price index. Cost-of-living increases must be approved by the Board of Trustees and actuary of the Fund. There was a cost-of-living adjustment (COLA) of 1.5% put into effect for the year ending 31 December 2017. The contribution refunds are paid with 5% interest.



**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**NOTES TO THE FINANCIAL STATEMENTS**

**NOTE 1: ORGANIZATION**

**B. FUNDING POLICY**

The contribution provision of this Fund is authorized by Article 6243e.1, Vernon's Texas Civil Statutes, which provides the authority and procedure to change the amount of contributions determined as a percentage of pay by each member and a percentage of payroll by the City.

The Fund is maintained by biweekly contributions from the earnings of fire fighters and from the City. For the year ended 31 December 2017 the City's contribution rate was 22.05% and fire fighters contribution rate was 18.70% of their earnings excluding overtime, educational incentive pay, assignment pay and temporary pay in higher classifications.

While the contribution requirements are not actuarially determined, state law requires that each plan of benefits adopted by the Fund be approved by a qualified actuary. The actuary must certify that the contribution commitment by fire fighters and the City provides an adequate financing arrangement.

**C. NET PENSION LIABILITY**

The Fund's net pension liability was measured as of 31 December 2017 was as follows:

Total pension liability	1,038,800,829
Plan fiduciary net position	<u>(953,798,227)</u>
Net pension liability	<u>\$85,002,602</u>
Plan fiduciary net position as a percentage of the total pension liability	<u>91.82%</u>

**1. Actuarial Assumptions**

The total pension liability in the 31 December 2017 actuarial valuation was determined using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.50%
Salary increases	1.00% to 8.50%
Discount rate	7.70%
Investment rate of return	7.70%, net of pension plan investment expense, including inflation

**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**NOTES TO THE FINANCIAL STATEMENTS**

**NOTE 1: ORGANIZATION**

**C. NET PENSION LIABILITY**

Mortality rates were based on the RP-2000: Fully Generational using Scale AA set back two years for males and females.

Mortality rates disabled lives: RP-2000 Disability Mortality Table.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best estimate ranges of expected future real rates of return (expected returns, net of pension plan investment plan investment expenses and inflation) are developed for each major asset class.

These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

The expected arithmetic net real rates of return for each major asset class are summarized in the following table:

<u>Asset Class</u>	<u>Long-Term Expected Net Real Rate of Return</u>
Public domestic equity	5.3%
Public foreign equity	6.9
Private equity fund of funds	5.6
Investment grade bonds	1.1
TIPS	0.8
High yield/bank loans	3.8
Emerging market debt	3.6
Core real estate	3.4
Non-core real estate	5.0
Natural resources	5.9

**2. Discount Rate**

The Discount Rate used to measure the Total Pension Liability was 7.70%. For purposes of this valuation, the expected rate of return on pension plan investments is 7.70%; the municipal bond rate is 3.57% (based on the weekly rate closest to but not later than the measurement date of the Bond Buyer 20-Bond Index as published by the Federal Reserve); and the resulting single discount rate is 7.70%. The projection of cash flows used to determine the Discount Rate assumed that Fund member contributions will be made at the current contribution rate and that City contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on those assumptions, the Fund's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected



**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**NOTES TO THE FINANCIAL STATEMENTS**

**NOTE 1: ORGANIZATION**

**C. NET PENSION LIABILITY**

rate of return on Fund investments was applied to all periods of projected benefit payments 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 Fund, calculated using the discount rate of 7.70%, as well as what the Fund's net pension liability would be if it were calculated using a discount rate that is one percentage point lower (6.70%) or one percentage point higher (8.70%) than the current rate:

	1% Decrease (6.70%)	Current Discount Rate (7.70%)	1% Increase (8.70%)
Fund's net pension liability	<u>\$189,653,027</u>	<u>\$85,002,602</u>	<u>\$(3,088,422)</u>

**NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**BASIS OF ACCOUNTING**

The Fund's financial statements are prepared using the accrual basis of accounting under which expenses are recorded when the liability is incurred, revenues are recorded in the accounting period in which they are earned and become measurable, and investment purchases and sales are recorded as of their trade date. Fire fighter and City contributions are recognized as revenues in the period which the related employees' payroll is earned. Benefits are recognized when the employee becomes eligible for retirement and elects to retire under the system and is paid a benefit. Employee contribution refunds are recognized when the employee leaves the City and elects to withdraw a contribution.

**METHOD USED TO VALUE INVESTMENTS**

Cash and short-term investments include deposits in a custodian-managed investment pool from which the Fund may make deposits and withdrawals at any time without prior notice or penalty. The market value of such deposits is equal to cost. The Board of Trustees has adopted a Statement of Investment Policies and Objectives (Investment Policy) to set forth factors involved in the management of investment assets for the Fund. By statute, the Board of Trustees in its sole discretion may invest, reinvest, or change the assets of the Fund. The Board of Trustees shall invest in funds in whatever instruments or investments considered prudent. In making investments for the Fund, the Board of Trustees shall discharge its duties with care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a similar capacity and familiar with such matters would use in the conduct of an enterprise of a similar character and with similar aims.

**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**NOTES TO THE FINANCIAL STATEMENTS**

**NOTE 2: SUMMARY OF SIGNIFICANT ACCOUNTING POLICIES**

**METHOD USED TO VALUE INVESTMENTS**

Investments are reported at fair value. Securities traded on a national or international exchange are valued at the last reported sales price at current exchange rates. Investments that do not have an established market are reported at estimated fair value. Realized and unrealized gains and losses as well as other investment adjustments are reported as net appreciation (depreciation) in the fair value of investments.

**PROPERTY AND EQUIPMENT**

Property and equipment are stated at cost. Additions and improvements which significantly extend the useful life of an asset are capitalized. Other costs incurred for repairs and maintenance are expensed as incurred. Depreciation on all assets is provided on the straight line basis over the following estimated useful lives:

Buildings and improvements	40 years
Office furniture and equipment	3-15 years

**ESTIMATES**

The preparation of financial statements in conformity with U.S. generally accepted accounting principles requires management to make estimates and assumptions that affect the reported amounts of assets and liabilities and disclosure of contingent assets and liabilities at the date of the financial statements and the reported amounts of additions and deductions to the net position restricted for pension benefits during the reporting period. Actual results could differ from those estimates.

**FUND EXPENSES**

All Fund administrative costs are the responsibility of the Fund and are financed through investment earnings.

**SUBSEQUENT EVENTS**

Management has evaluated subsequent events through the date of the Independent Auditor's Report, the date the financial statements were available to be issued.

**NOTE 3: FEDERAL INCOME TAXES**

The Fund is a Public Employee Retirement Fund and is exempt from Federal income taxes and the provisions of the Employee Retirement Income Security Act of 1974.



**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**NOTES TO THE FINANCIAL STATEMENTS**

**NOTE 4: DEPOSIT AND INVESTMENT RISK**

**CUSTODIAL CREDIT RISK**

Custodial credit risk for deposits is the risk that, in the event of the failure of a depository financial institution, the Fund will not be able to recover deposits or will not be able to recover collateral securities that are in the possession of an outside party. Deposits are exposed to custodial credit risk if they are uninsured and unsecured. The Fund did not have exposure to custodial credit risk for deposits as of 31 December 2017.

Custodial credit risk for investments is the risk that, in the event of the failure of the counterparty to a transaction, the Fund will not be able to recover the value of investment or collateral securities that are in the possession of an outside party. Investment securities are exposed to custodial credit risk if the securities are uninsured, are not registered in the name of the Fund and are held by either the counterparty or the counterparty's trust department or agent but not in the Fund's name. As of 31 December 2017, the Fund's investment securities are not exposed to custodial credit risk because all securities are held by the Fund's custodial bank in the Fund's name.

**CONCENTRATION OF CREDIT RISK**

Concentration of credit risk is the risk of loss attributed to the magnitude of the Fund's investment in a single issuer. As of year end, the Fund had no investments with a single issuer that exceeded 5% of the Fund's net position.

The Fund's investment policy established asset allocation targets for major classes of invested assets as listed below. The Fund is authorized to invest in the following:

<u>Class</u>	<u>Target Range</u>
Equity	30-55%
Fixed Income Investments	20-40%
Alternatives	10-40%

**INTEREST RATE RISK**

Interest rate risk is the risk that changes in interest rates will adversely affect an investment's fair value. Although the Fund does have a formal investment policy, it does not specifically limit investment maturities as a means of managing its exposure to potential fair value losses from future changes in interest rates. As of 31 December 2017 the Fund had no exposure to interest rate risk.

**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**NOTES TO THE FINANCIAL STATEMENTS**

**NOTE 4: DEPOSIT AND INVESTMENT RISK**

**FOREIGN CURRENCY RISK**

Foreign currency risk is the risk that changes in exchange rates will adversely affect the fair value of an investment or deposit. Although the Fund does have a formal investment policy, it does not specifically address the Fund's exposure related to foreign currency risk. The Fund had the following exposure to foreign currency risk as of 31 December 2017:

<u>Denomination by Investment Type</u>	<u>Market Value (USD)</u>
Private Equity Fund Investments	
Euro	<u>\$5,561,569</u>
Real Estate Fund Investments	
Euro	<u>4,488,505</u>
Public Fixed Income	
Argentinian Peso	7,796,426
Brazilian Real	31,440,150
Euro	5,435,904
Indian Rupee	11,876,731
Indonesian Rupiah	6,427,189
New Peruvian Sol	7,629,954
Russian Ruble	12,002,404
Uruguay Peso	<u>5,839,796</u>
	<u>88,448,554</u>
	<u>\$98,498,628</u>

**CREDIT RISK**

Credit risk is the risk that an issuer or other counter party to an investment will not fulfill its obligations to the Fund. It is the Fund's policy to maintain fixed income securities within its portfolio at an average credit rating of investment grade or better. The Fund had no exposure to credit risk due to the types of investments held as of 31 December 2017.



**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**NOTES TO THE FINANCIAL STATEMENTS**

**NOTE 5: SCHEDULE OF INVESTMENT RETURNS**

The money-weighted rate of return expresses investment performance, net of investment expenses, that reflects the estimated effect of the contributions received and the benefits paid during the year.

<u>Fiscal Year</u>	<u>Annual Money-Weighted Net Real Rate of Return</u>
31 December 2017	17.29%

**NOTE 6: FAIR VALUE MEASUREMENT**

	Quoted Prices In Active Markets for Identical Assets (Level 1)	Significant Other Observable Inputs (Level 2)	Significant Unobservable Inputs (Level 3)
Public domestic equities	<u>\$180,734,832</u>	<u>\$0</u>	<u>\$0</u>
Public international equities	<u>\$206,838,525</u>	<u>\$0</u>	<u>\$0</u>
Private equity fund investments	<u>\$0</u>	<u>\$0</u>	<u>\$163,730,779</u>
Public fixed income	<u>\$0</u>	<u>\$289,919,619</u>	<u>\$0</u>
Real estate fund investments	<u>\$0</u>	<u>\$0</u>	<u>\$78,282,492</u>
Private natural resources fund	<u>\$0</u>	<u>\$0</u>	<u>\$23,326,753</u>

**NOTE 7: SECURITIES LENDING**

The Fund is authorized under its investment policy to participate in securities lending programs through State Street Bank and Trust Company (State Street) under which, for an agreed-upon fee, system owned investments are loaned to a borrowing financial institution. Under this agreement, when the loan closes, the borrowed securities are returned to the Fund and the collateral is returned to the borrower. During the fiscal year, State Street lent, on behalf of the Fund, certain US Equity securities of the Fund held by State Street as custodian and received cash or other collateral including securities issued or guaranteed by the United States government. State Street does not have the ability to pledge or sell collateral securities delivered absent a borrower default. The lending agreement requires securities to be collateralized by cash, US government securities or irrevocable letters of credit with a total market value of at least 100% of the market value of the loaned securities.

Pursuant to the Securities Lending Authorization Agreement, State Street had an obligation to indemnify the Fund in the event of default by a borrower. There were no failures by any borrowers to return loaned securities or pay distributions thereon during the fiscal year that resulted in a declaration or notice of default of the Borrower. During the fiscal year, the Fund and the borrowers maintained the right to terminate securities lending transactions upon notice.

**AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND**  
**NOTES TO THE FINANCIAL STATEMENTS**

**NOTE 7: SECURITIES LENDING**

There is no formal limit on the amount of loans that can be made, however the securities lending program shall in no way inhibit the trading activities of the Fund's investment managers. The cash collateral received on each loan was invested, together with the cash collateral of other qualified tax-exempt plan lenders, in a collective investment fund comprised of a liquidity pool and a duration pool. As of 31 December 2017 the liquidity pool had an average duration of 27.59 days and an average weighted final maturity of 153.05 days for USD collateral. As of this date, the duration pool had an average duration of 24.72 days and an average weighted final maturity of 3,184.52 days for USD collateral.

Because the securities lending transactions were terminable at will, their duration did not generally match the duration of the investments made with the cash collateral received from the borrower. On 31 December 2017 the Fund had no credit risk exposure to borrowers. The market values of collateral held and the market value (USD) of securities on loan for the Fund as of 31 December 2017 were \$12,692,180 and \$11,976,133 respectively.

**NOTE 8: COMMITMENTS AND CONTINGENCIES**

The Fund's investments include investment in partnership interests, which are closed end private markets strategies. In connection with those investments the Fund still has remaining commitments as of 31 December 2017 of \$99.7 million pursuant to the terms of the respective interest.

At 31 December 2017 the total accumulated lump sum benefit due to DROP participants was \$86,952,245.



# AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS Last 10 Years \*

	12/31/2017	12/31/2016	12/31/2015
Total Pension Liability			
Service Cost	23,830,495	24,322,417	23,309,543
Interest	75,812,099	70,892,708	66,404,730
Changes of benefit terms	8,963,689	5,491,908	-
Differences between Expected and Actual Experience	4,360,239	8,893,371	7,192,645
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(51,888,455)	(45,495,681)	(44,756,847)
Net Change in Total Pension Liability	61,078,067	64,104,723	52,150,071
Total Pension Liability - Beginning	977,722,762	913,618,039	861,467,968
Total Pension Liability - Ending (a)	<u>\$1,038,800,829</u>	<u>\$ 977,722,762</u>	<u>\$ 913,618,039</u>
Plan Fiduciary Net Position			
Contributions - Employer	19,242,205	19,103,891	19,222,329
Contributions - Employee	16,318,769	15,884,261	15,546,979
Net Investment Income	141,915,000	55,569,165	6,328,063
Benefit Payments, including Refunds of Employee Contributions	(51,888,455)	(45,495,681)	(44,756,847)
Administrative Expense	(1,399,488)	(662,501)	(562,687)
Net Change in Plan Fiduciary Net Position	124,188,031	44,399,135	(4,222,163)
Plan Fiduciary Net Position - Beginning	829,610,196	785,211,061	789,433,224
Plan Fiduciary Net Position - Ending (b)	<u>\$ 953,798,227</u>	<u>\$ 829,610,196</u>	<u>\$ 785,211,061</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 85,002,602</u>	<u>\$ 148,112,566</u>	<u>\$ 128,406,978</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	91.82%	84.85%	85.95%
Covered Employee Payroll	\$ 87,266,236	\$ 86,638,961	\$ 87,836,040
Net Pension Liability as a percentage of Covered Employee Payroll	97.41%	170.95%	146.19%

### Notes to Schedule:

#### *Changes of benefit terms:*

For measurement date 12/31/2017, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 2.2% cost-of-living adjustment, effective January 1, 2018.

For measurement date 12/31/2016, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 1.5% cost-of-living adjustment, effective January 1, 2017.

\* - Until a full ten-year trend is compiled, only available information is shown.

See independent auditor's report.



# AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS Last 10 Years \*

	12/31/2014	12/31/2013
Total Pension Liability		
Service Cost	25,318,456	23,497,407
Interest	62,976,839	59,249,151
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	4,883,207	-
Benefit Payments, including Refunds of Employee Contributions	(37,992,903)	(34,943,917)
Net Change in Total Pension Liability	55,185,599	47,802,641
Total Pension Liability - Beginning	806,282,369	758,479,728
Total Pension Liability - Ending (a)	<u>\$ 861,467,968</u>	<u>\$ 806,282,369</u>
Plan Fiduciary Net Position		
Contributions - Employer	18,669,944	17,786,494
Contributions - Employee	14,659,946	14,000,514
Net Investment Income	42,005,227	101,289,167
Benefit Payments, including Refunds of Employee Contributions	(37,992,903)	(34,943,917)
Administrative Expense	(530,816)	(363,050)
Net Change in Plan Fiduciary Net Position	36,811,398	97,769,208
Plan Fiduciary Net Position - Beginning	752,621,826	654,852,618
Plan Fiduciary Net Position - Ending (b)	<u>\$ 789,433,224</u>	<u>\$ 752,621,826</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 72,034,744</u>	<u>\$ 53,660,543</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	91.64%	93.34%
Covered Employee Payroll	\$ 84,670,948	\$ 83,279,101
Net Pension Liability as a percentage of Covered Employee Payroll	85.08%	64.43%

### Notes to Schedule:

#### *Changes of assumptions:*

For measurement date 12/31/2014, amounts reported as changes of assumptions resulted from an actuarial experience study dated June 15, 2015, below a brief overview of the changes:

- \* A "fresh-start" on the actuarial asset value has been implemented. For all future valuations, the asset valuation method will utilize a new smoothing technique.
- \* The investment return assumption has been decreased from 7.75% to 7.70% per year compounded annually, net of all expenses.
- \* The general wage inflation rate has been decreased from 3.5% to 3.0% per
- \* The service-based table attributable to merit and longevity salary increases
- \* The Retro-DROP election assumptions have been amended.
- \* The withdrawal rates have been amended.
- \* The assumed spousal age difference has been amended.

\* - Until a full ten-year trend is compiled, only available information is shown.

See independent auditor's report.

# AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND

## SCHEDULE OF CONTRIBUTIONS Last 10 Years \*

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a percentage of Covered Employee Payroll
12/31/2017	N/A	N/A	N/A	\$ 87,266,236	22.05%
12/31/2016	N/A	N/A	N/A	\$ 86,638,961	22.05%
12/31/2015	N/A	N/A	N/A	\$ 87,836,040	21.36%
12/31/2014	N/A	N/A	N/A	\$ 84,670,948	21.36%
12/31/2013	N/A	N/A	N/A	\$ 83,279,101	21.36%

### Notes to Schedule

Methods and assumptions used to determine liabilities:

Mortality Rates - Healthy Lives	RP-2000 (Fully Generational using Scale AA) set back two years for males and females - Sex Distinct. The assumed rates of mortality sufficiently accommodate expected mortality improvements.								
Mortality Rates - Disabled Lives	RP2000 Disability Mortality Table.								
Retirement Elections:	See tables on following page. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.								
Termination Rates:	See tables below. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.								
Disability Rates:	See tables on following pages. These assumptions were reviewed in conjunction with an actuarial experience study dated June 15, 2015.								
Interest Rate:	7.70% per year, compounded annually, net of all expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.								
Salary Increases:	See tables on following page. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.								
General Wage Inflation:	3.00% per year. This assumption was approved in conjunction with an actuarial experience study dated June 15, 2015.								
Inflation:	3.50% per year. This is reasonable based upon long-term historical experience.								
Payroll Growth:	3.50% per year for amortization of the Unfunded Actuarial Accrued Liability. This is reasonable based upon long-term historical experience.								
Asset Valuation Method:	All assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.								
Marital Status:	100% of actives are assumed to be married at time of benefit commencement. Females are assumed to be 4 years younger than Males. Additionally, 50% are assumed to have dependent children. The age of the youngest child is assumed to be one year. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.								
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method.								
Termination Rates:	<table> <tr> <th>Years of Service</th><th>Termination Probability</th></tr> <tr> <td>0-4</td><td>1.0%</td></tr> <tr> <td>5-13</td><td>0.5%</td></tr> <tr> <td>14+</td><td>0.0%</td></tr> </table>	Years of Service	Termination Probability	0-4	1.0%	5-13	0.5%	14+	0.0%
Years of Service	Termination Probability								
0-4	1.0%								
5-13	0.5%								
14+	0.0%								

\* - Until a full ten-year trend is compiled, only available information is shown.

See independent auditor's report.



# AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND

Retirement Rates:	Number of Years After First Eligibility for Early Retirement	Probability of Retirement
	0	2.0%
	1	2.0%
	2	2.0%
	3	2.0%
	4	2.0%
	5	5.0%
	6	7.5%
	7	7.5%
	8	10.0%
	9	16.7%
	10	16.7%
	11	16.7%
	12	20.0%
	13	20.0%
	14	30.0%
	15	40.0%
	16	50.0%
	17	75.0%
	18	100.0%

Retro-DROP Elections:	Number of Years After First Eligibility for Early Retirement	No-DROP Elected	Duration 1 Election	Duration 2 Election
	0	90%	0.5 years (10%)	n/a
	1	50%	1 year (50%)	n/a
	2	50%	1 year (25%)	2 years (25%)
	3	50%	1 year (25%)	2 years (25%)
	4	20%	1 year (60%)	3 years (20%)
	5	20%	2 years (40%)	4 years (40%)
	6	20%	2 years (60%)	5 years (20%)
	7	20%	2 years (50%)	5 years (30%)
	8	20%	3 years (60%)	6 years (20%)
	9	10%	3 years (50%)	6 years (40%)
	10	10%	3 years (50%)	6 years (40%)
	11	10%	3 years (60%)	6 years (30%)
	12	10%	3 years (75%)	6 years (15%)
	13	10%	3 years (40%)	6 years (50%)
	14	10%	3 years (40%)	6 years (50%)
	15	10%	3 years (20%)	6 years (70%)
	16	10%	3 years (20%)	6 years (70%)
	17	10%	3 years (20%)	6 years (70%)
	18	10%	3 years (20%)	6 years (70%)

See independent auditor's report.

## AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND

Disability Rate Table:

Age	Probability of Disablement
20	0.014%
25	0.019%
30	0.031%
35	0.052%
40	0.092%
45	0.209%
50	0.379%
55	0.490%
60	0.911%

% Increase in Salary\*:

Years of Service	Increase
0	6.00%
1	8.50%
2	7.50%
3	4.00%
4	1.00%
5	5.00%
10	1.50%
15	1.50%
20	5.50%
21+	1.00%

\* Expected increase in salary in addition to general wage inflation assumption.

See independent auditor's report.

# AUSTIN FIRE FIGHTERS RELIEF AND RETIREMENT FUND

## SCHEDULE OF INVESTMENT RETURNS Last 10 Years\*

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
12/31/2017	17.29%
12/31/2016	7.13%
12/31/2015	0.81%
12/31/2014	5.60%
12/31/2013	13.30%

\* - Until a full ten-year trend is compiled, only available information is shown.

See independent auditor's report.

AUSTIN FIREFIGHTERS'  
RELIEF AND RETIREMENT FUND

ACTUARIAL VALUATION  
AS OF DECEMBER 31, 2017







August 10, 2018

Mr. William E. Stefka  
Austin Firefighters'  
Relief and Retirement Fund  
4101 Parkstone Heights Drive, Suite 270  
Austin, TX 78746

Re: Austin Firefighters' Relief and Retirement Fund

Dear Mr. Stefka:

We are pleased to present to the Board this report of the annual actuarial valuation of the Austin Firefighters' Relief and Retirement Fund (AFRRF). Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the funding period required to amortize any existing Unfunded Actuarial Accrued Liability. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Please note that this valuation may not be applicable for any other purposes.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of the Texas Local Fire Fighters' Retirement Act (TLFFRA) and Vernon's Texas Civil Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations.

In conducting the valuation, we have relied on personnel, plan design, financial reports, and asset information supplied by the AFRRF staff, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.



The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of January 1, 2017. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.

The undersigned is familiar with the immediate and long-term aspects of pension valuations, and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

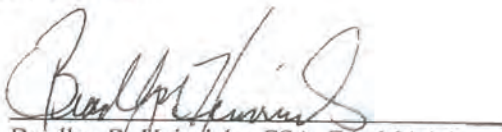
To our knowledge, no associate of Foster & Foster Inc. working on valuations of the program has any direct financial interest or indirect material interest in the city of Austin, nor does anyone at Foster & Foster Inc. act as a member of the Board of Trustees of the AFRRF. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact me at 239-433-5500.

Respectfully submitted,

Foster & Foster Inc.

By:

  
Bradley R. Heinrichs, FSA, EA, MAAA  
Enrolled Actuary #17-6901

BRH/lke

Enclosures

## TABLE OF CONTENTS

### **Introduction**

Summary of Report.....	5
Changes since Prior Valuation.....	7
Comparative Summary of Principal Valuation Results.....	8
Gain/Loss Analysis.....	10

### **Report Information**

Actuarial Assumptions and Methods.....	11
Valuation Notes.....	14
Statement by Enrolled Actuary.....	15

### **Trust Fund**

Statement of Fiduciary Net Position.....	16
Statement of Changes in Fiduciary Net Position.....	17
Actuarial Asset Valuation.....	18
Changes in Net Assets Available for Benefits.....	19

### **Member Statistics**

Statistical Data.....	20
Age and Service Distribution.....	21

### **Summary of Benefit Provisions**

Summary.....	22
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### **Governmental Accounting Standards Board Disclosure Statements**

GASB 67.....	25
GASB 68.....	37

## SUMMARY OF REPORT

The regular annual actuarial valuation of the Austin Firefighters' Relief and Retirement Fund, performed as of December 31, 2017, has been completed and the results are presented in this Report. The pension costs, compared with those developed in the December 31, 2016 actuarial valuation, are as follows:

<u>Valuation Date</u>	<u>12/31/2017</u>	<u>12/31/2016</u>
Current Normal Cost Rate		
% of Covered Payroll	29.46%	29.16%
Actuarial Accrued Liability (AAL)	\$1,038,118,085	\$981,771,267
Actuarial Value of Assets (AVA)	\$916,931,534	\$866,512,111
Unfunded Actuarial Accrued Liability (UAAL = AAL - AVA)	\$121,186,551	\$115,259,156
Funded Ratio (AVA / AAL)	88.3%	88.3%
Amortization Period <sup>2</sup>	16.95 years	16.17 years
Expected City Contribution Rate	22.05%	22.05%
Expected Member Contribution Rate	18.70%	18.70%
Total Expected Contribution Rate	40.75%	40.75%
City 20-Year Funding Cost	20.85%	20.48%
City 30-Year Funding Cost <sup>1</sup>	18.71%	18.35%
City 40-Year Funding Cost	17.71%	17.37%

<sup>1</sup> Per Section 802.101(a) of the Texas Government Code, the actuarial valuation must include a recommended contribution rate needed for the system to achieve and maintain an amortization period that does not exceed 30 years.

<sup>2</sup> If the actuarial smoothing technique was removed and the market value of assets was utilized to determine the amortization period, the result would be 10.50 years as of December 31, 2017.



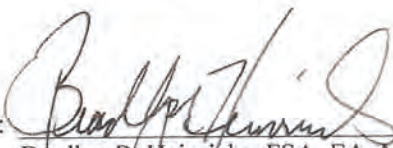
During the past year, the plan has realized favorable actuarial experience. The primary component of actuarial gain was attributable to average increases in pensionable earnings that were below the assumed rate.

Despite these net actuarial gains, the plan realized an increase in liabilities as a result of granting a 2.20% cost-of-living adjustment to eligible retirees, effective January 1, 2018.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Board of Trustees in order to discuss the Report and answer any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER INC.

By:   
Bradley R. Heinrichs, FSA, EA, MAAA

By:   
Drew D. Ballard, EA, MAAA

## CHANGES SINCE PRIOR VALUATION

### Fund Changes

There have been no changes in benefit provisions since the prior valuation.

### Actuarial Assumption/Method Changes

There have been no changes to the assumptions or methods since the prior valuation.

# COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>12/31/2017</u>	<u>12/31/2016</u>
A. Participant Data		
Actives	1,045	990
Service Retirees + DROP	650	618
Beneficiaries	74	71
QDRO	44	44
Disability Retirees	18	17
Terminated Vested	9	7
Total	<u>1,840</u>	<u>1,747</u>
Covered Payroll	88,578,067	84,864,171
Payroll Under Assumed Ret. Age	88,209,122	84,500,978
Annual Rate of Payments to:		
Service Retirees	39,941,555	36,626,360
Beneficiaries	2,881,465	2,637,771
QDRO	863,300	830,901
Disability Retirees	744,706	694,439
Terminated Vested	317,466	256,595
B. Assets		
Actuarial Value	916,931,534	866,512,111
Market Value	953,798,227	829,610,196
C. Liabilities *		
Present Value of Benefits		
Active Members		
Retirement + Vested Benefits	692,205,014	670,666,482
Death Benefits	8,369,038	8,056,817
Disability Benefits	23,971,186	22,777,807
Service Retirees + DROP	532,178,906	479,203,306
Beneficiaries	23,055,003	21,063,811
QDRO	9,422,560	9,194,296
Disability Retirees	6,568,655	6,158,042
Terminated Vested	2,783,086	2,276,246
Total	<u>1,298,553,448</u>	<u>1,219,396,807</u>

\* Liabilities shown represent present value of future payments.



	<u>12/31/2017</u>	<u>12/31/2016</u>
C. Liabilities - (Continued)		
Present Value of Future Salaries	918,035,842	846,052,806
Normal Cost (Entry Age Normal)		
Retirement + Vested Benefits	23,316,755	22,107,403
Death Benefits	563,692	542,455
Disability Benefits	1,250,055	1,180,638
Total Normal Cost	<u>25,130,502</u>	<u>23,830,496</u>
Present Value of Future Normal Costs	260,435,363	237,625,540
Actuarial Accrued Liability		
Retirement + Vested Benefits	450,208,818	449,883,922
Death Benefits	2,865,171	2,945,121
Disability Benefits	11,035,886	11,046,523
Inactives	574,008,210	517,895,701
Total Actuarial Accrued Liability	<u>1,038,118,085</u>	<u>981,771,267</u>
Unfunded Actuarial Accrued Liability (UAAL)	121,186,551	115,259,156
Funded Ratio (AVA/AL)	88.3%	88.3%
D. Actuarial Present Value of Accrued Benefits		
Inactives	574,008,210	517,895,701
Actives	345,230,441	328,470,323
Total Present Value Accrued Benefits	<u>919,238,651</u>	<u>846,366,024</u>
Funded Ratio (MVA/PVAB)	103.8%	98.0%

## GAIN/LOSS ANALYSIS

### a. Total Gain/(Loss)

1. Unfunded Actuarial Accrued Liability as of December 31, 2016	115,259,156
2. Normal Cost applicable for 2017	23,830,496
3. Interest on (1) and (2)	10,709,903
4. Contributions made during 2017	35,560,974
5. Interest on (4)	1,343,711
6. Expected UAAL as of December 31, 2017: (1)+(2)+(3)-(4)-(5)	112,894,870
7. Actual UAAL as of December 31, 2017	121,186,551
Total Actuarial Gain/(Loss) <sup>1</sup>	(8,291,681)

### b. Gain/(Loss) on Assets

1. Actuarial Value of Assets as of December 31, 2016	866,512,111
2. Contributions Less Benefit Payments	(16,327,481)
3. Expected Investment Earnings	66,092,825
4. Expected AVA as of December 31, 2017: (1)+(2)+(3)	916,277,455
5. Actual Actuarial Value of Assets as of December 31, 2017	916,931,534
Gain/(Loss) on Assets	654,079

### c. Gain/(Loss) on Liabilities

1. Expected Actuarial Accrued Liability: a(6)+b(4)	1,029,172,325
2. Actual Actuarial Accrued Liability	1,038,118,085
Gain/(Loss) on Liabilities <sup>1</sup>	(8,945,760)

<sup>1</sup> Includes increase in liabilities associated with the 2.2% cost-of-living adjustment that was granted to eligible retirees, effective January 1, 2018.



ACTUARIAL ASSUMPTIONS AND METHODS  
(Effective December 31, 2017)

<u>Mortality Rates – Healthy Lives</u>	RP2000 (Fully Generational using Scale AA) set back two years for males and females -- Sex Distinct.  The assumed rates of mortality sufficiently accommodates expected mortality improvements.
<u>Mortality Rates – Disabled Lives</u>	RP2000 Disability Mortality Table
<u>Retirement Elections</u>	See tables below. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.
<u>Termination Rates</u>	See tables below. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.
<u>Disability Rates</u>	See tables below. These assumptions were reviewed in conjunction with an actuarial experience study dated June 15, 2015.
<u>Interest Rate</u>	7.70% per year, compounded annually, net of all expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.
<u>Salary Increases</u>	See tables below. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.
<u>General Wage Inflation</u>	3.00% per year. This assumption was approved in conjunction with an actuarial experience study dated June 15, 2015.
<u>Inflation</u>	3.50% per year. This is reasonable based upon long-term historical experience.
<u>Payroll Growth</u>	3.50% per year for amortization of the Unfunded Actuarial Accrued Liability. This is reasonable based upon long-term historical experience.
<u>Asset Valuation Method</u>	All assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.

Marital Status

100% of actives are assumed to be married at time of benefit commencement. Females are assumed to be 4 years younger than Males. Additionally, 50% are assumed to have dependent children. The age of the youngest child is assumed to be one year.

These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.

Funding Method

Entry Age Normal Actuarial Cost Method.

Termination Rates

<u>Years of Service</u>	<u>Termination Probability</u>
0-4	1.0%
5-13	0.5
14+	0

Retirement Rates

<u>Number of Years After First Eligibility for Early Retirement</u>	<u>Probability of Retirement</u>
0	2.0%
1	2.0
2	2.0
3	2.0
4	2.0
5	5.0
6	7.5
7	7.5
8	10.0
9	16.7
10	16.7
11	16.7
12	20.0
13	20.0
14	30.0
15	40.0
16	50.0
17	75.0
18	100.0



### Retro-DROP Elections

Number of Years After First Eligibility for Early Retirement	<u>No-DROP Elected</u>	<u>Duration 1 Election</u>	<u>Duration 2 Election</u>
0	90%	0.5 years (10%)	n/a
1	50%	1 year (50%)	n/a
2	50%	1 year (25%)	2 years (25%)
3	50%	1 year (25%)	2 years (25%)
4	20%	1 year (60%)	3 years (20%)
5	20%	2 years (40%)	4 years (40%)
6	20%	2 years (60%)	5 years (20%)
7	20%	2 years (50%)	5 years (30%)
8	20%	3 years (60%)	6 years (20%)
9	10%	3 years (50%)	6 years (40%)
10	10%	3 years (50%)	6 years (40%)
11	10%	3 years (60%)	6 years (30%)
12	10%	3 years (75%)	6 years (15%)
13	10%	3 years (40%)	6 years (50%)
14	10%	3 years (40%)	6 years (50%)
15	10%	3 years (20%)	6 years (70%)
16	10%	3 years (20%)	6 years (70%)
17	10%	3 years (20%)	6 years (70%)
18	10%	3 years (20%)	6 years (70%)

### Disability Rates

<u>Age</u>	<u>Probability of Disablement</u>
20	0.014%
25	0.019
30	0.031
35	0.052
40	0.092
45	0.209
50	0.379
55	0.490
60	0.911

### % Increase in Salary\*

<u>Years of Service</u>	<u>Increase</u>
0	6.00%
1	8.50
2	7.50
3	4.00
4	1.00
5	5.00
10	1.50
15	1.50
20	5.50
21+	1.00

\* Expected increase in salary in addition to general wage inflation assumption.

## VALUATION NOTES

Payroll under Assumed Retirement Age is the projected rate of pay as of the valuation date of all active participants who are not subject to a 100% probability of retirement in the first year following the valuation date, discounted to take into account the probability of remaining an active participant.

Covered Payroll is equal to the Payroll under Assumed Retirement Age, with an addition for the projected rate of pay for the active participants who are subject to a 100% probability of retirement in the first year following the valuation date, discounted to take into account interest for middle of year timing.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

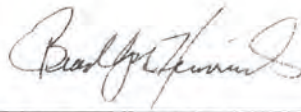
Normal (Current Year's) Cost is determined for each participant as the present value of future benefits, determined as of the Member's entry age, amortized as a level percentage of compensation over the anticipated number of years of participation, determined as of the entry age.

Individual Entry Age Normal Actuarial Cost Method (Level Percent of Compensation) is the method used to determine required contributions under the Fund. The use of this method involves the systematic funding of the Normal Cost (described above) and the Unfunded Accrued (Past Service) Liability. The actuarial accrued liability for active participants is the difference between the present value of future benefits and the present value of future Normal Costs. The actuarial accrued liability for inactive participants is the present value of future benefits.

Unfunded Actuarial Accrued Liability (UAAL) is the difference between the actuarial accrued liability (described above) and the actuarial value of assets.

#### STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of the Texas Local Fire Fighters' Retirement Act (TLFFRA), Vernon's Texas Civil Statutes, and adhere to the Actuarial Standards of Practice. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



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Bradley R. Heinrichs, FSA, EA, MAAA  
Enrolled Actuary #17-6901



STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2017

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Property, Furniture & Equipment	235,821.00	235,821.00
Money Market	8,756,546.00	8,756,546.00
Total Cash and Equivalents	8,992,367.00	8,992,367.00
Receivables:		
From Broker for Investments Sold	2,371,068.00	2,371,068.00
Investment Income	131,974.00	131,974.00
Total Receivable	2,503,042.00	2,503,042.00
Investments:		
State Street Securities	815,692,943.00	942,833,000.00
Total Investments	815,692,943.00	942,833,000.00
Total Assets	827,188,352.00	954,328,409.00
<u>LIABILITIES</u>		
Payables:		
To Broker for Investments Purchased	530,182.00	530,182.00
Total Liabilities	530,182.00	530,182.00
NET POSITION RESTRICTED FOR PENSIONS	826,658,170.00	953,798,227.00

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED DECEMBER 31, 2017  
Market Value Basis

ADDITIONS

Contributions:

Member	16,318,769.00
City	19,242,205.00

Total Contributions	35,560,974.00
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Investment Income:

Miscellaneous Income	30,917.00
Net Realized Gain (Loss)	37,598,507.00
Unrealized Gain (Loss)	101,367,119.02
Net Increase in Fair Value of Investments	138,996,543.02
Interest & Dividends	4,500,138.00
Less Investment Expense <sup>1</sup>	(1,581,681.00)

Net Investment Income	141,915,000.02
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Total Additions	177,475,974.02
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DEDUCTIONS

Distributions to Members:

Benefit Payments	42,628,844.90
Lump Sum DROP Distributions	8,887,284.10
Refunds of Member Contributions	372,326.00

Total Distributions	51,888,455.00
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Administrative Expense	1,399,488.00
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Total Deductions	53,287,943.00
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Net Increase in Net Position	124,188,031.02
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NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	829,610,195.98
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End of the Year	953,798,227.00
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<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees

ACTUARIAL ASSET VALUATION  
December 31, 2017

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of Market Value of Assets.

Plan Year Ending	Gain/(Loss)	<u>Gains/(Losses) Not Yet Recognized</u>				
		Amounts Not Yet Recognized by Valuation Year				
		2018	2019	2020	2021	2022
12/31/2013	N/A	0	0	0	0	0
12/31/2014	N/A	0	0	0	0	0
12/31/2015	(54,636,462)	(21,854,586)	(10,927,294)	0	0	0
12/31/2016	(5,150,047)	(3,090,029)	(2,060,020)	(1,030,011)	0	0
12/31/2017	77,264,135	61,811,308	46,358,481	30,905,654	15,452,827	0
Total		36,866,693	33,371,167	29,875,643	15,452,827	0

<u>Development of Investment Gain/(Loss)</u>	
Market Value of Assets, 12/31/2016	829,610,196
Contributions Less Benefit Payments	(16,327,481)
Expected Investment Earnings*	63,251,377
Actual Net Investment Earnings	140,515,512
Actuarial Investment Gain/(Loss)	<u>77,264,135</u>

\*Expected Investment Earnings =  $0.077 * [829,610,196 + 0.5 * (16,327,481)]$

<u>Development of Actuarial Value of Assets</u>	
(1) Market Value of Assets, 12/31/2017	953,798,227
(2) Gains/(Losses) Not Yet Recognized	<u>36,866,693</u>
(3) Actuarial Value of Assets, 12/31/2017. (1) - (2)	916,931,534
(A) 12/31/2016 Actuarial Assets:	866,512,111
(I) Net Investment Income:	
1. Interest and Dividends	4,531,055
2. Realized Gains (Losses)	37,598,507
3. Change in Actuarial Value	27,598,511
4. Investment & Administrative Expenses	<u>(2,981,169)</u>
Total	66,746,904
(B) 12/31/2017 Actuarial Assets:	916,931,534
Actuarial Assets Rate of Return = $2I/(A+B-I)$ :	7.78%
Market Value of Assets Rate of Return:	17.11%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	654,079
12/31/2017 Limited Actuarial Assets:	916,931,534



CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
DECEMBER 31, 2017  
Actuarial Asset Basis

REVENUES

Contributions:		
Member	16,318,769.00	
City	19,242,205.00	
Total Contributions		35,560,974.00
Earnings from Investments:		
Interest & Dividends	4,500,138.00	
Miscellaneous Income	30,917.00	
Net Realized Gain (Loss)	37,598,507.00	
Change in Actuarial Value	27,598,511.02	
Total Earnings and Investment Gains		69,728,073.02

EXPENDITURES

Distributions to Members:		
Benefit Payments	42,628,844.90	
Lump Sum DROP Distributions	8,887,284.10	
Refunds of Member Contributions	372,326.00	
Total Distributions		51,888,455.00
Expenses:		
Investment related <sup>1</sup>	1,581,681.00	
Administrative	1,399,488.00	
Total Expenses		2,981,169.00
Change in Net Assets for the Year		50,419,423.02
Net Assets Beginning of the Year		866,512,110.98
Net Assets End of the Year <sup>2</sup>		916,931,534.00

<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup>Net Assets may be limited for actuarial consideration.

## STATISTICAL DATA

	<u>12/31/2015</u>	<u>12/31/2016</u>	<u>12/31/2017</u>
Actives	1,050	990	1,045
Average Current Age	42.6	43.1	42.5
Average Age at Employment	28.4	28.6	28.9
Average Past Service	14.2	14.5	13.6
Average Annual Salary	\$86,181	\$90,088	\$89,026

# AGE AND SERVICE DISTRIBUTION

## PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	4	1	0	0	0	0	0	0	0	0	0	5
25 - 29	38	17	0	17	1	1	0	0	0	0	0	74
30 - 34	38	28	0	49	19	25	4	0	0	0	0	163
35 - 39	23	15	0	21	41	64	35	14	0	0	0	213
40 - 44	0	0	0	5	17	36	66	58	12	0	0	194
45 - 49	0	0	0	0	3	12	47	63	75	5	0	205
50 - 54	0	0	0	0	0	0	3	22	59	49	7	140
55 - 59	0	0	0	0	0	0	0	0	4	25	18	47
60 - 64	0	0	0	0	0	0	0	0	0	0	4	4
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	103	61	0	92	81	138	155	157	150	79	29	1,045



AUSTIN FIREFIGHTERS'  
RELIEF AND RETIREMENT FUND  
SUMMARY OF BENEFIT PROVISIONS

<u>Service</u>	Total years and completed months during which a Member makes contributions to the Fund.
<u>Average Monthly Compensation</u>	Average Salary for the highest 36 months of service.
<u>Member Contributions</u>	18.70% of Salary.
<u>City Contributions</u>	22.05% of payroll.
<u>Normal Retirement</u>	
Date	Earlier of age 50 and 10 years of Service, or 25 years of Service, regardless of age.
Benefit	3.30% of Average Monthly Compensation times Service (\$1,200 minimum). Effective July 1, 2012, the minimum benefit was increased to \$2,000 per month for all retirees and surviving spouses currently receiving normal or disability retirement benefits which commenced prior to January 1, 1994.
Form of Benefit	<p><u>Married</u>: Life Annuity with 75% continued to Surviving Spouse</p> <p><u>Single</u>: Life Annuity (options available)</p>
<u>Early Retirement</u>	
Date	Earlier of age 45 and 10 years of Service, or 20 years of Service, regardless of age.
Benefit	Same for Normal Retirement as shown above. Members who retire under Early Retirement are not eligible to receive any COLA adjustments until the date they would have met Normal Retirement eligibility requirements.

### Vesting

Schedule	100% after 10 years of Service.
Benefit Amount	Member will receive his (her) accrued benefit payable at age 50 or the date they would have completed 25 years of Service had they remained employed.  Non-vested members receive a refund of member contributions accumulated with 5.0% interest.

### Disability

Eligibility	Disability preventing the Member from performing the duties of a firefighter during the two and one-half years after becoming disabled or any employment after the two and one-half years after becoming disabled.
Benefit	Accrued benefit at date of disability, but not less than 66% of Average Monthly Compensation.
Form of Benefit	<u>Married</u> : Life Annuity with 75% continued to Surviving Spouse  <u>Single</u> : Life Annuity (options available).

### Death Benefits

Surviving Spouse of Member:	75% of Member's accrued benefit at date of death, but not less than 49.5% of Average Monthly Compensation.
Dependent Children of Member: (with Surviving Spouse)	Each child is entitled to 15% of Member's accrued benefit at date of death, but not less than 9.9% of Average Monthly Compensation.
Dependent Children of Member: (with no Surviving Spouse)	75% of Member's accrued benefit at date of death, but not less than 49.5% of Average Monthly Compensation, split equally among each dependent child.

### Cost of Living Adjustment

Eligibility	Normal Retirement.
Amount	Determined by the actuary if providing a COLA will not impair financial stability of the Fund.

### Retroactive DROP

Eligibility

Satisfaction of Early or Normal Retirement Eligibility.

Participation Period

Upon election to retroactively enter DROP, the Retro DROP period will not exceed 84 months.

Rate of Return

5.0%, compounded annually, on monthly benefits that would have been deposited into a DROP account and Member contributions deposited into the fund between the effective DROP entry date and the actual date of termination.



STATEMENT OF FIDUCIARY NET POSITION  
DECEMBER 31, 2017

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Property, Furniture & Equipment	235,821
Money Market	8,756,546
Total Cash and Equivalents	8,992,367
Receivables:	
From Broker for Investments Sold	2,371,068
Investment Income	131,974
Total Receivable	2,503,042
Investments:	
State Street Securities	942,833,000
Total Investments	942,833,000
Total Assets	954,328,409
<u>LIABILITIES</u>	
Payables:	
To Broker for Investments Purchased	530,182
Total Liabilities	530,182
NET POSITION RESTRICTED FOR PENSIONS	953,798,227

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED DECEMBER 31, 2017  
Market Value Basis

ADDITIONS

## Contributions:

Member	16,318,769
City	19,242,205

Total Contributions	35,560,974
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## Investment Income:

Miscellaneous Income	30,917
Net Realized Gain (Loss)	37,598,507
Unrealized Gain (Loss)	101,367,119
Net Increase in Fair Value of Investments	138,996,543
Interest & Dividends	4,500,138
Less Investment Expense <sup>1</sup>	(1,581,681)

Net Investment Income	141,915,000
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Total Additions	177,475,974
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DEDUCTIONS

## Distributions to Members:

Benefit Payments	42,628,845
Lump Sum DROP Distributions	8,887,284
Refunds of Member Contributions	372,326

Total Distributions	51,888,455
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Administrative Expense	1,399,488
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Total Deductions	53,287,943
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Net Increase in Net Position	124,188,031
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## NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	829,610,196
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End of the Year	953,798,227
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<sup>1</sup>Investment related expenses include investment advisory, custodial and performance monitoring fees.

## NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended December 31, 2017)

### Plan Description

#### *Plan Administration*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. The Mayor of the municipality,
- b. The city treasurer or, if there is no treasurer, the person who by law, charter provision, or ordinance performs the duty of city treasurer.
- c. Three Members of the fund to be selected by vote of the firefighters and retirees.

#### *Plan Membership as of December 31, 2016:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	750
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	7
Active Plan Members	990
	1,747

#### *Benefits Provided*

The Plan provides retirement, disability, termination and death benefits.

##### Normal Retirement:

Earlier of age 50 and 10 years of Service, or 25 years of Service, regardless of age.

Benefit: 3.30% of Average Monthly Compensation times Service (\$1,200 minimum). Effective July 1, 2012, the minimum benefit was increased to \$2,000 per month for all retirees and surviving spouses currently receiving normal or disability retirement benefits which commenced prior to January 1, 1994.

##### Early Retirement:

Earlier of age 45 and 10 years of Service, or 20 years of Service, regardless of age.

Benefit: Same for Normal Retirement as shown above. Members who retire under Early Retirement are not eligible to receive any COLA adjustments until the date they would have met Normal Retirement eligibility requirements.

##### Vesting:

Schedule: 100% after 10 years of Service.

Benefit Amount: Member will receive his (her) accrued benefit payable at age 50 or the date they would have completed 25 years of Service had they remained employed.

Non-vested members receive a refund of member contributions accumulated with 5.0% interest.

##### Disability:

Disability preventing the Member from performing the duties of a firefighter during the two and one-half years after becoming disabled or any employment after the two and one-half years after becoming disabled.

Accrued benefit at date of disability, but not less than 66% of Average Monthly Compensation.

##### Death Benefits:

Surviving Spouse of Member: 75% of Member's accrued benefit at date of death, but not less than 49.5% of Average Monthly Compensation.

Dependent Children of Member (with Surviving Spouse): Each child is entitled to 15% of Member's accrued benefit at date of death, but not less than 9.9% of Average Monthly Compensation.

Dependent Children of Member (with no Surviving Spouse): 75% of Member's accrued benefit at date of death, but no less than 49.5% of Average Monthly Compensation, split equally among each dependent child.

##### Cost of Living Adjustment:

Eligibility: Normal Retirement

Amount: Determined by the actuary if providing a COLA will not impair financial stability of the Fund.

#### *Contributions*

Member Contributions: 18.70% of Salary.

City Contributions: 22.05% of payroll.



**Investments***Investment Policy:*

The following was the Board's adopted asset allocation policy as of March 2018:

<u>Asset Class</u>	<u>Target Allocation</u>
Public Domestic Equity	20%
Public Foreign Equity	22%
Private Equity Fund of Funds	15%
Investment Grade Bonds	13%
TIPS	5%
High Yield/Bank Loans	5%
Emerging Market Debt	7%
Core Real Estate	5%
Non-Core Real Estate	5%
Natural Resources	3%
<u>Total</u>	<u>100%</u>

*Concentrations:*

The Plan did not hold investments in any one organization that represent 5 percent or more of the Pension Plan's Fiduciary Net Position.

*Rate of Return:*

For the year ended December 31, 2017, the annual money-weighted rate of return on Pension Plan investments, net of Pension Plan investment expense, was 17.29 percent.

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested.

Deferred Retirement Option Program*Retroactive DROP*

Eligibility: Satisfaction of Early or Normal Retirement Eligibility.

Participation Period: Upon election to retroactively enter DROP, the Retro DROP period will not exceed 84 months.

Rate of Return: 5.0%, compounded annually, on monthly benefits that would have been deposited into a DROP account and Member contributions deposited into the fund between the effective DROP entry date and the actual date of termination.

The DROP balance as December 31, 2017 is \$86,322,683.

## NET PENSION LIABILITY OF THE SPONSOR

The components of the Net Pension Liability of the Sponsor on December 31, 2017 were as follows:

Total Pension Liability	\$1,038,800,829
Plan Fiduciary Net Position	\$ (953,798,227)
Sponsor's Net Pension Liability	<u>\$ 85,002,602</u>
Plan Fiduciary Net Position as a percentage of Total Pension Liability	91.82%

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of December 31, 2016 updated to December 31, 2017 using the following actuarial assumptions:

Inflation	3.50%
General Wage Inflation	3.00%
Salary Increases	1.00% - 6.00%
Discount Rate	7.70%
Investment Rate of Return	7.70%

Mortality Rates Healthy Lives: RP-2000 (Fully Generational using Scale AA) set back two years for males and females - Sex distinct. The assumed rates of mortality sufficiently accommodate expected mortality improvements.

Mortality Rates Disabled Lives: RP2000 Disability Mortality Table.

The most recent actuarial experience study used to review the other significant assumptions was dated June 15, 2015.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2017, the inflation rate assumption of the investment advisor was 2.70%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic real rates of return for each major asset class included in the Pension Plan's target asset allocation as of March 2018 are summarized in the following table:

Asset Class	Long Term Expected Real Rate of Return
Public Domestic Equity	5.3%
Public Foreign Equity	6.9%
Private Equity Fund of Funds	5.6%
Investment Grade Bonds	1.1%
TIPS	0.8%
High Yield/Bank Loans	3.8%
Emerging Market Debt	3.6%
Core Real Estate	3.4%
Non-Core Real Estate	5.0%
Natural Resources	5.9%

**Discount Rate:**

The Discount Rate used to measure the Total Pension Liability was 7.70 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will continue at the currently negotiated rate of 22.05% of payroll each year. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For purpose of this valuation, the expected rate of return on pension plan investments is 7.70%; the municipal bond rate is 3.44% (based on the weekly rate closest to but not later than the measurement date of the Bond Buyer 20-Bond Index as published by the Bond Buyer); and the resulting single discount rate is 7.70%.

	1% Decrease 6.70%	Current Discount Rate 7.70%	1% Increase 8.70%
Sponsor's Net Pension Liability	\$ 189,653,027	\$ 85,002,602	\$ (3,088,422)



**SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS**  
Last 10 Years

	12/31/2017	12/31/2016	12/31/2015
Total Pension Liability			
Service Cost	23,830,495	24,322,417	23,309,543
Interest	75,812,099	70,892,708	66,404,730
Changes of benefit terms	8,963,689	5,491,908	-
Differences between Expected and Actual Experience	4,360,239	8,893,371	7,192,645
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(51,888,455)	(45,495,681)	(44,756,847)
Net Change in Total Pension Liability	61,078,067	64,104,723	52,150,071
Total Pension Liability - Beginning	977,722,762	913,618,039	861,467,968
Total Pension Liability - Ending (a)	<u>\$1,038,800,829</u>	<u>\$ 977,722,762</u>	<u>\$ 913,618,039</u>
Plan Fiduciary Net Position			
Contributions - Employer	19,242,205	19,103,891	19,222,329
Contributions - Employee	16,318,769	15,884,261	15,546,979
Net Investment Income	141,915,000	55,569,165	6,328,063
Benefit Payments, including Refunds of Employee Contributions	(51,888,455)	(45,495,681)	(44,756,847)
Administrative Expense	(1,399,488)	(662,501)	(562,687)
Net Change in Plan Fiduciary Net Position	124,188,031	44,399,135	(4,222,163)
Plan Fiduciary Net Position - Beginning	829,610,196	785,211,061	789,433,224
Plan Fiduciary Net Position - Ending (b)	<u>\$ 953,798,227</u>	<u>\$ 829,610,196</u>	<u>\$ 785,211,061</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 85,002,602</u>	<u>\$ 148,112,566</u>	<u>\$ 128,406,978</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	91.82%	84.85%	85.95%
Covered Employee Payroll	\$ 87,266,236	\$ 86,638,961	\$ 87,836,040
Net Pension Liability as a percentage of Covered Employee Payroll	97.41%	170.95%	146.19%

**Notes to Schedule:***Changes of benefit terms:*

For measurement date 12/31/2017, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 2.2% cost-of-living adjustment, effective January 1, 2018.

For measurement date 12/31/2016, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 1.5% cost-of-living adjustment, effective January 1, 2017.

**SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS**  
Last 10 Years

	12/31/2014	12/31/2013
Total Pension Liability		
Service Cost	25,318,456	23,497,407
Interest	62,976,839	59,249,151
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	4,883,207	-
Benefit Payments, including Refunds of Employee Contributions	(37,992,903)	(34,943,917)
Net Change in Total Pension Liability	55,185,599	47,802,641
Total Pension Liability - Beginning	806,282,369	758,479,728
Total Pension Liability - Ending (a)	<u>\$ 861,467,968</u>	<u>\$ 806,282,369</u>
Plan Fiduciary Net Position		
Contributions - Employer	18,669,944	17,786,494
Contributions - Employee	14,659,946	14,000,514
Net Investment Income	42,005,227	101,289,167
Benefit Payments, including Refunds of Employee Contributions	(37,992,903)	(34,943,917)
Administrative Expense	(530,816)	(363,050)
Net Change in Plan Fiduciary Net Position	36,811,398	97,769,208
Plan Fiduciary Net Position - Beginning	752,621,826	654,852,618
Plan Fiduciary Net Position - Ending (b)	<u>\$ 789,433,224</u>	<u>\$ 752,621,826</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 72,034,744</u>	<u>\$ 53,660,543</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	91.64%	93.34%
Covered Employee Payroll	\$ 84,670,948	\$ 83,279,101
Net Pension Liability as a percentage of Covered Employee Payroll	85.08%	64.43%

**Notes to Schedule:**

*Changes of assumptions:*

For measurement date 12/31/2014, amounts reported as changes of assumptions resulted from an actuarial experience study dated June 15, 2015, below a brief overview of the changes:

- A "fresh-start" on the actuarial asset value has been implemented. For all future valuations, the asset valuation method will utilize a new smoothing technique.
- The investment return assumption has been decreased from 7.75% to 7.70% per year compounded annually, net of all expenses.
- The general wage inflation rate has been decreased from 3.5% to 3.0% per
- The service-based table attributable to merit and longevity salary increases
- The Retro-DROP election assumptions have been amended.
- The withdrawal rates have been amended.
- The assumed spousal age difference has been amended.



# SCHEDULE OF CONTRIBUTIONS

## Last 10 Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a percentage of Covered Employee Payroll
12/31/2017	N/A	N/A	N/A	\$ 87,266,236	22.05%
12/31/2016	N/A	N/A	N/A	\$ 86,638,961	22.05%
12/31/2015	N/A	N/A	N/A	\$ 87,836,040	21.36%
12/31/2014	N/A	N/A	N/A	\$ 84,670,948	21.36%
12/31/2013	N/A	N/A	N/A	\$ 83,279,101	21.36%

### Notes to Schedule

Methods and assumptions used to determine liabilities:

Mortality Rates - Healthy Lives	RP-2000 (Fully Generational using Scale AA) set back two years for males and females - Sex Distinct. The assumed rates of mortality sufficiently accommodate expected mortality improvements.
Mortality Rates - Disabled Lives	RP2000 Disability Mortality Table.
Retirement Elections:	See tables on following page. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.
Termination Rates:	See tables below. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.
Disability Rates:	See tables on following pages. These assumptions were reviewed in conjunction with an actuarial experience study dated June 15, 2015.
Interest Rate:	7.70% per year, compounded annually, net of all expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.
Salary Increases:	See tables on following page. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.
General Wage Inflation:	3.00% per year. This assumption was approved in conjunction with an actuarial experience study dated June 15, 2015.
Inflation:	3.50% per year. This is reasonable based upon long-term historical experience.
Payroll Growth:	3.50% per year for amortization of the Unfunded Actuarial Accrued Liability. This is reasonable based upon long-term historical experience.
Asset Valuation Method:	All assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.
Marital Status:	100% of actives are assumed to be married at time of benefit commencement. Females are assumed to be 4 years younger than Males. Additionally, 50% are assumed to have dependent children. The age of the youngest child is assumed to be one year. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method.
Termination Rates:	

Years of Service	Termination Probability
0-4	1.0%
5-13	0.5%
14+	0.0%



## Retirement Rates:

Number of Years After First Eligibility for Early Retirement	Probability of Retirement
0	2.0%
1	2.0%
2	2.0%
3	2.0%
4	2.0%
5	5.0%
6	7.5%
7	7.5%
8	10.0%
9	16.7%
10	16.7%
11	16.7%
12	20.0%
13	20.0%
14	30.0%
15	40.0%
16	50.0%
17	75.0%
18	100.0%

## Retro-DROP Elections:

Number of Years After First Eligibility for Early Retirement	No-DROP Elected	Duration 1 Election	Duration 2 Election
0	90%	0.5 years (10%)	n/a
1	50%	1 year (50%)	n/a
2	50%	1 year (25%)	2 years (25%)
3	50%	1 year (25%)	2 years (25%)
4	20%	1 year (60%)	3 years (20%)
5	20%	2 years (40%)	4 years (40%)
6	20%	2 years (60%)	5 years (20%)
7	20%	2 years (50%)	5 years (30%)
8	20%	3 years (60%)	6 years (20%)
9	10%	3 years (50%)	6 years (40%)
10	10%	3 years (50%)	6 years (40%)
11	10%	3 years (60%)	6 years (30%)
12	10%	3 years (75%)	6 years (15%)
13	10%	3 years (40%)	6 years (50%)
14	10%	3 years (40%)	6 years (50%)
15	10%	3 years (20%)	6 years (70%)
16	10%	3 years (20%)	6 years (70%)
17	10%	3 years (20%)	6 years (70%)
18	10%	3 years (20%)	6 years (70%)

Disability Rate Table:

Age	Probability of Disablement
20	0.014%
25	0.019%
30	0.031%
35	0.052%
40	0.092%
45	0.209%
50	0.379%
55	0.490%
60	0.911%

% Increase in Salary\*:

Years of Service	Increase
0	6.00%
1	8.50%
2	7.50%
3	4.00%
4	1.00%
5	5.00%
10	1.50%
15	1.50%
20	5.50%
21+	1.00%

\* Expected increase in salary in addition to general wage inflation assumption.

SCHEDULE OF INVESTMENT RETURNS  
Last 10 Years

Fiscal Year Ended	Annual Money-Weighted Rate of Return Net of Investment Expense
12/31/2017	17.29%
12/31/2016	7.13%
12/31/2015	0.81%
12/31/2014	5.60%
12/31/2013	13.30%



## NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended September 30, 2018)

### General Information about the Pension Plan

#### *Plan Description*

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustees comprised of:

- a. The Mayor of the municipality,
  - b. The city treasurer or, if there is no treasurer, the person who by law, charter provision, or ordinance performs the duty of city treasurer,
  - c. Three Members of the fund to be selected by vote of the firefighters and retirees.
- A person who begins service as a firefighter in a municipality to which this Act applies and who is not ineligible for Membership in the fund becomes a member of the fund as a condition of that person's appointment.

#### *Plan Membership as of December 31, 2016:*

Inactive Plan Members or Beneficiaries Currently Receiving Benefits	750
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	7
Active Plan Members	990
	1,747

#### *Benefits Provided*

The Plan provides retirement, disability, termination and death benefits.

##### Normal Retirement:

Earlier of age 50 and 10 years of Service, or 25 years of Service, regardless of age.

Benefit: 3.30% of Average Monthly Compensation times Service (\$1,200 minimum). Effective July 1, 2012, the minimum benefit was increased to \$2,000 per month for all retirees and surviving spouses currently receiving normal or disability retirement benefits which commenced prior to January 1, 1994.

##### Early Retirement:

Earlier of age 45 and 10 years of Service, or 20 years of Service, regardless of age.

Benefit: Same for Normal Retirement as shown above. Members who retire under Early Retirement are not eligible to receive any COLA adjustments until the date they would have met Normal Retirement eligibility requirements.

##### Vesting:

Schedule: 100% after 10 years of Service.

Benefit Amount: Member will receive his (her) accrued benefit payable at age 50 or the date they would have completed 25 years of Service had they remained employed.

Non-vested members receive a refund of member contributions accumulated with 5.0% interest.

##### Disability:

Disability preventing the Member from performing the duties of a firefighter during the two and one-half years after becoming disabled or any employment after the two and one-half years after becoming disabled.

Accrued benefit at date of disability, but not less than 66% of Average Monthly Compensation.

##### Death Benefits:

Surviving Spouse of Member: 75% of Member's accrued benefit at date of death, but not less than 49.5% of Average Monthly Compensation.

Dependent Children of Member (with Surviving Spouse): Each child is entitled to 15% of Member's accrued benefit at date of death, but not less than 9.9% of Average Monthly Compensation.

Dependent Children of Member (with no Surviving Spouse): 75% of Member's accrued benefit at date of death, but no less than 49.5% of Average Monthly Compensation, split equally among each dependent child.

##### Cost of Living Adjustment:

Eligibility: Normal Retirement

Amount: Determined by the actuary if providing a COLA will not impair financial stability of the Fund.

Contributions

Member Contributions: 18.70% of Salary.

City Contributions: 22.05% of payroll.

Net Pension Liability

The measurement date is December 31, 2017.

The measurement period for the pension expense was December 31, 2016 to December 31, 2017.

The reporting period is September 30, 2017 through September 30, 2018.

The Sponsor's Net Pension Liability was measured as of December 31, 2017.

The Total Pension Liability used to calculate the Net Pension Liability was determined as of that date.

*Actuarial Assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of December 31, 2016 updated to December 31, 2017 using the following actuarial assumptions:

Inflation	3.50%
Salary Increases	1.00% - 6.00%
Discount Rate	7.70%
Investment Rate of Return	7.70%

Mortality Rates Healthy Lives: RP-2000 (Fully Generational using Scale AA) set back two years for males and females - Sex distinct.

The assumed rates of mortality sufficiently accommodate expected mortality improvements.

Mortality Rates Disabled Lives: RP2000 Disability Mortality Table.

The most recent actuarial experience study used to review the other significant assumptions was dated June 15, 2015.

The Long-Term Expected Rate of Return on Pension Plan investments can be determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of Pension Plan investment expenses and inflation) are developed for each major asset class.

For 2017, the inflation rate assumption of the investment advisor was 2.70%.

These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic real rates of return for each major asset class included in the Pension Plan's target asset allocation as of March 2018 are summarized in the following table:

Asset Class	Target Allocation	Long Term Expected Real Rate of Return
Public Domestic Equity	20%	5.3%
Public Foreign Equity	22%	6.9%
Private Equity Fund of Funds	15%	5.6%
Investment Grade Bonds	13%	1.1%
TIPS	5%	0.8%
High Yield/Bank Loans	5%	3.8%
Emerging Market Debt	7%	3.6%
Core Real Estate	5%	3.4%
Non-Core Real Estate	5%	5.0%
Natural Resources	3%	5.9%
Total	100%	



Discount Rate:

The Discount Rate used to measure the Total Pension Liability was 7.70 percent.

The projection of cash flows used to determine the Discount Rate assumed that Plan Member contributions will be made at the current contribution rate and that Sponsor contributions will continue at the currently negotiated rate of 22.05% of payroll each year. Based on those assumptions, the Pension Plan's Fiduciary Net Position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the Long-Term Expected Rate of Return on Pension Plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

For purpose of this valuation, the expected rate of return on pension plan investments is 7.70%; the municipal bond rate is 3.44% (based on the weekly rate closest to but not later than the measurement date of the Bond Buyer 20-Bond Index as published by the Bond Buyer); and the resulting single discount rate is 7.70%.



## CHANGES IN NET PENSION LIABILITY

	Increase (Decrease)		
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability
	(a)	(b)	(a)-(b)
Reporting Period Ending September 30, 2017	\$ 977,722,762	\$ 829,610,196	\$ 148,112,566
Changes for a Year:			
Service Cost	23,830,495	-	23,830,495
Interest	75,812,099	-	75,812,099
Differences between Expected and Actual Experience	4,360,239	-	4,360,239
Changes of assumptions	-	-	-
Changes of benefit terms	8,963,689	-	8,963,689
Contributions - Employer	-	19,242,205	(19,242,205)
Contributions - Employee	-	16,318,769	(16,318,769)
Contributions - Buy Back	-	-	-
Net Investment Income	-	141,915,000	(141,915,000)
Benefit Payments, including Refunds of Employee Contributions	(51,888,455)	(51,888,455)	-
Administrative Expense	-	(1,399,488)	1,399,488
Net Changes	61,078,067	124,188,031	(63,109,964)
Reporting Period Ending September 30, 2018	\$1,038,800,829	\$ 953,798,227	\$ 85,002,602

*Sensitivity of the Net Pension Liability to changes in the Discount Rate.*

	1% Decrease	Current Discount Rate	1% Increase
	6.70%	7.70%	8.70%
Sponsor's Net Pension Liability	\$ 189,653,027	\$ 85,002,602	\$ (3,088,422)

*Pension Plan Fiduciary Net Position.*

Detailed information about the pension Plan's Fiduciary Net Position is available in a separately issued Plan financial report.

# FINAL PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS

FISCAL YEAR SEPTEMBER 30, 2016

For the year ended September 30, 2017, the Sponsor has recognized a Pension Expense of \$42,859,568.

On September 30, 2017, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	13,176,184	-
Changes of assumptions	3,255,470	-
Net difference between Projected and Actual Earnings on Pension Plan investments	42,299,574	-
Employer contributions subsequent to the measurement date	19,104,704	-
Total	<u>\$ 77,835,932</u>	<u>\$ -</u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer contributions subsequent to the measurement date has been recognized as a reduction of the Net Pension Liability in the year ended September 30, 2017.

Other 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:	
2018	\$ 17,405,499
2019	\$ 17,405,500
2020	\$ 14,256,160
2021	\$ 3,445,738
2022	\$ 2,553,330
Thereafter	\$ 3,665,001

**PRELIMINARY PENSION EXPENSE AND DEFERRED OUTFLOWS OF RESOURCES AND  
DEFERRED INFLOWS OF RESOURCES RELATED TO PENSIONS  
FISCAL YEAR SEPTEMBER 30, 2018**

For the year ended September 30, 2018, the Sponsor will recognize a Pension Expense of \$32,774,398.

On September 30, 2018, the Sponsor reported Deferred Outflows of Resources and Deferred Inflows of Resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between Expected and Actual Experience	14,902,778	-
Changes of assumptions	2,712,891	-
Net difference between Projected and Actual Earnings on Pension Plan investments	-	35,526,598
Employer contributions subsequent to the measurement date	TBD	-
Total	<u>TBD</u>	<u>\$ 35,526,598</u>

The outcome of the Deferred Outflows of resources related to pensions resulting from Employer contributions subsequent to the measurement date will be recognized as a reduction of the Net Pension Liability in the year ended September 30, 2018.

Other 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:	
2019	\$ 2,284,890
2020	\$ (864,450)
2021	\$ (11,674,872)
2022	\$ (12,567,280)
2023	\$ 3,176,221
Thereafter	\$ 1,734,562



**SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS**  
Last 10 Fiscal Years

Reporting Period Ending Measurement Date	09/30/2018 12/31/2017	09/30/2017 12/31/2016	09/30/2016 12/31/2015
Total Pension Liability			
Service Cost	23,830,495	24,322,417	23,309,543
Interest	75,812,099	70,892,708	66,404,730
Changes of benefit terms	8,963,689	5,491,908	-
Differences between Expected and Actual Experience	4,360,239	8,893,371	7,192,645
Changes of assumptions	-	-	-
Benefit Payments, including Refunds of Employee Contributions	(51,888,455)	(45,495,681)	(44,756,847)
Net Change in Total Pension Liability	61,078,067	64,104,723	52,150,071
Total Pension Liability - Beginning	977,722,762	913,618,039	861,467,968
Total Pension Liability - Ending (a)	<u>\$1,038,800,829</u>	<u>\$ 977,722,762</u>	<u>\$ 913,618,039</u>
Plan Fiduciary Net Position			
Contributions - Employer	19,242,205	19,103,891	19,222,329
Contributions - Employee	16,318,769	15,884,261	15,546,979
Net Investment Income	141,915,000	55,569,165	6,328,063
Benefit Payments, including Refunds of Employee Contributions	(51,888,455)	(45,495,681)	(44,756,847)
Administrative Expense	(1,399,488)	(662,501)	(562,687)
Net Change in Plan Fiduciary Net Position	124,188,031	44,399,135	(4,222,163)
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Plan Fiduciary Net Position - Ending (b)	<u>\$ 953,798,227</u>	<u>\$ 829,610,196</u>	<u>\$ 785,211,061</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 85,002,602</u>	<u>\$ 148,112,566</u>	<u>\$ 128,406,978</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	91.82%	84.85%	85.95%
Covered Employee Payroll	\$ 87,266,236	\$ 86,638,961	\$ 87,836,040
Net Pension Liability as a percentage of Covered Employee Payroll	97.41%	170.95%	146.19%

**Notes to Schedule:***Changes of benefit terms:*

For measurement date 12/31/2017, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 2.2% cost-of-living adjustment, effective January 1, 2018.

For measurement date 12/31/2016, amounts reported as changes of benefit terms resulted from a cost-of-living adjustment. Eligible retirees receive a 1.5% cost-of-living adjustment, effective January 1, 2017.

**SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS**  
Last 10 Fiscal Years

Reporting Period Ending	09/30/2015	09/30/2014
Measurement Date	12/31/2014	12/31/2013
Total Pension Liability		
Service Cost	25,318,456	23,497,407
Interest	62,976,839	59,249,151
Changes of benefit terms	-	-
Differences between Expected and Actual Experience	-	-
Changes of assumptions	4,883,207	-
Benefit Payments, including Refunds of Employee Contributions	(37,992,903)	(34,943,917)
Net Change in Total Pension Liability	55,185,599	47,802,641
Total Pension Liability - Beginning	806,282,369	758,479,728
Total Pension Liability - Ending (a)	<u>\$ 861,467,968</u>	<u>\$ 806,282,369</u>
Plan Fiduciary Net Position		
Contributions - Employer	18,669,944	17,786,494
Contributions - Employee	14,659,946	14,000,514
Net Investment Income	42,005,227	101,289,167
Benefit Payments, including Refunds of Employee Contributions	(37,992,903)	(34,943,917)
Administrative Expense	(530,816)	(363,050)
Net Change in Plan Fiduciary Net Position	36,811,398	97,769,208
Plan Fiduciary Net Position - Beginning	752,621,826	654,852,618
Plan Fiduciary Net Position - Ending (b)	<u>\$ 789,433,224</u>	<u>\$ 752,621,826</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 72,034,744</u>	<u>\$ 53,660,543</u>
Plan Fiduciary Net Position as a percentage of the Total Pension Liability	91.64%	93.34%
Covered Employee Payroll	\$ 84,670,948	\$ 83,279,101
Net Pension Liability as a percentage of Covered Employee Payroll	85.08%	64.43%

**Notes to Schedule:***Changes of assumptions:*

For measurement date 12/31/2014, amounts reported as changes of assumptions resulted from an actuarial experience study dated June 15, 2015, below a brief overview of the changes:

- A "fresh-start" on the actuarial asset value has been implemented. For all future valuations, the asset valuation method will utilize a new smoothing technique.
- The investment return assumption has been decreased from 7.75% to 7.70% per year compounded annually, net of all expenses.
- The general wage inflation rate has been decreased from 3.5% to 3.0% per year.
- The service-based table attributable to merit and longevity salary increases has been amended.
- The Retro-DROP election assumptions have been amended.
- The withdrawal rates have been amended.
- The assumed spousal age difference has been amended.



## SCHEDULE OF CONTRIBUTIONS

Last 10 Fiscal Years

Fiscal Year Ended	Actuarially Determined Contribution	Contributions in relation to the Actuarially Determined Contributions	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a percentage of Covered Employee Payroll
09/30/2018	N/A	N/A	N/A	TBD by City	22.05%
09/30/2017	N/A	N/A	N/A	TBD by City	22.05%
09/30/2016	N/A	N/A	N/A	TBD by City	22.05%
09/30/2015	N/A	N/A	N/A	TBD by City	22.05%

Notes to Schedule

Methods and assumptions used to determine liabilities:

Mortality Rates - Healthy Lives	RP-2000 (Fully Generational using Scale AA) set back two years for males and females - Sex Distinct. The assumed rates of mortality sufficiently accommodate expected mortality improvements.				
Mortality Rates - Disabled Lives	RP2000 Disability Mortality Table.				
Retirement Elections:	See tables on following page. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.				
Termination Rates:	See tables below. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.				
Disability Rates:	See tables on following pages. These assumptions were reviewed in conjunction with an actuarial experience study dated June 15, 2015.				
Interest Rate:	7.70% per year, compounded annually, net of all expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.				
Salary Increases:	See tables on following page. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.				
General Wage Inflation:	3.00% per year. This assumption was approved in conjunction with an actuarial experience study dated June 15, 2015.				
Inflation:	3.50% per year. This is reasonable based upon long-term historical experience.				
Payroll Growth:	3.50% per year				
Asset Valuation Method:	All assets are valued at market value with an adjustment to uniformly spread investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period.				
Marital Status:	100% of actives are assumed to be married at time of benefit commencement. Females are assumed to be 4 years younger than Males. Additionally, 50% are assumed to have dependent children. The age of the youngest child is assumed to be one year. These assumptions were approved in conjunction with an actuarial experience study dated June 15, 2015.				
Actuarial Cost Method:	Entry Age Normal Actuarial Cost Method.				
Termination Rates:	Years of Service	Termination Probability			
	0-4	1.00%			
	5-13	0.50%			
	14+	0.00%			



## Retirement Rates:

Number of Years After First Eligibility for Early Retirement	Probability of Retirement
0	2.00%
1	2.00%
2	2.00%
3	2.00%
4	2.00%
5	5.00%
6	7.50%
7	7.50%
8	10.00%
9	16.70%
10	16.70%
11	16.70%
12	20.00%
13	20.00%
14	30.00%
15	40.00%
16	50.00%
17	75.00%
18	100.00%

## Retro-DROP Elections:

Years After First Eligibility for Early	No-DROP Elected	Duration 1 Election	Duration 2 Election
0	90%	0.5 years (10%)	n/a
1	50%	1 year (50%)	n/a
2	50%	1 year (25%)	2 years (25%)
3	50%	1 year (25%)	2 years (25%)
4	20%	1 year (60%)	3 years (20%)
5	20%	2 years (40%)	4 years (40%)
6	20%	2 years (60%)	5 years (20%)
7	20%	2 years (50%)	5 years (30%)
8	20%	3 years (60%)	6 years (20%)
9	10%	3 years (50%)	6 years (40%)
10	10%	3 years (50%)	6 years (40%)
11	10%	3 years (60%)	6 years (30%)
12	10%	3 years (75%)	6 years (15%)
13	10%	3 years (40%)	6 years (50%)
14	10%	3 years (40%)	6 years (50%)
15	10%	3 years (20%)	6 years (70%)
16	10%	3 years (20%)	6 years (70%)
17	10%	3 years (20%)	6 years (70%)
18	10%	3 years (20%)	6 years (70%)

Disability Rate Table:

Age	Probability of Disablement
20	0.014%
25	0.019%
30	0.031%
35	0.052%
40	0.092%
45	0.209%
50	0.379%
55	0.490%
60	0.911%

% Increase in Salary\*:

Years of Service	Increase
0	6.00%
1	8.50%
2	7.50%
3	4.00%
4	1.00%
5	5.00%
10	1.50%
15	1.50%
20	5.50%
21+	1.00%

\* Expected increase in salary in addition to general wage inflation assumption.

EXPENSE DEVELOPMENT AND AMORTIZATION SCHEDULES

The following information is not required to be disclosed but is provided for informational purposes.



FINAL COMPONENTS OF PENSION EXPENSE  
FISCAL YEAR SEPTEMBER 30, 2017

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 128,406,978	\$ -	\$ 76,775,278	\$ -
Employer Contributions made after 12/31/2016	-	-	19,104,704	-
Total Pension Liability Factors:				
Service Cost	24,322,417	-	-	24,322,417
Interest	70,892,708	-	-	70,892,708
Changes in benefit terms	5,491,908	-	-	5,491,908
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	8,893,371	-	8,893,371	-
Current year amortization of experience difference	-	-	(2,010,752)	2,010,752
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(542,579)	542,579
Benefit Payments, including Refunds of Employee Contributions	(45,495,681)	-	-	-
Net change	64,104,723	-	25,444,744	103,260,364
Plan Fiduciary Net Position:				
Contributions - Employer	19,103,891	-	(13,993,961)	-
Contributions - Employee	15,884,261	-	-	(15,884,261)
Projected Net Investment Income	60,031,206	-	-	(60,031,206)
Difference between projected and actual earnings on Pension Plan investments	(4,462,041)	-	4,462,041	-
Current year amortization	-	-	(14,852,170)	14,852,170
Benefit Payments, including Refunds of Employee Contributions	(45,495,681)	-	-	-
Administrative Expenses	(662,501)	-	-	662,501
Net change	44,399,135	-	(24,384,090)	(60,400,796)
Ending Balance	\$ 148,112,566	\$ -	\$ 77,835,932	\$ 42,859,568

PRELIMINARY COMPONENTS OF PENSION EXPENSE  
FISCAL YEAR SEPTEMBER 30, 2018

	Net Pension Liability	Deferred Inflows	Deferred Outflows	Pension Expense
Beginning balance	\$ 148,112,566	\$ -	\$ 77,835,932	\$ -
Employer Contributions made after 12/31/2017	-	-	TBD*	-
Total Pension Liability Factors:				
Service Cost	23,830,495	-	-	23,830,495
Interest	75,812,099	-	-	75,812,099
Changes in benefit terms	8,963,689	-	-	8,963,689
Differences between Expected and Actual Experience with regard to economic or demographic assumptions	4,360,239	-	4,360,239	-
Current year amortization of experience difference	-	-	(2,633,645)	2,633,645
Change in assumptions about future economic or demographic factors or other inputs	-	-	-	-
Current year amortization of change in assumptions	-	-	(542,579)	542,579
Benefit Payments, including Refunds of Employee Contributions	(51,888,455)	-	-	-
Net change	61,078,067	-	1,184,015	111,782,507
Plan Fiduciary Net Position:				
Contributions - Employer	19,242,205	-	(19,104,704)	-
Contributions - Employee	16,318,769	-	-	(16,318,769)
Projected Net Investment Income	63,197,497	-	-	(63,197,497)
Difference between projected and actual earnings on Pension Plan investments	78,717,503	78,717,503	-	-
Current year amortization	-	(15,743,499)	(14,852,168)	(891,331)
Benefit Payments, including Refunds of Employee Contributions	(51,888,455)	-	-	-
Administrative Expenses	(1,399,488)	-	-	1,399,488
Net change	124,188,031	62,974,004	(33,956,872)	(79,008,109)
Ending Balance	\$ 85,002,602	\$ 62,974,004	TBD	\$ 32,774,398

\* Employer Contributions subsequent to the measurement date made after December 31, 2017 but made on or before September 30, 2018 need to be added.

## AMORTIZATION SCHEDULE - INVESTMENT

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

Plan Year Ending	Differences Between Projected and Actual Earnings	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2014	\$ 15,746,691	5	\$ 3,149,338	\$ 3,149,338	\$ 3,149,338	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2015	\$ 54,052,112	5	\$ 10,810,423	\$ 10,810,422	\$ 10,810,422	\$ 10,810,422	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -
2016	\$ 4,462,041	5	\$ 892,409	\$ 892,408	\$ 892,408	\$ 892,408	\$ 892,408	\$ -	\$ -	\$ -	\$ -	\$ -
2017	\$ (78,717,503)	5	\$ -	\$ (15,743,499)	\$ (15,743,501)	\$ (15,743,501)	\$ (15,743,501)	\$ (15,743,501)	\$ -	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 14,852,170	\$ (891,331)	\$ (891,333)	\$ (4,040,671)	\$ (14,851,093)	\$ (15,743,501)	\$ -	\$ -	\$ -	\$ -



13 ASB 6K

# AMORTIZATION SCHEDULE - CHANGES OF ASSUMPTIONS

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

Plan Year Ending	Changes of Assumptions	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
2014	\$ 4,883,207	9	\$ 542,579	\$ 542,579	\$ 542,579	\$ 542,578	\$ 542,578	\$ 542,578	\$ 542,578	\$ -	\$ -	\$ -
Net Increase (Decrease) in Pension Expense			\$ 542,579	\$ 542,579	\$ 542,579	\$ 542,578	\$ 542,578	\$ 542,578	\$ 542,578	\$ -	\$ -	\$ -

AMORTIZATION SCHEDULE - EXPERIENCE

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

Plan Year Ending	Differences Between Expected and Actual Experience	Recognition Period (Years)	2017	2018	2019	2020	2021	2022	2023	2024	2025
2015	\$ 7,192,645	8	\$ 899,080	\$ 899,080	\$ 899,081	\$ 899,081	\$ 899,081	\$ 899,081	\$ 899,081	\$ -	\$ -
2016	\$ 8,893,371	8	\$ 1,111,672	\$ 1,111,672	\$ 1,111,672	\$ 1,111,671	\$ 1,111,671	\$ 1,111,671	\$ 1,111,671	\$ 1,111,671	\$ -
2017	\$ 4,360,239	7	\$ -	\$ 622,893	\$ 622,891	\$ 622,891	\$ 622,891	\$ 622,891	\$ 622,891	\$ 622,891	\$ -
Net Increase (Decrease) in Pension Expense			\$ 2,010,752	\$ 2,633,645	\$ 2,633,644	\$ 2,633,643	\$ 2,633,643	\$ 2,633,643	\$ 2,633,643	\$ 1,734,562	\$ -

## PENSION PLAN GUIDE

### GOVERNING PENSION LAW

In 1937 an Act of the 45<sup>th</sup> Texas State Legislature founded a statewide network for firefighter pension plans under Article 6243e, Vernon's Texas Civil Statutes. The Austin firefighters joined this group in 1942 which officially established the Austin Fire Fighters Relief and Retirement Fund. In 1975 a pension bill was passed during the 64<sup>th</sup> Texas State Legislature which created the current governing statute that pertains only to the Austin firefighters' pension plan under Article 6243e.1, Vernon's Texas Civil Statutes. The pension plan currently provides retirement, disability, death, and survivor benefits to over 1,800 active and retired participants and their beneficiaries.

### ADMINISTRATION

The fund is administered by a Board of Trustees consisting of five (5) members. Per the pension plan's governing statute, the Mayor serves as the pension board Chairman and the City Treasurer serves as the Treasurer of the Board. Members of the fund, both active and retired, elect three (3) fellow members to serve on the Board. The Board elects a Vice-Chairman annually from among their number.

An administrative pension office and staff have been established to better serve the firefighters, retirees, and their beneficiaries. Administrative costs and expenses for professional services rendered are paid by the fund.

### INVESTMENT OF FUNDS

The Board is required by law to keep separate from all other city funds all money for the use and benefit of the Firefighters Relief and Retirement Fund. The purpose of the fund is to accumulate adequate financial reserves to provide for the retirement benefits set forth in the plan's governing statute.

The fund hired an investment consultant to advise and assist the Board in setting the fund's investment policy and guidelines. The investment consultant is instrumental in the selection of the fund's investment managers.

The fund's holdings include a variety of investments to achieve its performance objective over the long term. The fund's holdings include domestic, international and emerging market equities, fixed income and private equity as well.

The fund has an investment custody account agreement with State Street designating their bank as the master trust custodian for the fund. State Street's home office is in Boston, Massachusetts and has branch offices in Kansas City, Missouri and Jacksonville, Florida which provide various services to our fund.

### ELIGIBILITY

All commissioned civil service and Texas state-certified firefighters with at least six (6) months of service who are employed by the fire department pursuant to the Firemen's and Policemen's Civil Service Statute.

### CONTRIBUTIONS

The Austin firefighters contribute 18.70% of their salary (compensation) into their pension fund. The City of Austin contributes 22.05% of the firefighters' salary on behalf of the firefighters. According to the firefighters' governing statute and for purposes of this section, compensation means a firefighter's salary including base pay and longevity. It excludes overtime pay, any temporary pay while in higher classifications, bilingual pay, educational incentive pay, assignment pay, Christmas Day bonus pay, and pay for automobile and clothing allowance if applicable.

### SERVICE CONSIDERED

The time served in the fire department for which a member is required to make and does make prescribed pension contributions. Military service, only which interrupts fire department service, may also be considered under certain circumstances.



## COMPENSATION CONSIDERED IN DETERMINING AVERAGE SALARY

The Austin firefighters and the City of Austin contribute a percentage of the firefighters' salary (compensation) which includes base pay and longevity pay. Overtime, any temporary pay in a higher classification, bilingual pay, educational incentive pay, and lump sum payments for accrued sick leave or vacation are not considered. Also excluded is any assignment pay, Christmas Day bonus pay, and any pay for automobile and clothing allowance, if applicable.

## NORMAL RETIREMENT BENEFIT

A firefighter is eligible for a standard Normal Retirement Benefit (Joint and Survivor 75% Annuity) once they either attain age fifty (50) or accrue twenty-five (25) years of service, regardless of age. The monthly annuity, payable for life, is 3.30% of the highest three years' average salary (compensation) multiplied by years of service considered. Average salary is the monthly average of the firefighter's salary (compensation) for the highest thirty-six (36) months of service, excluding overtime pay, any temporary pay in higher classifications, bilingual pay, educational incentive pay, Christmas Day bonus pay, and any automobile and clothing allowances, if applicable.

## SINGLE LIFE ANNUITY

Instead of the standard Normal Retirement Benefit a firefighter upon retirement may elect to choose a life annuity with no survivor benefits, or (Single Life Annuity). A Single Life Annuity will provide the retiree a monthly pension (annuity) benefit that is *payable only during the retiree's lifetime*. Since the Single Life Annuity does not provide for any spousal or survivor benefits, the amount of the monthly annuity under the Single Life Annuity form of benefit will be greater than the standard Normal Retirement Benefit. The Single Life Annuity will be actuarially calculated; individually based on the retiree's age. By electing the Single Life Annuity, the retiree is waiving their right to any survivor benefits available under the standard Normal Retirement Benefit. A married retiree must obtain their spouse's consent to elect a Single Life Annuity.

## EARLY RETIREMENT BENEFIT

A firefighter is eligible for an Early Retirement Benefit at age forty-five (45), with at least (10) years of service, or twenty (20) years of service regardless of age. The early retirement benefit does not include a reduction in the factor. However, firefighters who retire early or who participate in a deferred retirement option plan (DROP), do not become eligible for cost-of-living adjustments (COLA's) until reaching what would have been normal service retirement eligibility (age fifty (50) with at least ten (10) years of service, or twenty-five (25) years of service credit regardless of age; whichever occurs first.)

## DEFERRED RETIREMENT OPTION PLAN

Under this program a member eligible for service retirement may elect to continue in active service as a firefighter but have the fund begin crediting "payments" to a deferred retirement option plan (DROP) account in the member's name as of their eligible retirement (DROP) date. The monthly "payments" would be an amount equal to what the member's monthly annuity would have been if the member had retired as of that eligible DROP date. Any eligible cost-of-living adjustments (COLAS) would be applied to the monthly annuity during this DROP period. In addition, during the DROP period, the member would have all their appropriate pension contributions and applicable annual interest of 5% compounded monthly credited to their account during the DROP period as well. When the member retires, by terminating their active service in the fire department, an accumulated lump sum balance may be available to be distributed (all or part) to the member from the DROP account if the retiree is eligible for such direct distribution by meeting age requirements according to pension Board policy. Certain penalties could apply for "early distributions," so the pension Board encourages seeking tax advisement when in doubt. A second option is that the DROP account lump sum (all or part) may be "rolled over" into a qualified Individual Retirement Account (IRA). A third option is for the DROP account lump sum (all or part) to remain in the fund in the member's name continuing to draw 5% interest compounded monthly until the retiree is ready to have the funds moved elsewhere. At the time of termination for retirement, the member will then begin receiving their ongoing monthly pension benefit payments from the fund as well.

A member who has remained in active service after becoming eligible for service retirement can retroactively establish such a DROP account. That is, in lieu of electing to participate in the DROP



## DEFERRED RETIREMENT OPTION PLAN (Continued)

before actual retirement, a member who is eligible for normal service retirement may elect to terminate active service as a firefighter and establish the DROP account at termination. This is commonly referred to as a "RETRO or BACK DROP," whereby the firefighter's DROP account reflects the accrual from the actual termination date back to a date on or after the date which they become eligible for normal service retirement. The maximum period under which a firefighter can participate in a DROP is 7 years. A firefighter may elect to establish a DROP account after reaching normal or early service retirement eligibility.

Currently there are a total of 8 draws allowed while the retiree's DROP account balance remains in the pension plan. The number of draws can be set by pension board policy as determined feasible. The draws can either be in the form of a distribution to the retiree (provided the retiree reached age fifty (50) before retiring), or a rollover into a qualified IRA. The entire DROP balance must be withdrawn from the fund by April 1 of the calendar year following the year the retiree reaches age 70 ½. This can simply be done by rolling the funds over into an IRA which would not be a taxable event. Any firefighter eligible for a DROP who dies before retirement, and who is survived by a spouse, shall have such DROP options extended to their surviving spouse.

### DISABILITY BENEFIT

A firefighter is eligible for a disability retirement benefit during the first thirty (30) months of their disability if they are unable to perform their duties as a firefighter. After this initial thirty (30) month period, a disability retirement benefit may be continued, reduced, or discontinued according to criteria as established by the American Medical Association and as adopted by the pension Board. The annuity is equal to the firefighter's accrued unreduced pension based on the greater of (1) their years of service at time of disability, or (2) twenty (20) years of service.

It is the policy of the Board that no disability retirement benefit shall commence retroactively more than ninety (90) days prior to the date on which the application is filed with the fund.

### DEATH BENEFIT

If a firefighter dies either before or after retirement, the firefighter's surviving spouse shall receive seventy-five (75) percent of the member's accrued unreduced pension based on the greater of (1) the member's years of service at time of death, or (2) twenty (20) years of service. If the member's employment is terminated by death before retirement and they leave no surviving beneficiary entitled to pension benefits, then the member's estate shall receive their contributions with interest. Any lump sum payments to the member's estate will include 5% interest based on a method of application approved by the Board.

### VESTED BENEFIT

If the member has at least ten (10) years of service and has terminated their employment with the fire department before reaching early or normal retirement eligibility with the pension plan, the member may elect to leave their accumulated deposits (pension contributions and interest) in the fund to be eligible for a future pension benefit. The member will then be entitled to receive a vested pension benefit upon reaching what would have been normal retirement eligibility (age fifty (50) with at least ten (10) years of service, or twenty-five (25) years of service regardless of age, whichever occurs first.

### SEVERANCE

The severance benefit of a firefighter who subsequently terminates their employment before being eligible for retirement shall be an amount equal to the total of their pension contributions, with interest, which were made while a participating member of the fund. Severance benefits for such terminating members will include their pension contributions along with 5% interest and will be based on a method of application approved by the Board.

### COST-OF-LIVING ADJUSTMENTS

Eligible pension recipients are entitled to annual cost-of-living adjustments (COLA's) when deemed affordable. COLA's are to be based on the annual percentage increase in the Consumer Price Index (CPI-U) which measures inflation.



## COST-OF-LIVING ADJUSTMENTS (Continued)

COLA's are approved only when the fund's actuary has advised the Board that the adjustment would not impair the financial stability of the fund. To offset the effects of inflation on the retirees' pension benefits, providing COLA's, when affordable, remains a top priority of the Board.

## BEFORE-TAX CONTRIBUTIONS

Funds available to pay benefits come from three (3) sources....

- Your contributions
- City of Austin contributions, and
- Investment earnings

Firefighters contribute 18.70% of their salary (compensation) into the pension fund. The City of Austin contributes 22.05% of salary (compensation) for each plan participant. For example, if your annual pay is \$50,000.00, you will contribute \$9,350.00 (18.70%) a year and the City of Austin will contribute \$11,025.00 (22.05%). Since January 1, 1986, all firefighter contributions into the plan are being made before taxes are figured. This reduces your taxable income, so you pay less federal income tax and your take-home pay is greater. An example follows:

	<u>BEFORE TAX</u>	<u>AFTER TAX</u>
Assume your pay is	\$50,000.00	\$50,000.00
Pre-Tax Contributions	-9,350.00	-0.00
Federal Taxes (Assume 15% taxes)	<u>-6,097.50</u>	<u>-7,500.00</u>
	\$34,552.50	\$42,500.00
After-Tax Contributions	<u>-</u>	<u>-9,350.00</u>
	\$34,552.50	\$33,150.00
Take Home Pay		

## RETIREMENT BENEFIT EXAMPLE

Your retirement benefit is based upon three (3) components...

- Years of credited service in plan, multiplied by
- Retirement factor of 3.30%, multiplied by
- Your highest thirty-six (36) months average salary as of date of retirement

Assume you are a retiring firefighter who is fifty-five (55) years old with twenty-seven (27) years of credited service, and whose highest thirty-six (36) months average salary is \$5,000.00. Your pension would be calculated as follows:

- Years	27
- Factor	3.30%
- Salary	<u>\$5,000.00</u>
- Monthly Benefit	<u>\$4,455.00</u>

## EARLY RETIREMENT BENEFIT EXAMPLE

A firefighter is eligible for an early retirement benefit at age forty-five (45), with at least ten (10) years of service, or twenty (20) years of credited service regardless of age. The early retirement benefit does not include a reduction in the factor. However, firefighters who retire early or who participate in a deferred retirement option plan (DROP) do not become eligible for cost-of-living adjustments (COLA's) until reaching normal service retirement eligibility (age fifty (50) with at least (10) years of service, or twenty-five (25) years of service regardless of age; whichever occurs first).



## EARLY RETIREMENT BENEFIT EXAMPLE (Continued)

Assume you joined the fire department and pension plan at age twenty-five (25). At age forty-five (45), with twenty (20) years of service, you elect to terminate service to begin receiving an early retirement benefit. Also assume your highest thirty-six (36) months average salary is \$5,000.00. The benefit is then calculated as follows:

- Years	20
- Factor	3.30%
- Salary	<u>\$5,000.00</u>
- Monthly Retirement Benefit	\$3,300.00

## DISABILITY RETIREMENT EXAMPLE

If a firefighter is eligible for disability benefits but has less than twenty (20) years of credited service, then twenty (20) years is used in the calculation. A disability benefit is calculated the same way a regular retirement benefit is, using the same three (3) components as follows:

- Years (assume 20 if less)	20
- Factor	3.30%
- Salary (assumed)	<u>\$4,000.00</u>
- Monthly Disability	\$2,640.00

## SURVIVORS BENEFIT

Benefits are available to eligible dependents of all plan participants should such participant die before or after retirement. Eligible dependents include...

- Spouse, if married to you at time of retirement.
- Spouse, if married to you after retirement and you remained married for at least 24 consecutive months prior to your death.
- Spouse, if married to you at time of your death; and you die before retirement.
- All unmarried children under age twenty-two (22), unless the Board determines to the contrary.
- Dependent parent, if no surviving spouse or children are eligible.
- Designated surviving beneficiaries other than a spouse, child, or dependent parent as explained below.

Spousal benefits are paid for life even after remarriage. Spousal benefits eligibility will apply to those who become married to the retiree after such retiree's retirement and remain married to such retiree at least 24 consecutive months prior to the retiree's death. After all payments cease, any remaining balance of the member's total contributions including interest at the date of the member's death, which exceeds any retirement and death benefits paid, shall go to the member's estate.

Active members who are married and/or have dependent children may not designate anyone other than their spouse and/or dependent children for survivor benefits. Active members, who are unmarried with no dependent children, may designate or change beneficiaries under Section 7.09 of the statute as often as they wish. The amount of the survivor benefit for the designated beneficiary is based on the age difference between the retiree and such designated beneficiary.

After January 1, 2017, retired members who are unmarried with no dependent children, or who married after retirement and the term of the marriage is less than 24 months; may designate or change their beneficiary no more than twice for the remainder of their retirement. The retiree who makes such designation or change must agree to a reduction in their pension benefit for the designation or change to take effect. The amount of the reduction will be actuarially calculated, based on the ages of the retiree and the designated beneficiary.



## SURVIVORS BENEFIT EXAMPLE

Assume you are retired drawing \$4,455.00 per month and pass away, leaving a spouse who is eligible for benefits and have no children. Your spouse will receive seventy-five (75) percent of your benefit as follows:

- Your monthly benefit	\$4,455.00
	<u>75.00%</u>
- Your spouse's monthly benefit	\$3,341.25

Assume you pass away before retirement and you are survived by an eligible spouse and child. Suppose your average salary for the highest thirty-six (36) months averaged \$5,000.00, and you had eight (8) years of service at the time of death.

You first calculate the benefit you would have been entitled to at the date of death and then determine the appropriate amount to be paid to your spouse and child.

Your benefit would have been...

- Years (assume 20 if less)	20
- Factor	3.30%
- Salary	<u>\$5,000.00</u>
- Monthly benefit	\$3,300.00

Your spouse's benefit is...

- Firefighter base benefit	\$3,300.00
- Factor	<u>75.00%</u>
- Spousal monthly benefit	\$2,475.00

Your child's benefit is...

- Years (assume 20 if less)	20
- Child's benefit factor	.495%
- Average salary	<u>\$5,000.00</u>
- Child's monthly benefit	\$495.00

In 1994 the minimum monthly pension was increased from \$1,000 to \$1,200 for all eligible retirees and spouses. In 2012 the minimum monthly pension was increased to \$2,000.00 for those that were on the rolls in 1994 when the last adjustment was approved. This minimum benefit applied only to those eligible per above and does not necessarily apply to benefits paid according to court orders, divorce decrees, qualified domestic relations orders, and for disability and early or vested terminated annuitants, in some instances.

The retirement factor for the child is actuarially designed to be fifteen (15) percent of the regular retirement factor (3.30%), which is .495 percent. The child receives .495 percent (.00495) of the fire fighter's average salary, multiplied by the number of years of service, assuming twenty (20) years if less. The eligible children, collectively, will be entitled to a total amount of seventy-five (75) percent of the fire fighter's accrued benefit at the time of death, if there is no surviving spouse.

## PERSONNEL RECORDS

A personnel record (Form 500) is to be completed by all active firefighters. This information furnishes the pension office necessary data regarding age, years of service, beneficiaries, birth dates, social security numbers and marital status. There are other forms available for designating and changing beneficiaries for both active and retired firefighters for various purposes. You can visit our website at [AFRS.ORG](http://AFRS.ORG) for all the forms available at the pension office.

## RETIREMENT PROCESS

When a firefighter is ready to retire, there are forms available at the pension office to be completed. There will probably be other information to be furnished to the AFD administrative office as well. Upon retirement, the firefighter will receive a monthly annuity. Deductions can be made for withholding tax, as well as any health, dental, and vision insurance available through the City of Austin which the firefighter chooses. Direct deposit is also available. Please contact the pension office with any questions you have regarding your retirement. You can visit our web site at [AFRS.ORG](http://AFRS.ORG) for more information about your retirement.



## FUND HISTORY

An Act of the 45<sup>th</sup> Legislature of the State of Texas in 1937 created a statewide network for firefighter pension plans under Article 6243e Vernon's Texas Civil Statutes. This network covered approximately 38 paid and part paid fire departments around the state (known today as TLFFRA or the Texas Local Fire Fighters Retirement Act). The Austin firefighters joined this group in 1942 which officially established the Austin Fire Fighters Relief and Retirement Fund. Through the years, when benefit or eligibility requirement changes were being considered for the Austin firefighters, it was difficult to legislatively revise wording which would not disrupt the other pension funds operating under the same statute. In 1975 the Austin firefighters pension board of trustees went to the State Legislature and passed a pension bill, creating Article 6243e.1, which would pertain only to the Austin Fire Fighters Relief and Retirement Fund. The Austin firefighters pension plan currently provides retirement, disability, death, and survivor benefits to approximately 1,800 active and retired participants and their eligible beneficiaries.

In 1984 an actuarial study was conducted to adjust all the current retirees' benefits based upon the effect of inflation from their original date of retirement. There were some annuitants on the rolls that retired at the original monthly pension of \$100. Although these retirees had received cost-of-living increases through the years, they were still losing ground to inflation. After the actuarial changes were made, if a retiree's adjusted monthly benefit was less than \$500, then a minimum monthly pension of \$500 was implemented. This was approved by the pension board in December 1984 and went into effect March 31, 1985. Since 1985, while they are not automatic, pre-approved, or guaranteed; a full inflation cost-of-living adjustment (COLA) has been approved for all eligible retirees and beneficiaries most of those years. COLA affordability, as determined by the Fund's actuary, is reviewed annually on an ad-hoc basis based on the prior year's inflation. Mitigating the erosion of our retirees' pension benefits due to inflation remains a top priority of the pension board of trustees.

## CHRONOLOGY OF PENSION PLAN CHANGES

Significant plan changes and benefit enhancements since 1975 are as follows:

### 1975

A 2.0% COLA approved.

The retirement calculations changed from using the highest 5 years' average salary to using the highest 3 years' average salary.

The minimum monthly disability benefit changed from \$100 to \$200.

State statute Article 6243e.1 is created pertaining only to the Austin Firefighters Pension Fund, allowing the plan to branch away from the former statewide system.

### 1976

A 2.0% COLA approved.

### 1977

A 2.0% COLA approved.

### 1978

A 2.0% COLA approved.

The retirement multiplier increased from 2.0% to 2.1%

### 1979

A 2.0% COLA approved.

The minimum monthly spousal benefit increased from \$100 to \$200.

The minimum children's benefit increased from \$50 to \$100.

### 1980

A 2.0% COLA approved.



## CHRONOLOGY OF PENSION PLAN CHANGES

### 1981

A 2.0% COLA approved.

### 1982

A 2.0% COLA approved.

The retirement multiplier increased from 2.1% to 2.2%.

### 1983

A 2.0% COLA approved.

### 1984

A 2.0% COLA approved.

The retirement multiplier increased from 2.2% to 2.3%.

An actuarial study is conducted to adjust all then current retirees' benefits upward to offset the erosion of their benefits to inflation from their date of original retirement.

### 1985

A 4.0% COLA approved.

Early retirement eligibility set at age 50 and 25 years of service. (Normal retirement eligibility remained at age 55 or 35 years of service, regardless of age, which had been in effect for many years.)

Contribution rate by city increased from 14.0% to 14.05%.

The retirement multiplier increased from 2.3% to 2.5%

Employee contributions treated as employer contributions (pre-taxed) for federal income tax purposes. Contributions are paid pre-taxed creating more take home pay.

A special increase for all current retirees to "catch their benefits up" with inflation from the time of their original retirement. If the resulting monthly benefit was less than \$500, then a \$500 minimum monthly benefit was approved where applicable.

### 1986

A 3.0% COLA approved.

### 1987

A 1.5% COLA approved.

The retirement multiplier increased from 2.50% to 2.65%.

Normal retirement eligibility lowered from age 55 or 35 years of service, regardless of age to age 55 or 30 years of service, regardless of age.

### 1988

A 4.0% COLA approved.

The retirement multiplier increased from 2.65% to 2.90%.

### 1989

A 4.25% COLA approved.

The workers' compensation offset for disability benefits was eliminated.

## CHRONOLOGY OF PENSION PLAN CHANGES

Actuarially, an assumption adopted that 12% of firefighters were assumed to be single at retirement.

### 1990

A 4.50% COLA approved.

### 1991

A 6.30% COLA approved.

The minimum monthly pension benefit increased from \$500 to \$850.

Normal retirement eligibility reduced from age 55 or 30 years of service, regardless of age to age 53 or 28 years of service, regardless of age.

Surviving children eligible for full spousal benefits in the event there is no surviving spouse.

Actuarially, across the board salary increases assumption was decreased from 6.50% to 5.50% annually.

### 1992

A 2.90% COLA approved.

The minimum monthly pension benefit increased from \$850 to \$1000.

Actuarially, a 5% anticipated COLA is extended through 1996.

### 1993

A 3.20% COLA is approved.

Normal retirement eligibility lowered from age 53 or 28 years of service, regardless of age to age 52 or 27 years of service, regardless of age.

Early retirement eligibility lowered from age 50 with 25 years of service to age 50 or 25 years of service, regardless of age.

The survivor (spousal) benefit is changed to a flat 75% of retiree's benefit.

Contribution refunds are paid with 5% interest.

Actuarially, growth in payroll no longer assumes 1% growth in membership annually.

Actuarially, a 5% anticipated COLA is extended through 1998.

### 1994

A 2.80% COLA is approved.

The minimum monthly pension benefit for eligible retirees and beneficiaries is increased from \$1,000 to \$1,200.

City of Austin contributions increased from 14.05% to 16.05% of pay, while the contribution rate by the firefighters remains at 13.70%.

### 1995

A 2.60% COLA is approved.



## CHRONOLOGY OF PENSION PLAN CHANGES

Normal retirement eligibility reduced from age 52 to 50 (with at least 10 years of service) or with 25 years of service, regardless of age, down from 27 years of service.

Early retirement eligibility reduced from age 50 to age 48 (with at least 10 years of service) or with 23 years of service regardless of age, down from 25 years of service.

The retirement multiplier was increased from 2.90% to 3.0%.

A deferred retirement option plan (DROP) feature was added allowing up to 2 years of service designated for DROP participation.

City of Austin contributions increased from 16.05% to 18.05% of pay, while the contribution rate by the firefighters remains at 13.70%.

Actuarially, a 5% anticipated COLA is extended through 2002.

### 1996

A 2.90% COLA is approved.

### 1997

A 3.0% COLA is approved.

Early retirement eligibility (unreduced by the retirement multiplier) lowered from age 48 to age 45 (with at least 10 years of service), or with 20 years of service regardless of age, down from 23 years of service.

COLAs delayed until normal retirement eligibility is met.

The deferred retirement option plan (DROP) feature is extended from a maximum of 2 years to a maximum of 5 years of service designated for DROP participation.

Benefits made available to surviving spouses of retirees married after retirement.

Eliminate the requirement that a spouse's benefit terminate after remarriage.

Firefighter contributions "bought down" by 2% to 11.70%, while the city contributions increase to 20.05% due to the "meet and confer" agreement. (Firefighters continue to get credit for 13.70% per statute requirements.)

Actuarially, a 5% anticipated COLA is extended through 2004.

### 1998

A 2.10% COLA is approved.

Actuarially, the retirement incident rate revised to 100% of the members to retire and elect a 5 year DROP one year following the age first eligible for a 5 year DROP.

### 1999

A 1.50% COLA is approved.

A 3.33% benefit increase is approved September 1, 1999 to all then current retirees at the time based on the percentage increase of the retirement multiplier from 3.0% to 3.10%.

The retirement multiplier increased from 3.0% to 3.10%, effective September 1, 1999.

All DROP calculations including "BACKDROPS" will use a 3.10% multiplier after September 1, 1999, regardless of the DROP date.



## CHRONOLOGY OF PENSION PLAN CHANGES (Continued)

The deferred retirement option plan (DROP) benefits made available to eligible survivors of members who die before retirement but after becoming eligible for a DROP.

In November 1999, a new "meet and confer" agreement is set whereby firefighters are to receive a 3% salary increase in November 1999 and every six months going forward, beginning in March of 2000 through March 2002.

After 2004, annual COLAs of 0.5% are provided for retirees and beneficiaries going forward (should inflation be at least 0.5%). This does not limit the COLA to 0.5%, but sets the funding in advance. If the needed adjustment exceeds 0.5%, the Board and actuary must approve the portion above 0.5% based on the current financial status of the fund.

Actuarially, mortality tables for actives and non-disabled annuitants were updated to the 1994 Group Annuity Mortality tables, reflecting current industry standards.

Actuarially, a 3.50% anticipated COLA is approved through 2004 (lowered from a 5% anticipated COLA previously assumed, recognizing recent inflation trends.)

### 2000

A 2.60% COLA approved.

### 2001

A 3.40% COLA approved. A 6.45% benefit increase is approved September 1, 2001 to all then current retirees at the time based on the percentage increase of the

retirement multiplier from 3.10% to 3.30%.

The retirement multiplier increased from 3.10% to 3.30%.

All DROP calculations including "BACKDROPS" will use a 3.30% multiplier after September 1, 2001, regardless of the DROP date.

Effective September 1, 2001, the deferred retirement option plan (DROP) feature is extended from a maximum of 5 years to a maximum of 7 years of service designated for DROP participation.

A survivor benefit is made available for all unmarried retirees, and for unmarried firefighters who die after becoming eligible to retire, per statute provisions. The percentage will be an actuarial equivalent of 75% of the firefighter's accrued benefit and will be tied to the age difference of the firefighter and the designated beneficiary.

### 2002

A 2.1% COLA approved.

### 2003

Effective June 1, 2003 the contribution rate by the firefighters increased from 13.70% to 15.70% of pay, while the contribution rate by the City of Austin remains at 18.05%.

### 2004

No changes

### 2005

\$32.00 per month increase in benefits for all eligible retirees

## CHRONOLOGY OF PENSION PLAN CHANGES

### 2006

\$100.00 per month increase in benefits for all eligible retirees

### 2007

No changes

### 2008

No changes

### 2009

No changes

### 2010

As a result of an agreement between the firefighters and the City of Austin, the City's pension contributions will increase from 18.05% to 22.05% in a total of four 1% increments by the year 2013. The firefighters' pension contributions will also increase from 15.70% to 18.70% in a total of six ½% increments by the year 2016.

### 2011

No changes

### 2012

No changes

The minimum monthly pension is increased to \$2,000 for all current annuitants who were on the rolls in 1994 when the last adjustment of this type was made.

### 2013

\$93.00 per month increase in benefits for all eligible retirees.

### 2014

\$64.00 per month increase in benefits for all eligible retirees.

### 2015

A 1.3% COLA approved

### 2016

No COLA approved since the prior year had no inflation based on the CPI-U (all items) index. New fund rules (Section VI of Fund Rules as posted on website) were adopted for both active and retired firefighters regarding survivor and beneficiary designations. New optional forms of benefits (Section X of Fund Rules as posted on website) were adopted which now include the Single Life Annuity (SLA) option.

## CHRONOLOGY OF PENSION PLAN CHANGES

### 2017

A 1.5% COLA approved. New fund rules (Section VI of Fund Rules as posted on website) were adopted regarding the number of beneficiary designation changes allowed for unmarried retirees. New fund rules (Section XI of Fund Rules as posted on website) were adopted regarding possible retirement benefits and procedures upon indefinite suspension.

### 2018

A 2.2% COLA approved