

**RETIREMENT PLAN FOR THE EMPLOYEES' RETIREMENT
FUND OF THE CITY OF DALLAS**
ACTUARIAL VALUATION REPORT
AS OF DECEMBER 31, 2016

May 10, 2017

Board of Trustees
Employees' Retirement Fund of the City of Dallas, Texas
600 North Pearl Street
Suite 2450
Dallas, Texas 75201

Dear Members of the Board:

We are pleased to present our report of the actuarial valuation of the Employees' Retirement Fund of the City of Dallas, Texas ("ERF" or the "Fund") as of December 31, 2016.

This valuation provides information on the funding status of ERF. It includes a determination of the actuarially calculated contribution rates for the 2017 calendar year. In addition, it also contains the information necessary to determine the current total obligation rate and the current adjusted total obligation rate for the fiscal year beginning October 1, 2017 per City Ordinance. This rate is a function of the previous year's adjusted total obligation rate, this year's actuarially calculated contribution rate, and the rate necessary to make the debt service payment on the previously issued pension obligation bonds for fiscal year 2018.

In addition, the report provides various summaries of the data. A separate report is issued with regard to valuation results determined in accordance with Governmental Accounting Standards Board (GASB) Statements 67 and 68. Results of this report should not be used for any other purpose without consultation with the undersigned. Valuations are prepared annually as of December 31st, the last day of the ERF plan year. This report was prepared at the request of the Board and is intended for use by the ERF staff and those designated or approved by the Board. This report may be provided to parties other than ERF staff only in its entirety and only with the permission of the Board.

As authorized in Chapter 40-A(4)(16) of the Dallas City Code, the actuarial assumptions and methods are set by the Board of Trustees, based upon recommendations made by the plan's actuary. An experience investigation was performed for the five year period ending December 31, 2014. As a result of that study, revised assumptions were adopted by the Board effective with the valuation as of December 31, 2014. As described later in this report, these assumptions were further modified effective December 31, 2016. We believe the assumptions are internally consistent, reasonable, and, where appropriate, based on the actual experience of the ERF. All of the assumptions and methods used in this valuation were selected in compliance with the Actuarial Standards of Practice. All actuarial assumptions and methods are described under Section O of this report.

The results of the actuarial valuation are dependent on the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions.

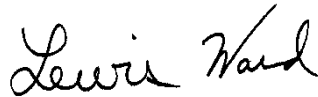
Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. Due to the limited scope of this assignment, GRS did not perform an analysis of the potential range of such possible future differences. The actuarial calculations are intended to provide information for rational decision making.

This valuation is based on the provisions of ERF in effect as of the valuation date, data on the ERF membership and information on the asset values of the Fund as of December 31, 2016. The member, annuitant and asset data used in the valuation were all prepared and furnished by ERF staff. While certain checks for reasonableness were performed, the data used was not audited.

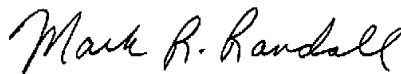
To the best of our knowledge, this report is complete and accurate and was conducted in accordance with the Actuarial Standards of Practice as set forth by the Actuarial Standards Board and in compliance with the provisions of the Dallas City Code. The undersigned are independent actuaries and consultants. Mr. Randall is an Enrolled Actuary and a Member of the American Academy of Actuaries and he meets the Qualification Standards of the American Academy of Actuaries. Both Mr. Randall and Mr. Ward have significant experience in performing valuations for large public retirement systems.

We would like to thank the ERF staff for their assistance in providing all necessary information to complete this valuation. Their courteous help is very much appreciated. We look forward to discussing this actuarial valuation report with you at your convenience. Please do not hesitate to let us know if you have any questions or need additional information.

Respectfully submitted,



Lewis Ward
Consultant



Mark R. Randall, MAAA, FCA, EA
Chief Executive Officer

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EXECUTIVE SUMMARY

(\$ in 000's)

The key results from the actuarial valuation of the Employees' Retirement Fund of the City of Dallas as of December 31, 2016, may be summarized as follows:

	<u>December 31, 2015</u>	<u>December 31, 2016</u>
	(1)	(2)
• Members		
- Actives	7,477	7,619
- Benefit recipients	6,756	6,903
- Deferred vested*	748	768
- Other terminated*	<u>415</u>	<u>447</u>
- Total	15,396	15,737
• Covered payroll (including overtime)	\$ 393,186	\$ 409,433
• Normal cost	\$ 78,818	\$ 83,387
as % of expected payroll	20.36%	20.75%
• Actuarial accrued liability	\$ 4,129,133	\$ 4,291,802
• Actuarial value of assets	\$ 3,320,387	\$ 3,451,463
• Market value of assets	\$ 3,194,582	\$ 3,327,681
• Unfunded actuarial accrued liability (UAAL)	\$ 808,746	\$ 840,339
• Estimated yield on assets (market value basis)	(1.83)%	8.65%
• Estimated yield on assets (actuarial value basis)	7.02%	8.51%
• Contribution Rates		
- Prior Adjusted Total Obligation Rate	36.00%	36.00%
- Current Total Obligation Rate	42.54%	43.46%
- Current Adjusted Total Obligation Rate	36.00%	36.00%
• Actuarial gains/(losses)		
- Assets	\$ (31,243)	\$ 16,405
- Actuarial liability experience	\$ 26,829	\$ 32,351
- Assumption and method changes	\$ -	\$ (41,157)
• 30-year level % of pay funding cost	\$ 134,824	\$ 144,114
as % of payroll (Employee + City)	34.19%	35.18%
• Funded ratio		
- Based on actuarial value of assets	80.4%	80.4%
- Based on market value of assets	77.4%	77.5%

* *Deferred vested are members who have applied for a deferred pension. Other terminations are other members who have terminated and still have contribution balances in the Fund.*

PURPOSES OF THE ACTUARIAL VALUATION

At your request, we have performed the actuarial valuation of the Employees' Retirement Fund of the City of Dallas ("ERF" or the "Fund") as of December 31, 2016.

The purposes of an actuarial valuation are as follows:

- To determine the funding status of ERF as of the valuation date;
- To develop the actuarially determined level of contributions for ERF for the 2017 calendar year; and
- To develop the current total obligation rate and the current adjusted total obligation rate for the fiscal year beginning October 1, 2017.

REPORT HIGHLIGHTS

The following is a set of key actuarial results from the prior year's valuation as compared to the current year:

	Valuation Date	
	December 31, 2015	December 31, 2016
Contribution Rates (% of Payroll)		
Normal Cost (including administrative expense)	21.53%	22.05%
Total Actuarial Contribution Rate	34.19%	35.18%
Total Projected Actuarial Contribution	\$134,824	\$144,114
Funded Status (on AVA basis)	December 31, 2015	December 31, 2016
Actuarial Accrued Liability	\$4,129,133	\$4,291,802
Actuarial Value of Assets	3,320,387	3,451,463
Unfunded Actuarial Accrued Liability	\$808,746	\$840,339
Funded Ratio	80.41%	80.42%

FUNDING PROCESS

Based on the previous work of the Employees' Retirement Fund Study Committee, which was ratified by both the City Council and the voters of Dallas, a new funding process commenced October 1, 2005. From this date forward, a new "current adjusted total obligation rate" will be contributed jointly by the City (63%) and the Membership (37%). This current adjusted total obligation rate will cover both the debt service tied to the pension obligation bonds issued in 2005 and the contributions to the ERF. In subsequent years, the contribution rate changes only if the actuarial valuation develops a "current total obligation rate" which differs from the "prior adjusted total obligation rate" by more than 3.00%.

As shown in Table 3 (under Section M) and discussed later in this report, the "current total obligation rate" (Item 4 in Table 3) exceeds the "prior adjusted total obligation rate" (Item 1 in Table 3) as of December 31, 2016. This means that the "current adjusted total obligation rate" will remain at 36.00% of active member payroll for the fiscal year beginning October 1, 2017. It should be noted that under the contribution corridor methodology, the "current adjusted total obligation rate" would have been higher if not for the maximum rate of 36.00% allowed under Chapter 40-A of the Dallas City Code.

ACTUARIAL CONTRIBUTIONS

The Actuarially Required Contribution Rate developed in this actuarial valuation is 35.18% of active member payroll. This rate excludes the amount needed to make the City's debt service payment on the pension obligation bonds in fiscal year 2018. As shown in Section M -Table 3 of this report, the debt service payment is determined to be 8.28% of projected payroll. The sum of these rates is 43.46% (the Current Total Obligation Rate), which is 7.46% more than the Prior Adjusted Total Obligation Rate of 36.00%. Because the total contribution rate cannot exceed 36.00%, the total contribution rate in fiscal year 2018 (the Current Adjusted Total Obligation Rate) to fund the ERF and make the debt service payment on the pension obligation bonds will be 36.00%, which is the maximum rate allowed under Chapter 40-A of the Dallas City Code.

The members contribute 37% of the Current Adjusted Total Obligation Rate and the City contributes 63%. Hence, the members portion of the 36.00% total contribution rate will be 13.32% and the City portion will be 22.68%. All of the member contribution rate will be contributed to the ERF. As noted above, 8.28% of the City's contribution rate will go towards the debt service on the pension obligation bonds and the remaining 14.40% will be contributed towards the ERF. This means a total contribution rate of 27.72% will be contributed to the ERF, which compares to the actuarially calculated rate of 35.18%.

ACTUARIAL ASSUMPTIONS

Section O of this report includes a summary of the actuarial assumptions and methods used in this valuation. In short, costs are determined using the Entry Age Normal actuarial cost method. The assumed annual investment return rate is 7.75% and includes an annual assumed rate of inflation of 2.75%.

The Board made the decision to lower the inflation assumption from 3.00% to 2.75% effective with the December 31, 2016 valuation. Since the inflation assumption is a building block for all of the economic assumptions, lowering the inflation rate also impacted the following assumptions:

- The assumed investment return assumption was decreased from 8.00% to 7.75%
- The COLA assumption was decreased from 3.00% to 2.75%
- The general wage increase assumption was decreased from 3.50% to 3.25%
- The payroll growth assumption was decreased from 3.00% to 2.75%

As shown on Table 8, changing the actuarial assumptions increased the unfunded actuarial accrued liability by approximately \$41.2 million.

All other actuarial assumptions and methods are the same as in the prior valuation report. Please see Section O for a complete description of these assumptions.

ERF BENEFITS

As the reader may be aware, City of Dallas voters elected a new tier of benefits for City of Dallas municipal employees hired after December 31, 2016. Since, the actuarial valuation was performed as of December 31, 2016 this valuation does not include any members under the new tier of benefits. The next valuation will be the first valuation to include members of the new tier.

There were no changes in the benefit provisions of ERF, since the prior valuation, for those members covered as of December 31, 2016. Please see Section P for a summary description of the ERF benefits.

EXPERIENCE DURING PREVIOUS YEARS

An Actuarial (Gain)/Loss Analysis [(G)/L] reviews the effects of the actual experience that differs from the assumed experience based on the actual results for the year. If any difference increases assets or reduces liabilities, we have an actuarial gain. The reverse is an actuarial loss.

On a market value return basis, the Fund returned approximately 8.65% (calculated on a dollar-weighted basis, net of investment expenses). Given this return, the actual investment income was greater than the expected investment income on the actuarial value of assets; therefore, an investment income gain is being partially recognized this year (1/5) and partially deferred into the near future (4/5). After also recognizing prior years' deferred investment gains and losses (years 2015 - 2012), there was an overall actuarial gain of \$16 million on the actuarial value of assets as of December 31, 2016. The rate of return on the actuarial value of assets for 2016 was 8.51% (calculated on a dollar-weighted basis, net of investment expenses). This result was greater than the prior year's investment return assumption of 8.00%.

During 2016, there was a liability actuarial gain of about \$32.4 million derived from demographic assumptions and non-investment economic assumptions (cost-of-living-adjustment). As seen below, ERF experienced an overall actuarial gain in calendar year 2016 in the amount of \$48.8 million.

The total (G)/L for the prior 4 years is broken down as follows (\$ in millions):

	2013	2014	2015	2016
1) Actuarial (Gain)/Loss on Assets	(\$144.95)	(\$61.00)	\$31.24	(\$16.41)
2) Actuarial (Gain)/Loss on Liabilities	(19.70)	(21.97)	(26.83)	(32.35)
3) Total Actuarial (Gain) or Loss (1+2)	<u>(164.65)</u>	<u>(82.97)</u>	<u>4.41</u>	<u>(48.76)</u>

The unfunded actuarial accrued liability (UAAL) also increased \$27.8 million due to the difference between the calculated contribution rate and the actual contributions during 2016.

ASSET INFORMATION

The assets of the Fund (on a market value basis) increased from \$3,195 million as of December 31, 2015 to \$3,328 million as of December 31, 2016.

The assets recognized for actuarial valuation purposes (known as “the actuarial value of assets”) are the product of a five-year market smoothing asset method. The purpose of such a smoothing method is to allow the use of market values, but to dampen the effect of the typical year-to-year market fluctuations. See Table 6 in Section M of this report for the determination of the actuarial value of assets as of December 31, 2016.

The actuarial value of assets has increased from \$3,320 million to \$3,451 million during 2016. The assets are slightly greater than the expected assets, \$3,435 million, due to investment gains in the five year averaging period.

The rate of return on investments for 2016 on the actuarial value of assets was 8.51%, compared to 7.02% in 2015. The detailed determinations of asset values utilized in this valuation and the change in assets in the last year are exhibited in Tables 4 and 5 of Section M of this report.

FUNDED STATUS

The funded status of ERF is measured by the Funded Ratio and the Unfunded Actuarial Accrued Liability (UAAL). The Funded Ratio is the ratio of the actuarial value of assets available for benefits to the actuarial accrued liability (AAL) of the Fund on the valuation date. Therefore, it reflects the portion of the AAL that is covered by ERF assets. The UAAL is the difference between these two amounts.

A Funded Ratio of 100% means that the funding of ERF is precisely on schedule as of the particular valuation date. In addition, an increasing funded ratio from year-to-year may also mean that the funding of ERF is on schedule. By monitoring changes in the Funding Ratio each year, we can determine whether or not funding progress is being made.

Based on the actuarial value of assets, the Funded Ratio of ERF remained virtually unchanged at 80.4% as of December 31, 2016.

The UAAL increased from \$808.7 million as of December 31, 2015 to \$840.3 million as of December 31, 2016. Since the UAAL is positive, this implies the actuarial accrued liabilities exceed the actuarial assets of the Fund as of December 31, 2016.

GASB DISCLOSURE

Governmental Accounting Standards Board (GASB) Statement Numbers 67 and 68 detail the current accounting standards for ERF and the Fund's sponsor, the City of Dallas, TX. These new standards were effective with the plan year ending December 31, 2014 for the Fund and the fiscal year ending September 30, 2015 for the City. The new standards created a clear distinction between the funding requirements of a pension plan and the accounting requirements. Because of these changes, the GASB disclosure information will no longer be included in the actuarial valuation report, but will instead be provided under separate cover.

CLOSING COMMENTS

The unfunded actuarial accrued liability of the Fund has decreased since the prior valuation due to a smaller than expected cost of living adjustment for retirees and gains on the actuarial value of assets.

The calculated contribution rate necessary to pay the Fund's normal cost and amortize the UAAL over 30 years is 35.18% of pay. When the debt service payment on the Pension Obligation Bonds is considered, the total contribution rate is 43.46% of payroll. However, Chapter 40-A of the Dallas City Code limits the contribution rate to 36.00% of payroll, therefore, the total rate to be contributed by the employees and the City for fiscal year 2018 will be 36.00% of pay.

The Fund is deferring \$124 million in investment losses to be recognized in future valuations. Additionally, the calculated contribution rate is above the 36.00% of pay maximum. When the Pension Obligation Bond debt is repaid, the calculated contribution rate is expected to drop between 8.50% - 9.00% of pay. However, that is not expected to happen for almost 20 years.

Last year at this time, we were concerned that the current benefits and financing structure may not be sustainable over the long term. The ERF Board responded by proposing changes to the benefits for employees hired after December 31, 2016. Following adoption of the proposed changes by the Dallas City Council, and approval by the City of Dallas voters, the new tier of benefits became effective for employees hired after December 31, 2016. While the liabilities of this valuation are not impacted by this change, we believe it is important to note that the outlook for the ERF has substantially improved. Based upon our projections, reflecting the new tier of benefits and assuming the actuarial assumptions are exactly met, the ERF is expected to be fully funded in approximately 47 years.

ACTUARIAL TABLES

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Summary of Actuarial Values
As of December 31, 2016
(\$ in 000's)

	APV* of Projected Benefits	Entry Age Actuarial Values		
		Actuarial Accrued Liability (AAL)	Normal Cost \$	Normal Cost % of Pay**
1 Active Members				
a. Retirement	\$ 1,716,031	\$ 1,335,726	\$ 57,192	14.24%
b. Death	37,558	23,603	2,188	0.54%
c. Disability	21,374	8,461	1,989	0.50%
d. Termination	143,500	11,613	19,042	4.74%
e. Health Subsidy	52,784	36,039	2,976	0.73%
Total	1,971,247	1,415,442	83,387	20.75%
2 Benefit Recipients	2,770,533	2,770,533		
3 Other Inactive	105,827	105,827		
4 Total Actuarial Values of Benefits	4,847,607	4,291,802	83,387	20.75%
5 Actuarial Value of Assets		3,451,463		
6 Unfunded Actuarial Accrued Liability (4 - 5)		840,339		
7 Funding Ratio		80.42%		
8 Market Value Measurements				
UAAL on market value		964,121		
Funded Ratio on market value		77.54%		

* APV – Actuarial Present Value

** Percentage of expected payroll for continuing active members.

Development of Actuarially Required Contribution for FY 2018
(\$ in 000's)

	<u>\$</u>	<u>% of Pay</u>
Actuarial Requirement		
a. Payment to Amortize UAAL over 30 years*	\$ 55,237	13.13%
b. Normal Cost	83,387	20.75%
c. Administrative Expense	<u>5,490</u>	<u>1.30%</u>
Total	\$ 144,114	35.18%

** Amortization is determined as a level percentage of projected payroll*

**Information for Ordinance 25695
For the Fiscal Year Commencing October 1, 2017**

1 Prior Adjusted Total Obligation Rate	36.00%
2 Actuarially Required Contribution Rate	35.18%
3 Debt Service	
a Scheduled Debt Service Payment for FY 2018	34,827,725
b Projected Payroll	420,692,643
c Pension Obligation Bond Credit Rate (a/b)	8.28%
4 Current Total Obligation Rate (2 + 3c)	43.46%
5 Current Adjusted Total Obligation Rate	36.00% *
6 Allocation of Contribution Rates for FY 2017	
a Employee (5 x .37)	13.32%
b City (5 x .63)	22.68%

* If the absolute value of the difference between the Prior Adjusted Total Obligation Rate (PATOR) and the Current Total Obligation Rate (CTOR) is less than or equal to 3.0% then:

Current Adjusted Total Obligation Rate (CATOR) = PATOR

otherwise:

1) If $PATOR - CTOR > 3.00\%$ then the CATOR is set equal to the greater of:

- a) the average of the Prior Adjusted Total Obligation Rate and the Current Total Obligation Rate; or
- b) 90% of the Prior Adjusted Total Obligation Rate

or

2) If $PATOR - CTOR < -3.00\%$ then the CATOR is set equal to the lesser of:

- a) the average of the Prior Adjusted Total Obligation Rate and the Current Total Obligation Rate; or
- b) 110% of the Prior Adjusted Total Obligation Rate

Additionally, the CATOR cannot exceed 36.00%.

Excerpts from City Ordinance 25695

ACTUARIALLY REQUIRED CONTRIBUTION RATE – means, for any fiscal year, a rate of contribution to the fund, expressed as a percentage of members' projected wages for such fiscal year, which is the sum of the following as determined in the actuarial valuation report for the preceding plan year:

- (A) the actuarial present value of the pension plan benefits and expenses that are allocated to a valuation period by the actuarial cost method; and
- (B) the contribution that will amortize the difference between the actuarial accrued liability of the fund and the actuarial value of the assets of the fund over the period of years required by generally accepted accounting principles.

CITY CONTRIBUTIONS – means, for each pay period ending during a transition year, the city shall contribute to the retirement fund an amount equal to:

- (A) 63% times the current total obligation rate for that fiscal year times the members' wages for the pay period, minus
- (B) The pension obligation bond credit rate for that fiscal year times the members' wages for the pay period;

and, for each pay period ending during each fiscal year, except for a transition year, the city shall contribute to the retirement fund an amount equal to:

- (C) 63% times the current adjusted total obligation rate for that fiscal year times the members' wages for the pay period, minus
- (D) The pension obligation bond credit rate for that fiscal year times the members' wages for the pay period.

EMPLOYEE CONTRIBUTIONS – means, for each pay period ending during a transition year, each member shall contribute to the retirement fund an amount equal to:

- (A) 37% times the current total obligation rate for that fiscal year times the member's wages for the pay period;

and, for each pay period ending during each fiscal year, except for a transition year, the member shall contribute to the retirement fund an amount equal to:

- (B) 37% times the current adjusted total obligation rate for that fiscal year times the member's wages for the pay period.

CURRENT ADJUSTED TOTAL OBLIGATION RATE – means, for any fiscal year, the rate determined by the board as follows, using whichever formula is applicable:

(A) If the current total obligation rate minus the prior adjusted total obligation rate is greater than three, then the current adjusted total obligation rate for such fiscal year is equal to the lesser of:

- (i) the prior adjusted total obligation rate plus one-half times the difference of the current total obligation rate minus the prior adjusted total obligation rate; or
- (ii) 110 percent times the prior adjusted total obligation rate; or
- (iii) 36 percent.

(B) If the difference between the current total obligation rate and the prior adjusted total obligation rate is less than three, then the current adjusted total obligation rate for such fiscal year is equal to the prior adjusted total obligation rate.

(C) If the prior adjusted total obligation rate minus the current total obligation rate is greater than three, then the current adjusted total obligation rate for such fiscal year is equal to the greater of:

- (i) the prior adjusted total obligation rate minus one-half times the difference of the prior adjusted total obligation rate minus the current total obligation rate; or
- (ii) 90 percent times the prior adjusted total obligation rate.

CURRENT TOTAL OBLIGATION RATE – means, for any fiscal year, the rate adopted by the board that is equal to the sum of the pension obligation bond credit rate for such fiscal year plus the actuarially required contribution rate for such fiscal year.

PENSION OBLIGATION BOND CREDIT RATE – means, for any fiscal year, the rate adopted by the board that is a percentage calculated by dividing:

(A) the debt service due during such fiscal year on any pension obligation bonds, the proceeds of which have been deposited in the fund, by:

(B) the total members' projected wages for such fiscal year, as reported in the relevant actuarial valuation report.

PRIOR ADJUSTED TOTAL OBLIGATION RATE – means:

(A) for the fiscal year commencing October 1, 2006, the current total obligation rate that was effective for the prior fiscal year; and

(B) for each fiscal year commencing on or after October 1, 2007, the current adjusted total obligation rate that was effective for the prior fiscal year.

PROJECTED PAYROLL – means the covered payroll for the valuation proceeding the fiscal year multiplied by the payroll growth assumption.

TRANSITION YEAR – means each of the following:

- (A) the first fiscal year in which debt service payments related to pension obligation bonds are due from the city;
- (B) the first fiscal year in which no debt service payments related to pension obligation bonds are due from the city; and
- (C) the fiscal year beginning October 1, 2005.

	<u>December 31, 2015</u>	<u>December 31, 2016</u>
Net Assets Available for Benefits		
(\$ in 000's)		
1 Assets		
a. Cash & Short-Term	\$85,936	\$123,539
2 Receivables		
a. Accrued Investment Income	15,303	12,242
b. Securities Sold	4,220	3,152
c. Employer Contribution	1,463	1,779
d. Employee Contribution	1,409	1,654
e. Pending Contracts	606	694
	<u>23,001</u>	<u>19,521</u>
3 Investments		
a. Index Funds	109,994	219,247
b. Fixed Income	878,185	873,730
c. Equities	1,724,367	1,739,555
d. Real Estate	244,462	205,361
e. Private Equity	146,051	161,948
	<u>3,103,059</u>	<u>3,199,841</u>
4 Total Assets	3,211,996	3,342,901
5 Liabilities		
a. Accounts Payable	6,193	7,877
b. Investment Transactions	11,221	7,343
	<u>17,414</u>	<u>15,220</u>
6 Net Assets Available For Benefits	<u><u>3,194,582</u></u>	<u><u>3,327,681</u></u>

Change in Assets Available for Benefits
Fiscal Year Ending December 31, 2016
(\$ in 000's)

	2015	2016
1 Assets Available at Beginning of Year	\$ 3,390,579	\$ 3,194,582
Adjustment *	<u>7,905</u>	<u>7,626</u>
	3,398,484	3,202,208
2 Revenues		
a. Employer Contributions	50,721	56,130
b. Employee Contributions	50,742	53,436
c. Investment Income	98,977	91,980
d. Investment Expense	(17,885)	(15,223)
e. Realized and Unrealized Gains (Losses)	(143,102)	192,579
f. Other (Security Lending)	<u>1,202</u>	<u>1,398</u>
Total Revenues	40,655	380,300
3 Expenses		
a. Benefits	235,106	243,684
b. Refunds	4,854	5,800
c. Administration Expense	<u>4,597</u>	<u>5,343</u>
Total Expense	244,557	254,827
4 Assets Available at End of Year (1 + 2 - 3)	<u><u>3,194,582</u></u>	<u><u>3,327,681</u></u>

* Change due to difference between unaudited asset value used for prior valuation and audited asset value reported the following year.

Development of Actuarial Value of Assets

As of December 31, 2016

(\$ in 000's)

	<u>Market Value</u>	<u>Actuarial Value</u>
1 Value of Assets @ 12-31-2015	\$ 3,194,582	\$ 3,320,387
2 Non-Investment Cash Flows during 2016		
a. Employer Contributions	56,130	56,130
b. Employee Contributions	53,436	53,436
c. Benefits (including refunds)	(249,484)	(249,484)
d. Administrative Expenses	(5,343)	(5,343)
Total	(145,261)	(145,261)
3 Expected Investment Returns @ 8.00%	259,932	259,932
4 Expected Assets @ 12-31-2016 (1 + 2 + 3)	3,309,253	3,435,058
5 Actual Assets Available for Benefits	3,327,681	
6 Gain/ (Loss) From Investment Returns (5 - 4)	18,428	
7 Recognition of Gains / (Losses)		
a. One-fifth of Current Year Gain/(Loss) (one-fifth of 6)		3,686
b. One-fifth of 2015 Gain/(Loss)		(61,315)
c. One-fifth of 2014 Gain/(Loss)		(8,126)
d. One-fifth of 2013 Gain/(Loss)		52,493
e. One-fifth of 2012 Gain/(Loss)		29,667
Total		16,405
8 Actuarial Value of Assets @ 12-31-2016 (4 + 7)		3,451,463

Historical Investment Performance
Dollar Weighted Basis Net of Investment Expenses

<u>Calendar Year</u>	<u>On Market Value</u>	<u>On Actuarial Value</u>
2000	-3.45%	9.59%
2001	-5.46%	2.76%
2002	-9.81%	-5.37%
2003	27.05%	2.03%
2004	15.22%	9.38%
2005	7.93%	13.71%
2006	16.90%	13.03%
2007	3.56%	9.58%
2008	-31.31%	-3.76%
2009	30.35%	6.79%
2010	15.77%	4.30%
2011	0.86%	1.15%
2012	14.29%	2.82%
2013	16.75%	10.65%
2014	6.14%	10.29%
2015	-1.83%	7.02%
2016	8.65%	8.51%
5-year average ending in 2016	8.60%	7.82%
10-year average ending in 2016	5.04%	5.64%

**Analysis of Change in Unfunded
Actuarial Accrued Liability
For the Year Ending December 31, 2016
(\$ in 000's)**

1 UAAL as of December 31, 2015		\$ 808,746
2 Expected Change in UAAL during 2016		
a. Expected Amortization Payment for CY 2016	(51,271)	
b. Interest adjustments on 1 & 2a to Year End @ 8.00%	<u>62,649</u>	
c. Expected change in UAAL		11,378
3 Increase/(Decrease) in UAAL Due to Difference Between Calculated Contribution Rate and Actual Contribution Rate		27,814
4 Net Actuarial Experience (Gains) & Losses		(48,756)
5 Assumption and Method Changes		41,157
6 UAAL as of December 31, 2016		\$ 840,339

**Analysis of Actuarial (Gains) and Losses
For 2016
(\$ in 000's)**

	<u>2016</u>
Investment Return	\$(16,405)
Salary Increase	3,744
Age and Service Retirement	(4,327)
General Employment Termination	1,875
Disability Incidence	(195)
Active Mortality	102
Benefit Recipient Mortality	(1,665)
Actual vs. Expected Cost of Living Adjustment (COLA)*	(27,890)
Other	<u>(3,995)</u>
Total Actuarial (Gain)/ Loss	\$ (48,756)

* Actual COLA of 1.45% versus expected COLA of 3.00%

Schedule of Funding Status

(\$ in 000's)

End of Year	Actuarial Value of Assets (a)	AAL (b)	UAAL (b-a)	Funding Ratio (a/b)	Payroll* (c)	UAAL as % of Payroll ((b-a)/c)
1997	1,437,533	1,673,761	236,228	85.89%	261,799	90.20%
1998	1,617,468	1,750,430	132,962	92.40%	275,547	48.30%
1999	1,862,644	1,873,998	11,353	99.39%	282,127	4.00%
2000	1,997,828	2,038,078	40,250	98.03%	298,355	13.50%
2001	2,017,041	2,276,488	259,447	88.60%	332,842	77.90%
2002	1,863,701	2,399,569	535,868	77.67%	324,615	165.08%
2003	1,843,099	2,489,071	645,972	74.05%	318,492	202.82%
2004	2,482,082	2,488,270	6,188	99.75%	331,201	1.87%
2005	2,739,269	2,606,173	(133,096)	105.11%	332,446	-40.04%
2006	2,998,099	2,761,404	(236,695)	108.57%	344,997	-68.61%
2007	3,183,260	2,915,164	(268,096)	109.20%	370,150	-72.43%
2008	2,957,506	3,075,385	117,879	96.17%	389,362	30.27%
2009	3,031,652	3,192,120	160,468	94.97%	375,164	42.77%
2010	3,027,439	3,282,126	254,687	92.24%	332,045	76.70%
2011	2,916,946	3,391,652	474,906	86.00%	318,972	148.89%
2012	2,846,124	3,518,356	672,232	80.89%	340,452	197.45%
2013	3,074,284	3,610,845	362,477	85.14%	352,486	102.83%
2014	3,241,053	4,004,055	763,002	80.94%	374,002	204.01%
2015	3,320,387	4,129,133	808,746	80.41%	404,981	199.70%
2016	3,451,463	4,291,802	840,339	80.42%	420,693	199.75%

Summary of Data Characteristics

	<u>December 31, 2014</u>	<u>December 31, 2015</u>	<u>December 31, 2016</u>
Active Members			
Number	7,180	7,477	7,619
Total Annualized Earnings of Members as of 12/31 (000's)	\$363,109	\$393,186	\$409,433
Average Earnings	50,572	52,586	53,738
Benefit Recipients			
Number	6,598	6,756	6,903
Total Annual Retirement Income (000's)	\$219,150	\$226,019	\$237,993
Total Annual Health Supplement (000's)	\$9,611	\$9,924	\$10,061
Average Total Annual Benefit	\$34,671	\$34,945	\$35,542
Inactive Members*			
Deferred Vested	739	748	768
Deferred Nonvested	360	415	447
Total	1,099	1,163	1,215

* The number of inactives on 12/31/2016 includes 768 members who have applied for a deferred pension and 447 other members who have terminated and still have contribution balances in the Fund.

Distribution of Active Members and Payroll by Age and Years of Service

Age	Years of Service								Totals
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30 & Over	
Under 20	3								3
	65,223								65,223
20-24	83	90							173
	2,493,177	3,175,914							5,669,091
25-29	182	365	47						594
	6,621,015	15,036,184	2,266,127						23,923,326
30-34	150	362	166	60					738
	6,183,656	16,872,435	9,061,174	3,343,869					35,461,134
35-39	125	361	173	118	48	2			827
	5,520,340	17,923,993	9,741,996	6,743,027	2,752,911	135,525			42,817,792
40-44	113	240	186	160	149	53			901
	4,779,503	12,251,776	10,684,479	9,429,371	8,326,704	3,093,830			48,565,663
45-49	110	292	152	157	192	154	52	2	1,111
	4,840,799	13,952,465	8,171,484	9,203,375	11,508,681	9,849,852	3,529,392	120,700	61,176,748
50-54	96	227	211	214	229	175	88	49	1,289
	3,906,332	11,145,340	11,325,315	12,520,588	13,396,460	11,348,751	6,089,698	3,377,565	73,110,049
55-59	56	198	158	165	226	135	64	48	1,050
	2,472,203	10,524,172	8,895,133	9,607,893	12,866,063	8,966,644	4,810,720	3,379,595	61,522,423
60-64	21	84	123	104	134	70	43	36	615
	1,171,834	4,186,452	7,088,996	5,701,271	7,505,198	4,667,379	3,146,762	2,630,032	36,097,924
65&Over	9	29	49	67	60	31	21	20	286
	403,732	1,776,865	2,781,920	4,295,757	4,130,807	2,019,636	1,676,390	1,607,015	18,692,122
Totals	948	2,248	1,265	1,045	1,038	620	268	156	7,588
	38,457,814	106,845,596	70,016,624	60,845,151	60,486,824	40,081,617	19,252,962	11,114,908	407,101,496

**Distribution of Benefit Recipients
as of December 31, 2016**

Age	Number	Annual Benefit*	Annual Average Benefit*
Under 50	55	\$ 859,728	\$ 15,631
50-54	262	11,568,007	44,153
55-59	709	31,381,385	44,261
60-64	1,354	50,557,956	37,340
65-69	1,682	63,426,759	37,709
70-74	1,113	36,043,975	32,385
75-79	740	20,887,022	28,226
80-84	477	12,155,868	25,484
85-89	311	7,134,288	22,940
90 & Over	200	3,977,540	19,888
Total	6,903	\$ 237,992,528	\$ 34,477

* Does not include Health Benefit Supplement.

EXPERIENCE TABLES

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**Pay Experience for Employees who are Active at
 Beginning and End of Year
 Valuation Pay Analysis
 Analyzed by Years of Service**

Service Beginning of Year	Experience for 2016			
	Number	Expected Pay	Actual Pay	Ratio A/E
Under 5	2,045	95,119,290	96,556,255	101.51%
5-9	1,270	69,969,797	69,455,014	99.26%
10-14	1,198	68,844,598	68,802,167	99.94%
15-19	975	56,734,972	57,077,943	100.60%
20-24	668	42,329,962	42,590,179	100.61%
25-29	295	20,714,809	20,847,140	100.64%
30 & Over	201	14,587,956	14,542,353	99.69%
Total	6,652	\$ 368,301,384	\$ 369,871,051	100.43%
Over 10 Years	3,337	\$ 203,212,297	\$ 203,859,782	100.32%

Service Beginning of Year	Experience for 2015/2016			
	Number	Expected Pay	Actual Pay	Ratio A/E
Under 5	3,851	177,536,669	182,356,000	102.71%
5-9	2,674	140,788,218	143,175,915	101.70%
10-14	2,197	123,723,090	125,314,684	101.29%
15-19	2,099	118,793,277	120,721,317	101.62%
20-24	1,270	78,732,025	79,940,764	101.54%
25-29	604	41,442,566	41,972,336	101.28%
30 & Over	434	30,541,988	30,869,993	101.07%
Total	13,129	\$ 711,557,833	\$ 724,351,009	101.80%
Over 10 Years	6,604	\$ 393,232,946	\$ 398,819,094	101.42%

Analysis of Retirement Experience

Age	2016 Retirement			2015/2016 Retirement		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
46	-	-	N/A	-	-	N/A
47	-	-	N/A	-	-	N/A
48	-	0.20	0.00%	1	0.90	111.11%
49	1	0.60	166.67%	3	2.00	150.00%
50	13	12.60	103.17%	27	29.20	92.47%
51	10	13.35	74.91%	21	26.10	80.46%
52	9	13.33	67.52%	22	27.18	80.94%
53	13	13.95	93.19%	24	27.75	86.49%
54	10	11.73	85.25%	18	24.48	73.53%
55	15	10.11	148.37%	21	25.74	81.59%
56	13	16.01	81.20%	21	31.37	66.94%
57	9	16.16	55.69%	17	29.73	57.18%
58	11	13.42	81.97%	18	26.03	69.15%
59	9	16.13	55.80%	19	33.58	56.58%
60	27	27.03	99.89%	49	52.91	92.61%
61	10	23.00	43.48%	27	44.24	61.03%
62	20	19.65	101.78%	35	40.05	87.39%
63	16	19.15	83.55%	28	35.90	77.99%
64	8	13.90	57.55%	17	25.75	66.02%
65	15	14.32	104.75%	30	33.25	90.23%
66	17	17.50	97.14%	28	29.30	95.56%
67	11	9.25	118.92%	18	19.95	90.23%
68	7	8.85	79.10%	11	14.00	78.57%
69	2	4.40	45.45%	7	9.20	76.09%
70 & Over	8	63.00	12.70%	19	121.00	15.70%
Total	254	357.64	71.02%	481	709.61	67.78%
Total Under 70	246	294.64	83.49%	462	588.61	78.49%

Analysis of Retirement Experience
 Age Groups

Age Group	2016 Retirements			2015/2016 Retirements		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
Under 55	56	65.76	85.16%	116	137.61	84.30%
55-59	57	71.83	79.35%	96	146.45	65.55%
60-64	81	102.73	78.85%	156	198.85	78.45%
65-69	52	54.32	95.73%	94	105.70	88.93%
70 & Over	8	63.00	12.70%	19	121.00	15.70%
Total	254	357.64	71.02%	481	709.61	67.78%
Total Under 70	246	294.64	83.49%	462	588.61	78.49%

Analysis of Turnover Experience

Years of Service	2016 Quits			2015/2016 Quits		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
0-4	378	359.89	105.03%	686	667.48	102.77%
5-9	107	79.61	134.41%	190	161.63	117.55%
10-14	36	42.50	84.70%	72	77.77	92.59%
15-19	15	19.68	76.23%	36	43.20	83.33%
20-24	9	8.20	109.76%	18	15.62	115.25%
25-29	1	0.48	210.08%	1	1.08	92.76%
Total	546	510.35	106.98%	1,003	966.77	103.75%

Analysis of Active Mortality Experience

Age	2016 Deaths			2015/2016 Deaths*		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
20-24	-	0.05	0.00%	-	0.09	0.00%
25-29	1	0.20	508.17%	1	0.37	273.07%
30-34	-	0.38	0.00%	-	0.72	0.00%
35-39	1	0.63	158.17%	1	1.26	79.52%
40-44	2	1.04	192.24%	6	2.07	289.47%
45-49	-	1.97	0.00%	1	3.94	25.38%
50-54	3	3.45	87.02%	5	6.88	72.67%
55-59	3	4.54	66.08%	7	8.88	78.80%
60 and Over	5	7.13	70.12%	10	13.87	72.12%
Total	15	19.38	77.42%	31	38.07	81.42%

*In conjunction with the December 31, 2016 valuation, additional data was provided by ERF staff for 2015. Therefore the total numbers shown in the 2015/2016 columns do not equal the sum of the 2015 deaths shown in the December 31, 2015 report and the 2016 deaths shown in this table.

Analysis of Disability Experience

Age	2016 Disabilities			2015/2016 Disabilities		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
20-24	-	0.02	0.00%	-	0.04	0.00%
25-29	-	0.13	0.00%	-	0.24	0.00%
30-34	-	0.23	0.00%	-	0.44	0.00%
35-39	-	0.38	0.00%	-	0.74	0.00%
40-44	1	0.75	134.19%	2	1.50	133.48%
45-49	-	1.90	0.00%	2	3.76	53.17%
50-54	3	3.56	84.36%	6	7.04	85.22%
55-59	2	3.89	51.46%	3	7.56	39.70%
60 and Over	-	1.26	0.00%	1	2.47	40.45%
Total	6	12.10	49.57%	14	23.79	58.84%

Analysis of Retiree Mortality Experience*

Age	2016 Experience			2015/2016 Experience		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
Under 60	3	3.25	92.30%	15	6.70	223.83%
60-64	13	9.74	133.53%	23	19.86	115.84%
65-69	19	21.62	87.89%	40	41.62	96.11%
70-74	18	21.68	83.03%	48	42.71	112.40%
75-79	20	22.02	90.81%	43	43.67	98.46%
80-84	29	21.71	133.58%	59	43.86	134.53%
85-89	31	23.50	131.89%	57	46.97	121.36%
90 & over	29	20.65	140.41%	52	41.06	126.65%
Total	162	144.17	112.36%	337	286.44	117.65%

**This analysis does not include beneficiary, QDRO, or disabled deaths.*

ACTUARIAL METHOD AND ASSUMPTIONS

Entry Age Normal Method.

The Entry Age Normal actuarial cost method is the actuarial valuation method used for all purposes under ERF.

The concept of this method is that funding of benefits for each member should be effected as a, theoretically, level contribution (as a level percentage of pay) from entry into ERF to termination of active status.

The Normal Cost (NC) for a fiscal year under this method is determined as described in the prior paragraph for each member. The ERF NC for the year is the total of individual normal costs determined for each active member.

The Actuarial Accrued Liability (AAL) under this method is the theoretical asset balance of the normal costs that would have accumulated to date based upon current actuarial assumptions. To the extent that the assets of the fund are insufficient to cover the AAL, an Unfunded Actuarial Accrued Liability (UAAL) develops.

The actuarially calculated contribution for a year is the Normal Cost for that year plus an amount to amortize the UAAL over 30 years as a level percentage of pay.

Actuarial Value of Asset Method.

The actuarial value of assets is equal to the expected actuarial value of assets adjusted for a five-year phase-in of actual investment return in excess of (or less than) expected investment return. The actual return is calculated net of investment expenses, and the expected investment return is equal to the assumed investment return rate multiplied by the prior year's actuarial value of assets, adjusted for contributions, benefits paid, and refunds.

ACTUARIAL METHOD AND ASSUMPTIONS
(AS OF DECEMBER 31, 2016)

Annual Rate of Investment Return: For all purposes under the Fund, the rate of investment return is assumed to be 7.75% per annum, net of investment expenses. This rate includes an annual assumed rate of inflation of 2.75%. In addition, annual cost-of-living adjustments are assumed to occur on average at the rate of 2.75% per annum.

Annual Compensation Increases: Each member's compensation is assumed to increase in accordance with a table based on actual ERF experience. Sample rates follow:

<u>Years of Service</u>	<u>Merit, Promotion, Longevity</u>	<u>General</u>	<u>Total</u>
0	3.00 %	3.25 %	6.25 %
1	3.00	3.25	6.25
2	2.75	3.25	6.00
3	2.00	3.25	5.25
4	1.50	3.25	4.75
5	1.50	3.25	4.75
6	1.50	3.25	4.75
7	1.00	3.25	4.25
8	1.00	3.25	4.25
9	0.75	3.25	4.00
10	0.75	3.25	4.00
11	0.75	3.25	4.00
12	0.50	3.25	3.75
13	0.50	3.25	3.75
14	0.50	3.25	3.75
15	0.50	3.25	3.75
16	0.50	3.25	3.75
17	0.50	3.25	3.75
18	0.25	3.25	3.50
19 & Over	0.00	3.25	3.25

ACTUARIAL METHOD AND ASSUMPTIONS (cont.)

Mortality:

Disabled Lives: RP-2000 Disabled Mortality Table for male annuitants, set forward one year.

Sample rates follow (rate per 1,000):

<u>Age</u>	<u>Disability Mortality Rate</u>	
	<u>Male</u>	<u>Female</u>
20	23	23
30	23	23
40	23	23
50	30	30
60	43	43
70	66	66
80	116	116
90	200	200

Other Benefit Recipients:

- a. Males – RP-2000 Blue Collar Healthy Mortality Table for male annuitants, with a 109% multiplier and fully generational mortality using improvement Scale BB.
- b. Females – RP-2000 Blue Collar Healthy Mortality Table for female annuitants, with a 103% multiplier and fully generational mortality using improvement Scale BB.

Sample rates follow (rate per 1,000), with projected mortality applied:

<u>Age</u>	<u>Mortality Rate</u>	
	<u>Male</u>	<u>Female</u>
30	0.8	0.3
40	1.4	0.9
50	2.5	1.9
60	8.1	4.3
70	22.9	15.8
80	60.4	41.6
90	166.0	118.0

ACTUARIAL METHOD AND ASSUMPTIONS (cont.)

Mortality:

Active Members:

- a. Males – RP2000 Healthy Mortality Table for male employees, set forward 4 years.
- b. Females – RP2000 Healthy Mortality Table for female employees, set back 5 years.

Sample rates follow (rate per 1,000):

Age	Mortality Rate	
	Male	Female
30	0.7	0.2
40	1.4	0.5
50	2.8	1.1
60	7.0	2.5
70	33.9	5.8
80	99.8	28.1
90	250.7	77.4

10% of active deaths are assumed to be service related.

Disability: A client-specific table of disability incidence with sample rates follows (rate per 1,000):

Age	Disability Rate
30	0.3
40	0.6
50	2.4
60	6.0

20% of disabilities are assumed to be service related. There is a 0% assumption of disability for members who have over 10 years of service and are eligible for retirement.

ACTUARIAL METHOD AND ASSUMPTIONS (cont.)

Retirement: Upon eligibility, active members are assumed to retire as follows (rate per 1,000):

Age	Male		Female	
	<u>First Year Eligible</u>	<u>Thereafter</u>	<u>First Year Eligible</u>	<u>Thereafter</u>
48-49	100	100	100	100
50	600	550	400	350
51	500	450	400	350
52	500	330	400	350
53	450	300	400	300
54	400	280	400	250
55	350	280	300	250
56	350	280	300	250
57	350	280	300	220
58-59	350	280	300	220
	<u>Service < 18 yrs.</u>	<u>Service 18 yrs.+</u>	<u>Service < 18 yrs.</u>	<u>Service 18 yrs. +</u>
60	80	250	100	300
61	90	250	150	220
62	100	250	150	200
63	150	250	150	150
64	150	250	100	100
65	180	250	200	200
66	200	250	250	250
67	200	250	250	250
68	200	250	150	250
69	200	250	150	250
70	1,000	1,000	1,000	1,000

ACTUARIAL METHOD AND ASSUMPTIONS (cont.)

General Turnover: A table of termination rates based on ERF experience. A sample of the ultimate rates follows:

<u>Years of Service</u>	<u>Terminations (per 1,000)</u>
0	210.0
1	160.0
2	130.0
3	105.0
4	85.0
5	67.5
6	62.5
7	57.5
8	49.0
9	46.0
10-14	37.0
15-19	22.0
20 & Over	14.0

There is 0% assumption of termination for members eligible for retirement.

Mortality Improvement: Scale BB is used to project mortality improvements for Healthy Retirees on a fully generational basis. There is no projection of mortality improvement before or after the measurement date for disabled lives or active employees.

Refunds of Contributions: Members are assumed to choose the most valuable termination benefit.

Operational Expenses: The amount of estimated administrative expenses expected in the next year is assumed to be equal to the prior year's expenses and is incorporated in the Normal Cost.

Marital Status: 75% of active male members and 50% of active female employees are assumed to be married.

ACTUARIAL METHOD AND ASSUMPTIONS (cont.)

Vacation Leave Conversions: Members with 20 or more years of service are assumed to convert unused vacation leave to 1.5 months of service. Other members are assumed to convert unused vacation leave to 1 month of service. No vacation leave conversion is assumed for disability retirement.

Spouse Age: The female spouse is assumed to be 3 years younger than the male spouse.

Payroll Growth Rate: In determining the level percent amortization of UAAL rate, the payroll of the entire system is assumed to increase at 3% each year.

Member's Pay: In determining the member's valuation salary, the greater of the prior calendar year's gross pay and the member's rate of compensation is used.

Form of Payment: It is assumed that 60% of married active male members and 84% of married active female employees will elect a Joint & 50% Survivor form of payment. Taking into consideration the marriage assumption and the inherent subsidy in the System's Joint & 100% Survivor factors, the male employees are valued with Joint and 29.0% Survivor annuities and the female employees are valued with Joint and 16.5% Survivor annuities.

Changes in Assumptions and Methods Since Prior Valuation: As described in Section F, the Board of Trustees adopted a lower inflation assumption and in conjunction with that change also modified several other economic assumptions. We believe this change is reasonable based on the current outlook for inflation. The demographic assumptions remain unchanged from the prior year.

SUMMARY OF BENEFIT PROVISIONS

Employees' Retirement Fund of the City of Dallas as of December 31, 2016

Membership	An employee becomes a member upon permanent employment and contributes to the Fund.
Contributions	Member: 37% of the current adjusted total obligation rate. New rates effective October 1 after the valuation date. City: 63% of the current adjusted total obligation rate. New rates effective October 1 after the valuation date.
Definitions	Final Average Salary: Average monthly salary over the member's highest three years of service. Credited Service: Length of time as an employee of the City of Dallas and while making contributions to the Fund.
Retirement Pension	Eligibility: a. Attainment of age 60; or b. Attainment of age 55 (if credited service began before May 9, 1972); or c. At any age after completion of 30 years of credited service with a reduced benefit before age 50; or d. Attainment of age 50, if the sum of an active member's age and credited service is at least equal to 78.

SUMMARY OF BENEFIT PROVISIONS (cont.)

Retirement Benefits: The retirement benefit equals 2-3/4% multiplied by average monthly earnings multiplied by credited service limited to a maximum of 36.3636 years plus a monthly \$125 health supplement (prorated for service less than 5 years).

Form of Payment: An unreduced pension benefit under a joint and one-half survivor option or a ten-year certain and life option. An actuarially equivalent joint and full survivor option is also available.

Deferred Retirement

Eligibility: Deferred retirement pension benefit commencing at age 60 or at age 55, if employment commenced prior to May 9, 1972, with at least five (5) years of credited service, and accumulated contributions are left on deposit with the Fund.

Monthly Benefit: The deferred retirement benefit is equal to the retirement pension based on earnings and credited service at the time of termination.

Disability Retirement Pension

Non-Service Disability:

1. Eligibility: Five (5) years of service and totally and permanently incapacitated for duty.
2. Monthly Benefit: Computed based on average monthly earnings and credited service at time of disability but not less than 10 times the percentage multiplier multiplied by the average monthly earnings.

SUMMARY OF BENEFIT PROVISIONS (cont.)

Service Disability:

1. Eligibility: Totally and permanently incapacitated from the further performance of duty as a result of injury while in the course of employment for the City.
2. Monthly Benefit: Calculated as a non-service disability pension but not less than \$500 per month.

Death Benefits

Form: Benefit paid in accordance with the option on file, or the eligible option, or if no eligible beneficiary, a lump sum equivalent of 10 years of benefit payments to the member's estate.

Monthly Benefit: Based on average monthly earnings and credited service at death but not less than 10 times the percentage multiplier multiplied by the average monthly earnings.

Minimum Service Death Benefit: Not less than \$500 per month if death resulted from a service related injury.

Return of Accumulated Contributions

A member at the time of termination is entitled to be paid accumulated contributions without interest.

Cost-of-Living Adjustments

An annual cost-of-living adjustment to the base pension benefit shall be made based on the greater of:

- a. The percentage of change in the price index for October of the current year over October of the previous year, up to 5%, or
- b. The percentage of annual average change in the price index for the 12-month period ending with the effective date of the adjustment, up to 5%.

SUMMARY OF BENEFIT PROVISIONS (cont.)

Tier B Members

Members hired after December 31, 2016 are part of Tier B. The benefits provisions previously described for members of Tier A also apply to Tier B, with the following exceptions:

1. Early Retirement Eligibility is the rule of 80, with full actuarial reduction
2. Normal Retirement Eligibility is (i) 65 years of age and 5 years of service or (ii) any age with 40 years of service
3. The cost-of-living adjustment includes a maximum of 3%
4. The final average salary is based on the highest five years of service
5. The normal form of payment is a ten-year certain and life annuity
6. The \$125 monthly health supplement is not included
7. The benefit multiplier is 2.50% per year of service