### **RETIREMENT PLAN FOR THE EMPLOYEES' RETIREMENT FUND OF THE CITY OF DALLAS** ACTUARIAL VALUATION REPORT AS OF DECEMBER 31, 2007



5605 N. MacArthur Blvd. Suite 870 Irving, TX 75038-2631

May 13, 2008

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

Dear Members of the Board:

We are pleased to present the report of the actuarial valuation of the Employees' Retirement Fund of the City of Dallas ("ERF") as of December 31, 2007.

This valuation provides information on the funding status of ERF. It includes a determination of the actuarially calculated contribution level for the 2008 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, 2008. 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 pension obligation bonds for fiscal year 2009.

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 value of the trust fund as of that date. All member data and asset information were provided by ERF staff. While certain checks for reasonableness were performed, the data used was not audited.

There were no changes in actuarial assumptions and cost method since the prior valuation.

To the best of our knowledge, this report is complete and accurate and was conducted in accordance with standards of practice by the Actuarial Standards Board and in compliance with the provisions of the ordinance. The actuarial assumptions used for the valuation produce results which, in the aggregate, are reasonable. The valuation was produced under the supervision of a Member of the American Academy of Actuaries, and both signatories have significant experience valuing large, public employee retirement systems.

Respectfully submitted,

Cewis Ward

Lewis Ward Consultant

Mark R. Randall

Mark R. Randall, M.A.A.A Senior Consultant

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# **SECTION A** EXECUTIVE SUMMARY

#### **EXECUTIVE SUMMARY**

#### (\$ in 000's)

The key results from the valuation of the Employees' Retirement Fund of the City of Dallas as of December 31, 2007, may be summarized as follows:

	Dece	mber 31, 2006	Dece	ember 31, 2007
		(1)		(2)
• Members				
- Actives		7,772		8,117
- Benefit recipients		5,197		5,304
- Deferred vested*		579		576
- Other terminated*		401		<u>467</u>
- Total		13,949		14,464
• Projected payroll (including overtime)	\$	334,949	\$	359,369
Normal cost	\$	53,695	\$	57,396
as % of payroll		16.25%		16.22%
Actuarial accrued liability	\$	2,761,404	\$	2,915,163
Actuarial value of assets	\$	2,998,099	\$	3,183,260
• Market value of assets	\$	3,171,542	\$	3,185,216
• Unfunded actuarial accrued liability (UAAL)	\$	(236,695)	\$	(268,097)
• Estimated yield on assets (market value basis)		16.90%		3.56%
• Estimated yield on assets (actuarial value basis)		13.03%		9.58%
Contribution Rates				
- Prior Adjusted Total Obligation Rate		24.41%		22.71%
- Current Total Obligation Rate		21.00%		20.21%
- Current Adjusted Total Obligation Rate		22.71%		22.71%
• Actuarial gains/(losses)				
- Assets	\$	128,747	\$	39,193
- Actuarial liability experience	\$	(9,346)	\$	(21,738)
- Assumption changes	\$	(24,799)	\$	-
• 30-year level % of pay funding cost	\$	41,079	\$	42,637
as % of payroll (Employee + City)		12.62%		12.25%
• Funded ratio				
- Based on actuarial value of assets		108.6%		109.2%
- Based on market value of assets		114.9%		109.3%

\* 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.

# **SECTION B** PURPOSES OF THE ACTUARIAL VALUATION

#### 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") as of December 31, 2007.

The purposes of an actuarial valuation are as follows:

- To determine the funding status of ERF as of the valuation date, and
- To develop the actuarially determined level of contributions for ERF for the 2008 calendar year, and
- To develop the current total obligation rate and the current adjusted total obligation rate for the fiscal year beginning October 1, 2008.

# **SECTION C** REPORT HIGHLIGHTS

### **REPORT HIGHLIGHTS**

The following is a set of key results for the prior year valuation and for the current year:

	( <b>\$ in 000's</b> )		
	2007	2008	
<b>Contribution Rates (% of Payroll)</b>			
Normal Cost (including administrative expense)	17.09%	16.96%	
Total Actuarial Contribution Rate	12.62%	12.25%	
Total Projected Actuarial Contribution	\$41,079	\$42,637	
Funded Status	12/31/06	12/31/07	
Actuarial Accrued Liability	\$2,761,404	\$2,915,164	
Actuarial Value of Assets	2,998,099	3,183,260	
Unfunded Actuarial Accrued Liability	(236,695)	(268,096)	
Funded Ratio	108.57%	109.20%	

# SECTION D

FUNDING PROCESS

#### **FUNDING PROCESS**

Based on the previous work of the Employees' Retirement Fund Study Committee, that was ratified by both the City Council and the voters, a new funding process commenced October 1, 2005. From that 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 pension obligation bonds issued in 2005 and the contributions to the ERF. In subsequent years, the contribution rate will change only if the actuarial valuation develops a "current total obligation rate" which differs from the "prior adjusted total obligation rate" by 3.00% or more.

As shown on Table 3 and discussed later in this report, the "current total obligation rate" differs from the "prior adjusted total obligation rate" by less than 3.00%. This means that the "current adjusted total obligation rate" will remain unchanged from the "prior adjusted total obligation rate".

## **SECTION E**

ACTUARIAL CONTRIBUTIONS

### **ACTUARIAL CONTRIBUTION**

The Actuarially Required Contribution Rate developed in this actuarial valuation is 12.25% 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 2009. As shown in Table 3, the debt service payment was determined to be 7.96% of projected payroll. The sum of these rates is 20.21% (the Current Total Obligation Rate) which is 2.50% less than the Prior Adjusted Total Obligation Rate of 22.71%. Because the difference is less than 3.00%, the total contribution rate in fiscal year 2009 (the Current Adjusted Total Obligation Rate) to fund the ERF and make the debt service payment on the pension obligation bonds will remain unchanged.

## **SECTION F**

ACTUARIAL ASSUMPTIONS

### **ACTUARIAL ASSUMPTIONS**

Section N 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 actuarial cost method. The assumed annual investment return rate is 8.25%.

There were no changes in the actuarial assumptions since the prior valuation report. Please see Section N for a complete description of these assumptions. **SECTION G** ERF BENEFITS

### **ERF BENEFITS**

There have been no changes in the benefit provisions of ERF since the prior valuation. Please see Section O for a summary description of ERF benefits.

## SECTION H

EXPERIENCE DURING PREVIOUS YEAR

### **EXPERIENCE DURING 2007**

Actuarial Gain and Loss Analysis reviews the effects of experience that differs from that assumed on actuarial results. If such a difference increases assets or reduces liabilities, we have an actuarial gain. The reverse is an actuarial loss.

ERF experienced an overall actuarial gain in calendar year 2007. This year's overall actuarial gain amounted to approximately \$17.46 million.

The total actuarial gain is the net of the gain from assets and the gain from liabilities. The total gain is broken down as follows (\$ in millions):

		2004	2005	2006	2007
1)	Actuarial (Gain)/Loss on Assets	(\$15.80)	(\$133.36)	(\$128.75)	(\$39.19)
2)	Actuarial (Gain)/Loss on Liabilities	(27.52)	(0.64)	9.35	21.73
3)	Total Actuarial (Gain) or Loss (1+2)	(43.32)	(134.00)	(119.40)	(17.46)

On a market value basis, the fund earned approximately 3.56% (on a dollar weighted basis net of investment expenses). The actual investment income was less than the expected investment income on the actuarial value of assets, therefore, an investment income loss is being deferred into the future. Due to the recognition of prior years' deferred investment gains, there was an actuarial gain of approximately \$39.19 million on the actuarial value of assets. The rate of return on the actuarial value for 2007 was 9.58% (on a dollar weighted basis net of investment expenses). This result was more than the current investment return assumption of 8.25%.

In addition, during 2007, there was an aggregate actuarial loss of about \$21.73 million from demographic assumptions and non-investment economic assumptions (salary increases).

## **SECTION I**

ASSET INFORMATION

#### **ASSET INFORMATION**

The assets of the fund (on a market value basis), that are available for benefits, increased from \$3,172 million as of December 31, 2006 (includes proceeds of the pension obligation bonds) to \$3,185 million as of December 31, 2007.

The assets recognized for actuarial purposes (actuarial value of assets) are the product of a smoothing technique. The purpose of such a technique is to allow the use of market values, but to dampen the effect of market volatility. See Table 6 for the determination of the actuarial value of assets.

The actuarial value of assets has increased from \$2,998 million to \$3,183 million during 2007. The rate of return on investments for 2007 on the actuarial value of assets was 9.58% compared to 13.03% in 2006. The detailed determinations of asset values utilized in this valuation and asset growth in the last year are exhibited in Tables 4 and 5.

## **SECTION J**

FUNDED STATUS

### **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. Thus, it reflects the portion of the AAL that is covered by ERF assets. The UAAL is the difference between these items.

A funded ratio of 100% means that the funding of ERF is precisely 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 ERF funded ratio increased from 108.57% as of December 31, 2006 to 109.20% as of December 31, 2007.

The UAAL decreased from -\$236.7 million as of December 31, 2006 to -\$268.1 million as of December 31, 2007. Since the UAAL is negative, this implies the actuarial assets exceed the actuarial liabilities of the Fund.

# SECTION K GASB DISCLOSURE

### GASB DISCLOSURE

GASB Statements Numbers 25 and 27 detail the current accounting standards for ERF and the Fund's sponsor, the City of Dallas. Tables 10a, 10b, and 10c provide footnotes and/or Required Supplemental Information tables required to be disclosed by these statements.

## SECTION L

ACTUARIAL TABLES

### **ACTUARIAL TABLES**

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## Summary of Actuarial Values

## As of December 31, 2007

#### (\$ in 000's)

APV* of Projected Benefits	Actuarial Accrued Liability		
	(AAL)	Normal Cost \$	Normal Cost % of Pay**
\$ 1,427,710	\$ 1,176,863	\$ 39,374	11.13%
34,665	22,575	1,949	0.55%
17,606	8,273	1,480	0.42%
97,968	19,014	12,060	3.40%
51,563	37,188	2,533	0.72%
1,629,512	1,263,913	57,396	16.22%
1,591,731	1,591,731		
59,520	59,520		
3,280,763	2,915,164	57,396	16.22%
	3,183,260		
	(268,096)		
	109.20%		
	17,606 97,968 51,563 1,629,512 1,591,731 59,520	34,665       22,575         17,606       8,273         97,968       19,014         51,563       37,188         1,629,512       1,263,913         1,591,731       1,591,731         59,520       59,520         3,280,763       2,915,164         3,183,260       (268,096)	$\begin{array}{cccccccccccccccccccccccccccccccccccc$

\* APV – Actuarial Present Value

\*\* Percentage of expected payroll for continuing active participants

#### Development of Actuarially Required Contribution for FY 2009

(**\$ in 000's**)

	 \$	% of Pay
1 Actuarial Requirement		
a. Payment to Amortize UAAL over 30 years*	\$ (17,434)	-4.71%
b. Normal Cost	57,396	16.22%
c. Administrative Expense	 2,675	0.74%
Total	\$ 42,637	12.25%

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

### Information for Ordinance 25695 For the Fiscal Year Commencing October 1, 2008

1 Prior Adjusted Total Obligation Rate	22.71%
2 Actuarially Required Contribution Rate	12.25%
3 Debt Service	
a Scheduled Debt Service Payment for FY 2009	29,461,524
b Projected Payroll	370,149,814
c Pension Obligation Bond Credit Rate (a/b)	7.96%
4 Current Total Obligation Rate (2 + 3c)	20.21%
5 Current Adjusted Total Obligation Rate	22.71% *
6 Allocation of Contribution Rates for FY 2008	
a Employee (5 x .37)	8.40%
b City (5 x .63)	14.31%

\* If the difference between the Prior Adjusted Total Obligation Rate and the Current Total Obligation Rate is more than 3.0% then the Current Adjusted Total Obligation Rate 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

#### **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, that 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, 2007, 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, 2008, the current adjusted total obligation rate that was effective for the prior fiscal year.

**PROJECTED PAYROLL** – means the covered payroll for the valuation preceding 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.

#### Net Assets Available for Benefits

#### (\$ in 000's)

	December 31, 2006	December 31, 2007
Assets		
Cash & Short-Term	\$93,872	\$133,987
Receivables		
Accrued Investment Income	13,758	16,230
Securities Sold	87,251	31,045
Employer Contribution	695	641
Employee Contribution	916	907
Pending Contracts	412	289
-	103,032	49,112
Investments		
Index Funds	128,599	132,433
Fixed Income	928,715	869,911
Equities	2,101,599	2,080,157
Real Estate	0	0
Venture Capital	63	38
ľ	3,158,976	3,082,539
Total Assets	3,355,880	3,265,638
Liabilities		
Accounts Payable	3,961	3,344
Investment Transactions	180,377	77,078
	184,338	80,422
Net Assets Available For Benefits	3,171,542	3,185,216

### Change in Assets Available for Benefits Fiscal Year Ending December 31, 2007 (\$ in 000's)

<b>1 Assets Available at Beginning of Year</b> Adjustment *		2006	2007	
		2,798,536	\$	3,171,542
		(1) 2,798,535		(8) 3,171,534
2 Revenues				
a. Employer Contributions		23,000		23,413
b. Employee Contributions		30,123		31,692
c. Investment Income		80,332		98,876
d. Investment Expense		(9,855)		(12,477)
e. Realized and Unrealized Gains (Losses)		393,653		22,766
f. Other (Security Lending)		1,057		1,953
Total Revenues		518,310		166,223
3 Expenses				
a. Benefits		139,202		146,810
b. Refunds		3,296		3,056
c. Administration Expense		2,805		2,675
Total Expense		145,303		152,541
4 Assets Available at End of Year (1 + 2 - 3)		3,171,542		3,185,216

\* 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, 2007

#### (**\$ in 000's**)

	Market Value		Actuarial Value	
1 Value of Assets @ 12-31-2006	\$	3,171,542	\$	2,998,099
2 Non-Investment Cash Flows during 2007				
a. Employer Contributions		23,413		23,413
b. Employee Contributions		31,692		31,692
c. Benefits (including refunds)		(149,866)		(149,866)
d. Administrative Expenses		(2,675)		(2,675)
Total		(97,436)		(97,436)
3 Expected Investment Returns @ 8.25%		243,404		243,404
4 Expected Assets @ 12-31-2007 (1 + 2 + 3)		3,317,510		3,144,067
5 Actual Assets Available for Benefits		3,185,216		
6 Gain/ (Loss) From Investment Returns (5 - 4)		(132,294)		
7 Recognition of Gains / (Losses)				
a. One-third of Current Year Gain/(Loss) (one-third of 6)				(44,098)
b. One-third of 2006 Gain/(Loss)				80,974
c. One-third of 2005 Gain/(Loss)				2,317
Total				39,193
8 Actuarial Value of Assets @ 12-31-2007 (4 + 7)				3,183,260

## Historical Investment Performance Dollar Weighted Basis Net of Investment Expenses

Calendar Year	On Market Value	On Actuarial Value
1997	20.48%	12.49%
1998	16.99%	15.17%
1999	16.74%	17.69%
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%

## Analysis of Change in Unfunded Actuarial Accrued Liability For the Year Ending December 31, 2007 (\$ in 000's)

1	UAAL	as of	December	31,	2006
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\$ (236,695)

2 Expected Change in UAAL during 2007		
a. Normal Cost for 2007 based on actual payroll	\$ 60,465	
b. Contributions 2007	(55,105)	
c. Interest adjustments on 1, 2a, & 2b to Year End @ 8.25%	(19,306)	
d. Expected change in UAAL		(13,946)
3 Net Actuarial Experience (Gains) & Losses		(17,455)
4 Assumption Changes and Audit Recommendations		0
5 UAAL as of December 31, 2007		\$ (268,096)

### Analysis of Actuarial (Gains) and Losses For 2007 (\$ in 000's)

	2007
Investment Return	\$(39,193)
Salary Increase	7,670
Age and Service Retirement	(7,022)
General Employment Termination	3,988
Disability Incidence	(25)
Active Mortality	(113)
Benefit Recipient Mortality	5,122
Actual vs. Expected Cost of Living Adjustment	10,872
Other	(676)
Change in Member Contribution Rate	1,923
Total Actuarial (Gain) Loss	\$(17,455)

## Schedule of Funding Status (As Required by GASB #25)

(\$ in 000's)

	Actuarial					
End	Value of			Funding		UAAL as
of	Assets	AAL	UAAL	Ratio	Payroll*	% of Payroll
Year	(a)	(b)	( <b>b-a</b> )	(a/b)	(c)	((b-a)/c)
1992	\$854,000	\$1,107,000	\$253,000	77.15%	\$200,000	126.50%
1993	945,000	1,123,000	178,000	84.15%	200,000	89.00%
1994	991,000	1,199,000	208,000	82.65%	208,000	100.00%
1995	1,176,000	1,459,000	283,000	80.60%	243,357	116.30%
1996	1,310,081	1,585,081	275,000	82.65%	257,169	106.90%
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%

\* Projected to following year.

Note: Data for years prior to 1997 are based on prior actuarial work product.

#### **Schedule of Employer Contributions**

#### (As Required by GASB #25)

#### (\$ in 000's)

					City Cont.
		Member	Net City	Actual City	as Percent
Year	Total ARC*	Contributions	ARC	Contributions	of Net ARC
1997	\$58,095	\$13,193	\$44,902	\$22,404	49.90 %
1998	61,339	14,001	47,338	23,762	50.20 %
1999	57,159	14,932	42,227	25,217	59.72 %
2000	50,142	16,460	33,682	27,847	82.68 %
2001	52,535	20,814	31,728	35,182	110.91 %
2002	71,246	21,771	49,475	36,606	73.99 %
2003	86,429	20,580	65,849	34,729	52.74 %
2004	92,278	20,896	71,382	35,251	49.38 %
2005	51,290	23,392	27,898	565,569	2027.29 %
2006	44,503	30,123	14,380	23,000	159.94 %
2007	41,079	31,692	9,387	23,413	249.42 %
2008	42,637	31,093 **	11,544 **	k	

\* ARC – Annual Required Contribution as defined in GASB Statements No. 25 and No. 27.

\*\* Estimated.

- Note 1: Data for years prior to 1998 are based on prior actuarial work product.
- Note 2: GASB Statements 25 and 27 are standards for accounting for public retirement systems and employers.

They are not designed to limit the funding decisions of plan sponsors.

#### Notes to Required Supplementary Information

The information presented in the required supplementary schedules was determined as part of the actuarial valuation at the dates indicated. Additional information as of the latest actuarial valuation for GASB 25 purposes is as follows:

Valuation Date	Decmber 31, 2007
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent Open
Payroll Growth Rate for Amortization	3.00%
Remaining Amortization Period	30 years
Asset Valuation Method	3-Year Smoothed Market
Actuarial Assumptions:	
Investment Rate of Return*	8.25%
Projected Salary Increases*	3.5% - 8.0%
*Includes Inflation at	3.00%
Cost-of-Living Adjustments	3.00%

#### **Summary of Data Characteristics**

	December 31, 2005	December 31, 2006	December 31, 2007
Active Members			
Number	7,763	7,772	8,117
Total Annualized Earnings of Members as of 12/31 (000's) Average Earnings	\$322,763 41,577	\$334,949 43,097	\$359,369 44,274
Benefit Recipients			
Number	5,065	5,197	5,304
Total Annual Retirement Income (000's)	\$124,076	\$133,532	\$142,267
Total Annual Health Supplement (000's)	\$7,430	\$7,614	\$7,784
Average Total Annual Benefit	\$25,964	\$27,159	\$28,283
Inactive Members			
Number	748	980	1043*

\* The number of inactives on 12/31/2007 includes 576 members who have applied for a deferred pension and 467 other members who have terminated and still have contribution balances in the Fund.

Years of Service									
Age	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30 & Over	Totals
Under20	18	-	-	-	-	-	-	-	18
	361,970	-	-	-	-	-	-	-	361,97
20-24	121	107	-	-	-	-	-	-	22
	2,936,882	2,985,524	-	-	-	-	-	-	5,922,40
25-29	202	297	49	2	-	-	-	-	55
	6,365,475	9,905,538	1,703,824	68,198	-	-	-	-	18,043,03
30-34	168	311	194	67	2	-	-	-	74
	5,769,247	11,642,903	7,522,639	2,776,892	81,076	-	-	-	27,792,75
35-39	154	299	201	198	57	1	-	-	91
	5,038,717	11,607,552	8,053,412	8,462,671	2,702,541	50,475	-	-	35,915,36
40-44	141	309	252	247	144	137	13	-	1,24
	4,800,850	12,669,165	10,618,435	10,980,140	7,655,121	7,086,578	761,700	-	54,571,98
45-49	114	284	257	229	202	266	184	11	1,54
	4,092,952	11,390,440	11,076,622	10,423,537	10,618,417	15,011,487	9,971,819	564,954	73,150,22
50-54	89	201	211	222	151	235	211	50	1,37
	3,248,748	8,044,913	9,561,825	10,429,727	8,233,293	13,423,374	12,312,278	2,822,156	68,076,31
55-59	54	144	152	166	137	161	86	52	95
	2,156,859	6,561,603	7,326,316	7,830,215	7,328,668	8,928,471	5,070,544	2,969,373	48,172,04
60-64	9	66	77	70	60	56	36	25	39
	413,368	2,589,997	3,434,165	3,377,435	3,220,938	3,026,160	2,291,922	1,553,567	19,907,55
65&Over	5	24	34	27	26	20	11	11	15
	183,534	1,142,389	1,656,585	1,136,019	1,335,536	977,474	498,132	525,414	7,455,08
Totals	1,075	2,042	1,427	1,228	779	876	541	149	8,11
I UUIS	35,368,602	78,540,024	60,953,823	55,484,834	41,175,590	48,504,019	30,906,395	8,435,464	359,368,75

## Distribution of Active Members and Payroll by Age and Years of Service as of December 31, 2007

#### **Distribution of Benefit Recipients**

as of December 31, 2007

Age	Number	Annual Benefit*	Annual Average Benefit*
Under 50	109	1,592,752	14,612
50-54	362	12,858,535	35,521
55-59	883	34,129,477	38,652
60-64	994	30,935,166	31,122
65-69	796	20,672,468	25,970
70-74	694	16,221,760	23,374
75-79	589	12,086,584	20,521
80-84	432	7,960,331	18,427
85-89	301	4,253,824	14,132
90 & Over	144	1,556,711	10,810
Total	5,304	142,267,609	26,823

\* Does not include Health Benefit Supplement.

**SECTION M** EXPERIENCE TABLES

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## **EXPERIENCE TABLES**

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

		Experience for 2007						
Service Beginning of Year	Number	Expected Pay	Actual Pay	Ratio A/E				
Under 5	1,903	71,549,274	72,450,258	101.26%				
5-9	1,404	58,724,421	59,601,863	101.49%				
10-14	1,268	55,814,513	56,880,181	101.91%				
15-19	800	40,934,882	41,374,845	101.07%				
20-24	876	48,420,966	48,640,816	100.45%				
25-29	583	33,040,147	33,013,717	99.92%				
30 & Over	176	10,277,332	10,295,223	100.17%				
Total	7,010	\$ 318,761,535	\$ 322,256,903	101.10%				
Over 10 Years	3,703	\$ 188,487,840	\$ 190,204,782	100.91%				

		Experience for 2006/2007					
Service Beginning of Year	Number	Expected Pay	Actual Pay	Ratio A/E			
Under 5	3,447	128,195,977	128,660,109	100.36%			
5-9	3,000	121,941,941	123,807,134	101.53%			
10-14	2,465	106,735,334	108,970,796	102.09%			
15-19	1,586	80,111,124	81,410,096	101.62%			
20-24	1,847	98,739,927	100,297,774	101.58%			
25-29	1,132	62,450,444	63,102,853	101.04%			
30 & Over	323	18,278,483	18,432,915	100.84%			
Total	13,800	\$ 616,453,230	\$ 624,681,677	101.33%			
Over 10 Years	7,353	\$ 366,315,312	\$ 372,214,434	101.61%			

	2007 Retirement				2006/2007 Retirement			
Age	Actual	Expected	Ratio A/E		Actual	Expected	Ratio A/E	
46	-	-	N/A	ľ	_	-	N/A	
47	-	-	N/A		-	-	N/A	
48	-	0.60	0.00%		-	0.80	0.00%	
49	-	1.30	0.00%		1	2.10	47.62%	
50	8	13.40	59.70%		24	33.15	72.40%	
51	17	21.42	79.37%		33	37.24	88.61%	
52	13	19.25	67.53%		29	37.55	77.23%	
53	9	19.00	47.37%		27	35.10	76.92%	
54	17	18.45	92.14%		32	37.95	84.32%	
55	10	22.45	44.54%		23	44.70	51.45%	
56	14	20.86	67.11%		27	37.61	71.79%	
57	13	21.54	60.35%		32	44.54	71.85%	
58	12	19.04	63.03%		23	36.04	63.82%	
59	8	16.40	48.78%		23	29.84	77.08%	
60	10	21.47	46.58%		29	46.32	62.61%	
61	11	20.10	54.73%		22	36.34	60.54%	
62	7	14.84	47.17%		14	28.52	49.09%	
63	13	11.60	112.07%		21	24.70	85.02%	
64	4	11.29	35.43%		11	22.05	49.89%	
65	11	15.25	72.13%		15	27.90	53.76%	
66	8	8.65	92.49%		14	14.85	94.28%	
67	3	5.25	57.14%		10	10.40	96.15%	
68	3	3.90	76.92%		4	5.95	67.23%	
69	1	1.60	62.50%		3	4.15	72.29%	
70 & Over	6	40.00	15.00%		14	78.00	17.95%	
Total	198	347.66	56.95%		431	675.80	63.78%	
Total Under 70	192	307.66	62.41%		417	597.80	69.76%	

#### Analysis of Retirement Experience

## Analysis of Retirement Experience

## Age Groups

Age	2007 Retirements			2006/2007 Retirements			
Group	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E	
Under 55	64	93.42	68.51%	146	183.89	79.40%	
55-59	57	100.29	56.84%	128	192.73	66.41%	
60-64	45	79.30	56.75%	97	157.93	61.42%	
65-69	26	34.65	75.04%	46	63.25	72.73%	
70 & Over	6	40.00	15.00%	14	78.00	17.95%	
Total	198	347.66	56.95%	431	675.80	63.78%	
Total Under 70	192	307.66	62.41%	417	597.80	69.76%	

Years of	2007 Quits			2	lits	
Service	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
0-4	390	343.92	113.40%	878	656.88	133.66%
5-9	79	85.93	91.94%	219	188.72	116.05%
10-14	44	48.60	90.53%	102	95.26	107.07%
15-19	16	19.07	83.91%	34	38.24	88.90%
20-24	13	11.44	113.68%	24	24.70	97.17%
25-29	-	1.54	0.00%	1	3.46	28.90%
Total	542	510.49	106.17%	1,258	1,007.27	124.89%

#### Analysis of Turnover Experience

		2007 Deaths			2006/2007 Deaths			
Age	Actual	Actual Expected Ratio A/E			Actual	Expected	Ratio A/E	
20-24	-	0	0.00%		-	0	0.00%	
25-29	-	0	0.00%		-	0	0.00%	
30-34	-	0	0.00%		1	1	168.62%	
35-39	-	0	0.00%		-	1	0.00%	
40-44	1	1	98.53%		1	2	48.13%	
45-49	3	2	156.81%		6	4	156.85%	
50-54	4	3	143.48%		7	6	124.61%	
55-59	1	4	28.32%		3	7	43.72%	
60 and Over	1	4	24.34%		3	8	38.06%	
Total	10	14.31	69.90%		21	28.22	74.42%	

## Analysis of Active Mortality Experience

	,	2007 Disabilities			2006/2007 Disabilities			
Age	Actual	Expected	Ratio A/E		Actual	Expected	Ratio A/E	
20-24	-	0	0.00%		-	0	0.00%	
25-29	-	0	0.00%		-	0	0.00%	
30-34	-	0	0.00%		-	0	0.00%	
35-39	-	0	0.00%		1	1	150.83%	
40-44	2	1	241.37%		2	2	115.33%	
45-49	1	2	46.11%		3	4	68.32%	
50-54	2	3	68.03%		6	6	100.02%	
55-59	2	3	74.88%		5	5	93.17%	
60 and Over	-	1	0.00%		1	2	59.44%	
Total	7	9.98	70.16%		18	20.27	88.82%	

#### Analysis of Disability Experience

**TABLE 19** 

	2007 Experience			2006/2007 Experience		
Age	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
Under 60	6	5.82	103.09%	12	11.61	103.36%
60-64	10	9.19	108.86%	21	17.74	118.39%
65-69	12	13.47	89.12%	24	26.38	90.98%
70-74	14	17.08	81.98%	32	33.80	94.68%
75-79	20	24.34	82.18%	52	48.99	106.14%
80-84	16	27.28	58.66%	41	53.80	76.21%
85-89	29	25.05	115.79%	66	52.91	124.74%
90 & over	26	21.01	123.75%	42	39.62	106.00%
Total	133	143.22	92.87%	290	284.85	101.81%

#### Analysis of Retiree Mortality Experience\*

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

# **SECTION N** ACTUARIAL METHOD AND ASSUMPTIONS

## ACTUARIAL METHOD AND ASSUMPTIONS ENTRY AGE METHOD

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

The concept of this method is that funding of benefits for each employee should be effected as a, theoretically, level contribution (as a 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 employee. The ERF NC for the year is the total of individual normal costs determined for each active employee.

The Actuarial Accrued Liability (AAL) under this method is the theoretical asset balance such normal costs would have accumulated to date based on current 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 NC for that year plus an amount to amortize the UAAL over 30 years as a level percentage of pay.

## **ASSET METHOD**

The actuarial value of assets is equal to the expected actuarial value of assets adjusted for a threeyear 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 ASSUMPTIONS (12/31/2007)

*Rate of Investment Return.* For all purposes under the system the rate of investment return is assumed to be 8.25% per annum, net of investment expenses.

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

Years of Service	Merit, Promotion, Longevity		General		Total	_
0	4.50	%	3.50	%	8.00	%
1	4.00		3.50		7.50	
2	3.25		3.50		6.75	
3	2.00		3.50		5.50	
4	1.75		3.50		5.25	
5	1.50		3.50		5.00	
6	1.00		3.50		4.50	
7	0.75		3.50		4.25	
8	0.50		3.50		4.00	
9 & Over	0.00		3.50		3.50	

#### Mortality:

<u>Disabled Lives</u>: 1965 Railroad Retirement Board Disabled Annuitants Mortality Table (without select rates). For females, the rates are multiplied by 60%.

Sample rates follow (rate per 1,000):

	<b>Disability Mortality Rate</b>				
Age	Male	Female			
20	44	26			
30	44	26			
40	44	26			
50	45	27			
60	53	32			
70	75	45			
80	130	78			
90	240	144			

#### Other Benefit Recipients:

- a. Males 1994 Uninsured Pension Mortality Table for males, set forward two years.
- b. Females 1994 Uninsured Pension Mortality Table for females, base table rates

multiplied by 125% for ages less than 85 and multiplied by 135% for ages 85 and up. Sample rates follow (rate per 1,000).

Female
0.5
0.5
1.0
1.9
6.0
18.5
53.0
168.8

#### Mortality:

#### Active Members:

a. Males – 1994 Uninsured Pension Mortality Table for males, base table rates multiplied by 87%.

b. Females – 1994 Uninsured Pension Mortality Table for females, base table rates multiplied by 125%.

Sample rates follow (rate per 1,000).

	Mortality Rate				
Age	Male	Female			
30	0.7	0.5			
40	1.0	1.0			
50	2.4	1.9			
60	7.5	6.0			
70	22.2	18.5			
80	58.0	53.0			
90	143.1	156.3			

15% 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
20	0.2
30	0.3
40	0.6
50	2.4
60	6.0

35% of disabilities are assumed to be service related.

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

Age	Male		Female		
	First Year Eligible	Thereafter	First Year Eligible	Thereafter	
48-49	100	100	100	100	
50	550	550	400	400	
51	420	420	500	500	
52	350	300	500	500	
53	350	300	350	350	
54	450	300	300	300	
55	450	350	400	400	
56	450	280	300	300	
57	450	280	280	280	
58-59	400	280	280	280	
	Service < 18 yrs.	Service 18 yrs.+	Service < 18 yrs.	Service 18 yrs. +	
60	100	280	150	400	
61	110	300	150	350	
62	160	300	150	250	
63	140	300	150	250	
64	200	300	70	170	
65	250	500	300	300	
66-69	250	400	200	300	
70	1,000	1,000	1,000	1,000	

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

	Terminations
Years of Service	(per 1,000)
0	
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 0.00% assumption of termination for members eligible for retirement.

*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: 80% of members are assumed to be married.

*Vacation Leave Conversions:* Members with 20 to 29 years of service are assumed to convert unused vacation leave to 1 month of service. Members with 30 or more years of service are assumed to convert unused vacation leave to 2 months 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, gross pay is used unless gross pay is less than 90% of the member's rate of compensation. If gross pay is less than 90% of the member's rate of compensation, the member's valuation salary is set to the member's rate of compensation.

*Form of Payment:* It is assumed that 43.75% of the married participants will elect a Joint & 50% Survivor form of payment and that 56.25% of the married participants will elect a Joint & 100% Survivor form of payment.

SECTION O

SUMMARY OF BENEFIT PROVISIONS

## SUMMARY OF BENEFIT PROVISIONS

## Employees' Retirement Fund of the City of Dallas as of December 31, 2007

Membership	An employee becomes a member upon permanent employment and contributes to the Retirement 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 an employee of the City of Dallas and while making contributions to the Fund.
<b>Retirement Pension</b>	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 78.

## **Summary of Key Provisions**

	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 \$125 health supplement (prorated for service less than 5 years).
	Form of Payment: An unreduced pension 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 commencing at age 60 or at age 55, if employment commenced prior to May 9, 1972, with at least five years of credited service, and accumulated contributions are left on deposit with the Fund.
	Monthly Benefit: The deferred retirement 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 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 Key Provisions**

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.
<b>Return of Accumulated</b> <b>Contributions</b>	A member at the time of termination is entitled to be paid accumulated contributions without interest.
Cost-of-Living Adjustments	A cost-of-living adjustment to the base pension shall be made based on the greater of:
	The percentage of change in the price index for October of the current year over October of the previous year up to 5%, or
	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%.