
**The Report of the
December 31, 2003 Actuarial Valuation
of the Employees' Retirement Fund
of the City of Dallas**



Gabriel, Roeder, Smith & Company



Actuaries & Consultants



GABRIEL, ROEDER, SMITH & COMPANY

Consultants & Actuaries

5605 N. MacArthur Blvd. • Suite 870 • Irving, Texas 75038-2631 • 469-524-0000 • fax 469-524-0003

May 12, 2004

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, 2003.

This valuation provides information on the funding status of ERF. In addition, it includes a determination of the actuarially calculated contribution level for the 2004 calendar year.

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 unaudited.

The actuarial assumptions and cost method are those used in the prior actuarial valuation of ERF.

To the best of my 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 with significant experience valuing public employee retirement systems.

Respectfully submitted,

A handwritten signature in black ink, appearing to read 'Norman S. Losk'.

Norman S. Losk, F.S.A.
Senior Consultant

A handwritten signature in black ink, appearing to read 'Lewis Ward'.

Lewis Ward
Consultant

Table of Contents

Page

Summary of the Valuation

1	Purposes of the Actuarial Valuation
1	Report Highlights
2	Total Actuarial Contribution
2	Funding Process
2	Actuarial Assumptions
2	ERF Benefits
3	Experience During 2003
4	Asset Information
4	Funding Status
5	GASB Disclosure

Appendix A Asset Information

6	Table 1 - Net Assets Available for Benefits
7	Table 2 - Change in Assets Available for Benefits
8	Table 3 - Development of Actuarial Value of Assets

Appendix B Membership Data

9	Table 4 - Summary of Data Characteristics
10	Table 5 - Distribution of Active Members and Payroll
11	Table 6- Distribution of Benefit Recipients

Appendix C Actuarial Determinations

12	Table 7 - Summary of Actuarial Values
13	Table 8 - Development of 2004 Actuarial Contribution
14	Table 9 - Analysis of Change in Unfunded Actuarial Accrued Liability
15	Table 10 - Analysis of Actuarial Gains and Losses in 2003

Appendix D Information for GASB No. 25 & No. 27

16	Table 11 - Schedule of Funding Status
17	Table 12 - Schedule of Employer Contributions
18	Table 13 - Information for Trend Data Notes

Appendix E Analysis of 2003 Experience

19	Table 14 – Pay Experience
20	Table 15 – Retirement Experience
21	Table 15a – Retirement Experience – Age Groups
22	Table 16 – Turnover Experience
23	Table 17 – Active Mortality Experience
24	Table 18 – Disability Experience
25	Table 19 – Retiree Mortality Experience

Appendix F Actuarial Method and Assumptions

26	Actuarial Method
27-33	Actuarial Assumptions

31-33	<i>Appendix G Summary of Benefit Provisions</i>
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Summary of the 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, 2003.

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 calendar year 2004.

Report Highlights

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

	(\$ in 000's)	
	2003	2004
Contribution Rates (% of Payroll)		
Normal Cost (including administrative expense)	17.12%	17.37%
Total Actuarial Contribution Rate	27.03%	29.55%
Total Support Rate	17.50%	17.50%
Shortfall of Actuarial Contribution under Support Rate	9.53%	12.05%
Total Projected Actuarial Contribution	\$86,429	\$92,278
 Funding Status	12/31/02	12/31/03
Actuarial Accrued Liability	\$2,399,569	\$2,489,071
Actuarial Value of Assets	1,863,701	1,843,099
Unfunded Actuarial Accrued Liability	535,868	645,972

Total Actuarial Contribution

The Total Actuarial Contribution Rate developed in this actuarial valuation is 29.55% of active member payroll. This rate is 2.52% higher than that developed in the prior valuation.

Funding Process

Based on the work of the Joint ERF/City Working Group that has been ratified by both the ERF membership and the City Council, a new funding process commenced October 1, 2000. As of that date, the City contribution rate increased from 8.50% of pay to 9.75% and the member contribution rate increased from 5.00% to 5.75%. On October 1, 2001, the City contribution rate increased to 11.00% of pay and the member contribution rate increased to 6.50%.

At its January 2003 meeting, the Board acted to change the October 2003 date to October 2005. However, this action has not as yet been addressed by the City Council, pending disposition of the report of the Employees' Retirement Fund Study Committee.

Actuarial Assumptions

The actuarial method and actuarial assumptions used in this valuation are identical to those disclosed in the prior valuation report. During early 2004, the Employees' Retirement Fund Study Committee has been reviewing the operations of ERF. Among its recommendations is a change in the economic assumptions used in the actuarial valuations of the system. While it is anticipated that the Committee recommendation will be to change these assumptions effective for the actuarial valuation as of December 31, 2004, if the Board adopts this new set of assumptions, we will prepare a supplement to this valuation which will include the results of this valuation using those assumptions.

ERF Benefits

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

Experience During 2003

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 loss in 2003. This year's overall ERF actuarial loss amounted to about \$68 million.

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

	<u>2000</u>	<u>2001</u>	<u>2002</u>	<u>2003</u>
1) Actuarial (Gain)/Loss on Assets	(\$20.00)	\$113.80	\$279.54	\$118.79
2) Actuarial (Gain)/Loss on Liabilities	51.40	109.90	(21.08)	(51.16)
3) Total Actuarial (Gain) or Loss (1+2)	<u>31.40</u>	<u>223.70</u>	<u>258.46</u>	<u>67.63</u>

There was an actuarial loss of nearly \$119 million from investment return. For the first time in four years, the fund earned positive returns at market value. The rate of return at actuarial value for 2003 was 2.03%. This result was less than the 8.50% assumption due to significant deferred asset losses due to the prior two years. When these losses are combined with this year's market gain, the net result still a loss from investment returns.

In addition, during 2003, there was an actuarial gain of about \$51 million from demographic assumptions and non-investment economic assumptions. This gain includes a gain from salary increases of over \$52 million.

It should be noted that the actuarial gain from liabilities amounts to only about 2.25% of actuarial accrued liabilities at the beginning of the year.

Asset Information

The market value of the assets of the fund, which are available for benefits, has not increased substantively on the last three years from \$1,908 million as of December 31, 2000 to \$1,910 million as of December 31, 2003. The markets, which turned downward significantly in the prior three years, reversed to produce a significant gain in the calendar year.

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 3 for the determination of the actuarial value of assets.

The actuarial value of assets has been reduced from \$1,864 million to \$1,843 million during 2003. The rate of investment return for 2003 on actuarial value of assets was 2.03% compared to -5.37% in 2001, 2.76% in 2000 and 9.6% in 1999. The detailed determinations of asset values utilized in this valuation and asset growth in the last year are set out in Appendix A.

Funding Status

The funding status of ERF is measured by the Funding Ratio and the Unfunded Actuarial Accrued Liability (UAAL). The Funding 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 funding 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 funding ratio fell from 98.0% at December 31, 2000 to 88.6% at December 31, 2001 to 77.7% as of December 31, 2002, and to 74.05% as of December 31, 2003.

The UAAL increased from \$40 million at December 31, 2000 to \$259 million at December 31, 2001 to \$536 million at December 31, 2002, to \$646 million at December 31, 2003.

GASB Disclosure

GASB Statements Numbers 25 and 27 set out the current accounting standards for ERF. Tables 11, 12, and 13 in Appendix D provide footnotes and/or Required Supplemental Information tables required to be disclosed by those statements.

Appendices

Appendix A

Asset Information

TABLE 1
Net Assets Available for Benefits
(\$ in 000's)

	<u>December 31, 2002</u>	<u>December 31, 2003</u>
Assets		
Cash & Short-Term	\$206,206	\$58,783
Receivables		
Accrued Investment Income	9,004	8,858
Securities Sold	13,043	16,595
Employer Contribution	660	997
Employee Contribution	390	589
	<u>23,097</u>	<u>27,039</u>
Investments		
Index Funds	491,277	495,721
Fixed Income	501,220	543,411
Equities	569,906	857,730
Real Estate	0	0
Venture Capital	507	354
	<u>1,562,910</u>	<u>1,897,216</u>
Total Assets	1,792,213	1,983,038
Liabilities		
Accounts Payable	4,295	5,029
Investment Transactions	233,125	68,260
	<u>237,420</u>	<u>73,289</u>
Net Assets Available For Benefits	<u><u>1,554,793</u></u>	<u><u>1,909,749</u></u>

TABLE 2
Change in Assets Available for Benefits
Fiscal Year Ending December 31, 2003
(\$ in 000's)

	<u>2002</u>	<u>2003</u>
1 Assets Available at Beginning of Year	\$1,769,692	\$1,554,793
Adjustment	217	1
	<u>1,769,909</u>	<u>1,554,794</u>
 2 Revenues		
a. Employer Contributions	36,606	34,729
b. Employee Contributions	21,771	20,580
c. Investment Income (includes realized gains)	43,354	42,729
d. Investment Expense	(4,855)	(5,502)
e. Unrealized Capital Gains (Losses)	(210,331)	374,416
f. Other	153	1,129
Total Revenues	<u>(113,302)</u>	<u>468,081</u>
 3 Expenses		
a. Benefits	97,363	108,402
b. Refunds	2,551	2,605
c. Administration Expense	1,900	2,119
Total Expense	<u>101,814</u>	<u>113,126</u>
 4 Assets Available at End of Year (1 + 2 - 3)	<u><u>1,554,793</u></u>	<u><u>1,909,749</u></u>

TABLE 3
Development of Actuarial Value of Assets
As of December 31, 2003
(\$ in 000's)

	<u>Market Value</u>	<u>Actuarial Value</u>
1 Value of Assets @ 12/31/2002	\$1,554,794	\$1,863,701
2 Non-Investment Cash Flows during 2003		
a. Employer Contributions	34,729	34,729
b. Employee Contributions	20,580	20,580
c. Benefits (including refunds)	(111,007)	(111,007)
d. Administrative Expenses	(2,119)	(2,119)
Total	<u>(57,817)</u>	<u>(57,817)</u>
3 Expected Investment Returns @ 8.5%	156,007	156,007
4 Expected Assets @ 12-31-2003 (1 + 2 + 3)	1,652,984	1,961,891
5 Actual Assets Available for Benefits	1,909,749	
6 Gain/ (Loss) From Investment Returns (5 - 4)	256,765	
7 Recognition of Gains / (Losses)		
a. One-third of Gain/(Loss) (33% of 6)		85,588
b. One-third of 2002 Gain/(Loss)		(113,701)
c. One-third of 2001 Gain/(Loss)		(90,679)
Total		<u>(118,792)</u>
8 Actuarial Value of Assets @ 12-31-2003 (4+7)		<u><u>1,843,099</u></u>

Appendix B

Membership Data

TABLE 4
Summary of Data Characteristics

	<u>December 31, 2001</u>	<u>December 31, 2002</u>	<u>December 31, 2003</u>
Active Members			
Number	8,093	7,588	7,538
Total Annualized Earnings of Members as of 12/31 (000's)	\$335,965	\$312,130	\$306,243
Average Earnings	41,513	41,135	40,627
Benefit Recipients			
Number	4,389	4,608	4,805
Total Annual Retirement Income (000's)	\$82,913	\$94,670	\$103,762
Total Annual Health Supplement (000's)	\$6,583	\$6,829	\$7,092
Average Total Annual Benefit	\$20,391	\$22,027	\$23,071
Inactive Members			
Number	412	457	501

TABLE 5
Distribution of Active Members and Payroll by Age and Years of Service
as of December 31, 2003

Age	Years of Service								Totals
	Under 1	1-4	5-9	10-14	15-19	20-24	25-29	30 & Over	
Under20	1	-	-	-	-	-	-	-	1
	4,575	-	-	-	-	-	-	-	4,575
20-24	39	43	5	-	-	-	-	-	87
	797,158	1,126,332	135,679	-	-	-	-	-	2,059,169
25-29	91	223	114	3	-	-	-	-	431
	2,165,967	6,753,023	3,598,212	91,076	-	-	-	-	12,608,278
30-34	135	257	272	61	4	-	-	-	729
	3,249,133	8,258,258	9,368,850	2,201,214	157,547	-	-	-	23,235,002
35-39	94	283	305	191	115	11	-	-	999
	2,207,870	9,479,070	11,107,319	8,079,374	5,212,725	461,938	-	-	36,548,296
40-44	80	268	321	207	269	196	13	-	1,354
	2,152,438	9,276,547	12,090,479	8,928,295	12,888,382	9,001,833	677,803	-	55,015,777
45-49	62	229	282	184	269	305	144	13	1,488
	1,468,521	8,836,264	10,742,208	8,441,370	13,261,582	15,350,017	7,174,497	754,009	66,028,468
50-54	56	159	235	154	223	271	154	49	1,301
	1,353,486	6,220,968	8,984,137	7,079,010	10,682,746	13,915,571	8,122,035	2,477,911	58,835,864
55-59	27	87	132	117	169	142	61	39	774
	675,974	3,375,211	5,541,623	5,231,049	8,027,853	7,233,884	3,331,199	2,344,075	35,760,868
60-64	8	48	72	59	61	31	12	13	304
	221,305	1,878,882	2,996,474	2,471,574	2,752,159	1,377,281	512,066	809,052	13,018,793
65&Over	2	9	11	12	10	9	9	8	70
	41,596	388,498	484,596	494,859	568,193	442,995	335,890	370,855	3,127,482
Totals	595	1,606	1,749	988	1,120	965	393	122	7,538
	14,338,023	55,593,053	65,049,577	43,017,821	53,551,187	47,783,519	20,153,490	6,755,902	306,242,572

TABLE 6
Distribution of Benefit Recipients
as of December 31, 2003

Age	Number	Annual Benefit*	Annual Average Benefit
Under 50	127	1,553,054	12,229
50-54	424	14,493,276	34,182
55-59	686	22,495,648	32,792
60-64	737	17,626,475	23,917
65-69	698	14,719,497	21,088
70-74	672	12,512,991	18,621
75-79	563	9,581,525	17,019
80-84	474	6,643,718	14,016
85-89	299	3,213,838	10,749
90 & Over	125	921,868	7,375
Total	4,805	103,761,891	21,595

** Does not include Health Supplement.*

Appendix C

Actuarial Determinations

TABLE 7
Summary of Actuarial Values
As of December 31, 2003
(\$ 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	\$ 1,376,017	\$ 1,119,170	\$ 37,325	12.12%
b. Death	46,668	28,396	2,754	0.90%
c. Disability	16,063	7,850	1,199	0.38%
d. Termination	82,104	23,244	8,405	2.73%
e. Health Subsidy	42,869	32,597	1,692	0.55%
Total	1,563,720	1,211,257	51,375	16.68%
2 Benefit Recipients	1,233,061	1,233,061		
3 Other Inactive	44,753	44,753		
4 Total Actuarial Values of Benefits	2,841,534	2,489,071	51,375	16.68%
5 Actuarial Value of Assets		1,843,099		
6 Unfunded Actuarial Accrued Liability (4 - 5)		645,972		
7 Funding Ratio		74.05%		

* APV – Actuarial Present Value

TABLE 8
Development of 2004 Actuarial Contribution
(\$ in 000's)

	\$	% of Pay
1 Actuarial Requirement		
a. Payment to Amortize UAAL over 30 years	\$38,782	12.18%
b. Normal Cost for 2004	51,375	16.68%
c. Administrative Expense	2,119	0.69%
Total	\$92,276	29.55%
 2 Contribution of Support Rate	 \$35,034	 11.00%
	20,702	6.50%
	\$55,736	17.50%
 3 Excess of Actuarial Requirement over Support Rate	 \$36,540	 12.05%

TABLE 9
Analysis of Change in Unfunded
Actuarial Accrued Liability
For the Year Ending December 31, 2003
(\$ in 000's)

1 UAAL as of December 31, 2002		\$535,868
2 Expected Change in UAAL during 2003		
a. Normal Cost for 2003	\$52,357	
b. Contributions 2003	(55,309)	
c. Interest adjustments on 1, 2a, & 2b to Year End @ 8.5%	45,423	
d. Expected change in UAAL	42,471	
3 Net Actuarial (Gains) & Losses		67,632
4 UAAL as of December 31, 2003		645,972

TABLE 10
Analysis of Actuarial Gains and Losses
For 2003
(\$ in 000's)

	2003
Investment Return	\$ 118,822
Salary Increase	(52,461)
Age and Service Retirement	12,515
General Employment Termination	883
Disability Incidence	517
Active Mortality	(750)
Benefit Recipient Mortality	(8,471)
Other	(3,393)
 Total Actuarial (Gain) Loss	 \$ 67,632

Appendix D
Information for GASB No. 25 & 27

TABLE 11
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)
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%

* Projected to following year.

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

TABLE 12
Schedule of Employer Contributions
(\$ in 000's)

Year	Total ARC*	Member Contributions	Net City ARC	Actual City Contributions	City Cont. as Percent 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	92,276	20,298 **	71,978 **		

* 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 retirement systems.

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

TABLE 13
Information for Trend Data Notes

Actuarial Cost Method	Entry Age
Amortization Method	Level Percent Open
Remaining Amortization Period (Years)	30
Asset Valuation Method	3-Year Smoothed Market
Actuarial Assumptions:	
Investment Rate of Return*	8.50%
Projected Salary Increases*	4.5% - 11.5%
Cost-of-Living Adjustments	4.00%

** Includes Inflation at 4.0%.*

Appendix E

Analysis of 2003 Experience

Table 14
Pay Experience for Employees who are Active at
Beginning and End of Year
Analyzed by Years of Service

Service Beginning of Year	Experience for 2003				Experience for 2001/2003			
	Number	Expected Pay	Actual Pay	Ratio A/E	Number	Expected Pay	Actual Pay	Ratio A/E
Under 5	1,999	\$ 72,185,026	\$ 66,647,838	92.33%	6,948	\$ 235,596,078	\$ 235,692,553	100.04%
5-9	1,557	62,699,437	59,496,711	94.89%	4,324	170,897,172	169,261,828	99.04%
10-14	923	43,621,034	41,742,657	95.69%	2,843	132,581,591	130,999,065	98.81%
15-19	1,134	56,539,313	54,104,654	95.69%	3,800	184,426,840	182,914,056	99.18%
20-24	870	45,338,308	43,385,983	95.69%	2,542	129,099,873	127,185,374	98.52%
25-29	320	17,141,527	16,403,387	95.69%	1,048	55,408,072	55,365,110	99.92%
30 & Over	75	4,303,597	4,118,281	95.69%	238	13,365,412	13,288,242	99.42%
Total	6,878	\$ 301,828,242	\$ 285,899,511	94.72%	21,743	\$ 921,375,037	\$ 914,706,227	99.28%
Over 10 Years	3,322	\$ 166,943,779	\$ 159,754,962	95.69%	10,471	\$ 514,881,788	\$ 509,751,846	99.00%

TABLE 15
Analysis of Retirement Experience

Age	2003 Retirement			2001/2003 Retirement		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
46	0	-	N/A	1	-	N/A
47	1	-	N/A	3	-	N/A
48	0	0.94	0.00%	5	7.51	66.59%
49	11	6.27	175.41%	29	15.39	188.39%
50	21	17.50	120.00%	75	54.63	137.30%
51	18	9.58	187.89%	48	42.18	113.80%
52	10	9.70	103.09%	49	46.48	105.42%
53	19	17.68	107.47%	52	54.32	95.74%
54	21	21.54	97.49%	68	57.23	118.81%
55	24	15.20	157.94%	64	46.81	136.73%
56	16	18.55	86.24%	33	40.77	80.93%
57	9	12.00	74.99%	34	34.59	98.31%
58	11	9.70	113.36%	30	31.28	95.91%
59	20	11.89	168.15%	49	32.43	151.11%
60	17	23.70	71.73%	53	68.68	77.17%
61	12	11.25	106.67%	30	29.25	102.56%
62	10	7.58	132.01%	28	22.66	123.59%
63	3	4.05	74.07%	23	16.20	141.98%
64	7	2.85	245.61%	22	11.33	194.17%
65	5	2.09	239.23%	19	12.34	153.94%
66	4	1.90	210.53%	19	10.26	185.28%
67	2	1.52	131.58%	7	6.08	115.13%
68	0	1.33	0.00%	1	4.03	24.81%
69	0	0.38	0.00%	2	3.04	65.79%
70 & Over	5	17.00	29.41%	20	75.00	26.67%
Total	246	224.20	109.72%	764	722.47	105.75%
Total Under 70	241	207.20	116.31%	744	647.47	114.91%

TABLE 15a
Analysis of Retirement Experience
Age Groups

Age Group	2003 Retirements			2001/2003 Retirements		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
Under 55	101	83.21	121.38%	330	277.73	118.82%
55-59	80	67.35	118.79%	210	185.88	112.98%
60-64	49	49.42	99.14%	156	148.11	105.33%
65-69	11	7.22	152.35%	48	35.75	134.28%
70 & Over	5	17.00	29.41%	20	75.00	26.67%
Total	246	224.20	109.72%	764	722.47	105.75%
Total Under 70	241	207.20	116.31%	744	647.47	114.91%

TABLE 16
Analysis of Turnover Experience

Years of Service	2003 Quits			2001/2003 Quits		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
0-4	290	277.12	104.65%	841	941.91	89.29%
5-9	73	96.01	76.04%	220	223.83	98.29%
10-14	34	31.64	107.46%	91	96.04	94.75%
15-19	21	27.25	77.07%	87	90.41	96.23%
20-24	11	8.66	127.01%	54	25.26	213.77%
25-29	1	2.23	44.82%	23	7.06	325.73%
Total	430	442.91	97.09%	1,316	1,384.51	95.05%

TABLE 17
Analysis of Active Mortality Experience

<u>Age</u>	2003 Deaths			2001/2003 Deaths		
	<u>Actual</u>	<u>Expected</u>	<u>Ratio A/E</u>	<u>Actual</u>	<u>Expected</u>	<u>Ratio A/E</u>
20-24	-	0.06	0.00%	-	0.26	0.00%
25-29	-	0.24	0.00%	1	0.81	123.52%
30-34	-	0.40	0.00%	-	1.33	0.00%
35-39	-	0.86	0.00%	1	2.80	35.72%
40-44	-	1.78	0.00%	3	5.55	54.04%
45-49	5	3.10	0.00%	6	9.55	62.80%
50-54	6	4.23	141.93%	9	12.74	70.66%
55-59	2	3.52	56.78%	7	10.30	67.95%
60 and Over	2	2.35	85.05%	4	7.53	53.11%
Total	15	16.55	90.65%	31	50.88	60.93%

TABLE 18
Analysis of Active Disability Experience

Age	2003 Disabilities			2001/2003 Disabilities		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
20-24	-	0.01	0.00%	-	0.05	0.00%
25-29	-	0.09	0.00%	-	0.28	0.00%
30-34	-	0.21	0.00%	-	0.65	0.00%
35-39	-	0.48	0.00%	-	1.50	0.00%
40-44	2	1.24	161.69%	4	3.74	107.04%
45-49	-	2.63	0.00%	2	7.89	25.34%
50-54	4	3.59	111.37%	11	10.44	105.35%
55-59	4	2.57	155.55%	6	7.29	82.29%
60 and Over	1	0.00	N/A	2	0.00	N/A
Total	11	10.82	101.62%	25	31.84	78.51%

TABLE 19
Analysis of Retiree Mortality Experience

Age	2003 Experience			2001/2003 Experience		
	Actual	Expected	Ratio A/E	Actual	Expected	Ratio A/E
Under 60	21	19.50	107.72%	34	27.45	123.85%
60-64	16	15.77	101.47%	34	29.44	115.48%
65-69	31	22.97	134.98%	68	46.84	145.18%
70-74	27	25.30	106.72%	77	62.75	122.72%
75-79	44	37.13	118.49%	98	81.07	120.88%
80-84	29	28.10	103.21%	108	82.57	130.80%
85-89	13	18.28	71.13%	67	55.27	121.23%
90 & over	3	4.61	65.04%	45	30.66	146.78%
Total	184	171.65	107.20%	531	416.05	127.63%

Appendix F

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.

ACTUARIAL ASSUMPTIONS (ADOPTED MAY, 2001)

Rate of Investment Return. For all purposes under the system the rate of investment return is assumed to be 8.5% 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	7.50	%	4.50	%	12.00	%
1	6.50		4.50		11.00	
2	5.00		4.50		9.50	
3	3.00		4.50		7.50	
4	2.75		4.50		7.25	
5	2.50		4.50		7.00	
6	1.50		4.50		6.00	
7-8	0.50		4.50		5.00	
9 & Over	0.00		4.50		4.50	

For the purpose of amortizing the UAAL, the payroll of the entire system is assumed to increase at 4% each year.

Mortality:

Disabled Lives: 85% of the 1965 Railroad Retirement Board Disabled Annuitants Mortality Table (ultimate rates). A sample follows (rate per 1,000):

Age	Disability Mortality Rate
20	37
30	37
40	37
50	39
60	45
70	63
80	110
90	204

ACTUARIAL ASSUMPTIONS

Other Benefit Recipients: A table based on the Unisex Pension Mortality Table for 1984 with female ages set back 4 years with the following adjustments:

<u>Age</u>	<u>Male</u>	<u>Female</u>
0-55	0.750	0.700
56-59	Grade to .900	0.700
60-77	0.900	0.850
78-80	Grade to .825	0.850
80-99	0.825	1.000
100 and Over	1.000	1.000

Sample Rates follow (rate per 1,000):

<u>Age</u>	<u>Mortality Rate</u>	
	<u>Male</u>	<u>Female</u>
30	0.80	0.80
40	1.60	1.10
50	4.20	2.60
60	12.40	8.40
70	31.30	21.10
80	67.00	57.80
90	150.50	132.20

Active Members: A table based on the Unisex Pension Mortality Table for 1984 with female ages set back 4 years. The following adjustments apply to those rates:

<u>Age</u>	<u>Male</u>	<u>Female</u>
0-69	70%	50%
70-99	85	75
100+	100	100

Actuarial Assumptions

Sample rates follow (rate per 1,000):

Age	Mortality Rate	
	Male	Female
30	0.8	0.6
40	1.5	0.8
50	3.9	1.9
60	9.9	4.9
70	29.5	18.6
80	69.1	43.3
90	155.1	99.1

Disability: A 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

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

Age	First Year Eligible	Thereafter
48-49	313	188
50	500	375
51-54	500	313
55-59	438	313
60	263	250
61-64	225	150
65-69	225	188
70	1,000	1,000

Actuarial Assumptions

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	192
1	145
2	130
3	120
4	112
5	75
6	70
7	62
8-9	52
10-14	35
15-19	25
20 and Over	10

Refunds of Contributions: Vested members terminating before retirement who elect a refund of contributions (per 1,000).

<u>Age</u>	<u>Service</u>			
	<u>5 – 9</u>	<u>10 – 14</u>	<u>15 – 19</u>	<u>20+</u>
20-30	1,000	1,000	N/A	N/A
31-40	950	900	600	0
41-50	800	650	400	0
51-60	700	450	0	0

Operational Expenses: The amount of estimated administrative expenses expected in the next year is supplied by ERF staff and incorporated in the Normal Cost.

Marital Status: 80% of members are assumed to be married.

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

APPENDIX G
Summary of Benefit Provisions

SUMMARY OF KEY PROVISIONS
Employees' Retirement Fund of the City of Dallas
as of December 31, 2001

Membership An employee becomes a member upon permanent employment and contributes to the Retirement Fund.

Contributions Member: 5% of compensation, increasing to 5.75% effective October 1, 2000, and 6.50% effective October 1, 2001.

City: The City contributes an amount not less than the amount contributed by its employees, currently 8.5% of member wages. This rate will increase to 9.75% effective October 1, 2000, and 11.00% effective October 1, 2001.

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.

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.
- d. Attainment of age 50, if the sum of an active member's age and credited service is at least 78.

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.

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 terminations 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%.

