

PUBLIC SCHOOL RETIREMENT SYSTEM  
OF THE SCHOOL DISTRICT  
OF KANSAS CITY, MISSOURI  
ACTUARIAL VALUATION  
AS OF JANUARY 1, 2004

OCTOBER  
2004

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SECTION 1  
REPORT OF THE ACTUARY

PURPOSE OF THE REPORT

This report is submitted in accordance with Section 169.291-14 Revised Statutes of Missouri (R.S. Mo.) 1986 and amendments which require the actuary to make an annual valuation of the assets and liabilities of the System. The purpose of the actuarial valuation is twofold: (1) to determine the employers' annual required contribution and (2) to develop information to measure the relative financial condition of the System.

The employers' required annual contribution to the Retirement System is computed in accordance with the principles of GASB Statement No. 25 and generally accepted actuarial standards. The amount of the annual required contribution is stated in Section 2 of this report. Details regarding the computation of the contribution are in Section 4. A description of the actuarial cost method and assumptions appears in Section 3. A summary of provisions of the current law upon which this report is based may be found in Exhibit A.

Information concerning the financial condition and factors affecting it will be found throughout the report. There is no generally accepted single measure or standard for determining whether or not a retirement system is "actuarially sound." The financial health of a retirement system is measured best on a relative basis. Results are compared over a period of years to determine whether adequate progress is being made in the funding of the System's liabilities. Another relative measure is the stability of the contribution rate, with recognition for changes in funding requirements due to changes in benefit provisions. The actuarial balance sheet also provides an indication of the relative financial condition of the Plan.

COMMENTS

This report is based on the Retirement System's benefits, assets and membership as of January 1, 2004. It reflects an \$800 payment as of February, 2005 as a 13th check supplement for eligible retired members and a 2.3% COLA effective January 1, 2005 for members who retired prior to January 1, 2004, payable beginning February 1, 2005. The Board's current policy is to grant COLA's annually up to a 100% cumulative increase, provided statutory safeguards are met. The current funding level will only provide a cumulative maximum of 21%, so the results in this report assume a cumulative maximum of 21%, not 100%. This is a decrease from the prior valuation, which assumed a 22% cumulative maximum.

Actuarial experience for 2003 was moderately favorable. However, the increase in the number of members resulted in an increase in the actuarially required contribution rate from the prior

year. The annual required contribution rate for the 2004 Plan Year increased to 6.61% of covered payroll from 6.52% for the 2003 Plan Year. The 2004 rate is below the statutory 7.50% which became effective January 1, 1999. A substantial number of records in the census data used for the actuarial valuation contained inconsistent or incorrect information related to status and/or compensation. Adjustments were made where it appeared necessary to provide information which would provide a more accurate basis for the actuarial valuation. The effect of these adjustments was not quantified, but may account for part of the increase in the required contribution.

Under the actuarial funding method used to determine the contribution, actuarial gains (or losses) result in a decrease (or increase) in the Unfunded Actuarial Accrued Liability (UAAL). Actuarial gains (or losses) result from differences between the actual experience of the System and the expected experience projected by the actuarial assumptions. The assumptions are based on the long-term expected experience of the System. Actuarial gains (or losses) reflect short-term deviations between actual and expected experience. Since the UAAL is redetermined on an annual basis, the contribution required to amortize the UAAL will usually fluctuate from year to year.

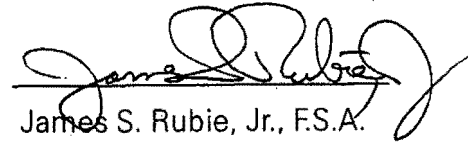
The funded status of the System is highly leveraged with respect to the UAAL. It is increased to a negative \$22,485,404 on January 1, 2004 as compared to a negative \$16,566,697 on January 1, 2003. Investment experience was unfavorable for 2003. The actuarial value of assets had a 6.22% rate of return or a loss of \$12,448,367. Experience from non-investment sources, including the reduction in the cumulative COLA maximum, was favorable and resulted in an overall net gain of \$16,068,109. Modest percentage deviations from expected increases in the present value of benefits or assets, resulting from favorable or unfavorable experience, can result in significant decreases or increases in the UAAL. Thus, with a system as well funded as this System, significant fluctuations in the UAAL can be expected.

The annual employer required contribution rate is 6.61% of covered payroll, which is below the statutory rate of 7.50%. As is the case with the UAAL, the annual required rate is subject to fluctuation as the result of deviations in experience. The rate could increase significantly should there be a significant change in the active membership of the System.

Note that the five-year experience analysis is due for the period ending December 31, 2003. Any revisions to the actuarial assumptions should be reflected in the next actuarial valuation.

In our opinion, the Retirement System has been and will continue to be funded on a sound actuarial basis provided the required statutory contributions are made.

Respectfully submitted,



James S. Rubie, Jr., F.S.A.

## SECTION 2

SUMMARY OF PRINCIPAL VALUATION RESULTS  
AND COMPARISON WITH THE PRIOR YEAR

	<u>January 1, 2003</u>	<u>January 1, 2004</u>
Plan Members		
Active Members	4,891	5,090
Retired Members & Beneficiaries	3,058	3,042
Inactive Members*	<u>1,192</u>	<u>1,091</u>
Total	9,141	9,223
Annual Covered Compensation	\$168,391,474	\$186,528,530
Actuarial Present Value of Future Benefits	915,999,667	952,176,462
Actuarial Present Value of Projected Accrued Benefits	713,782,531	735,164,648
Unfunded Actuarial Accrued Liability	(16,566,697)	(22,485,404)
Assets		
Actuarial Value	717,681,067	738,612,110
Market Value	579,064,098	688,818,642
Employer Normal Cost — Due December 31	12,456,172	14,335,369
As a % of Covered Compensation	7.40%	7.69%
Annual Required Employer Contribution		
Due December 31	\$ 10,984,595	\$ 12,338,049
As a % of Covered Compensation	6.52%	6.61%
Projected Actual — Due December 31 of the following year	\$ 12,629,361	\$ 13,989,640
As a % of Covered Compensation	7.50%	7.50%
Ratio of Assets to Actuarial Present Value of Projected Accrued Benefits		
At Actuarial Value	101%	100%
At Market Value	81%	94%

\*Includes former Members entitled to a refund of contributions.

## SECTION 3

### ACTUARIAL METHODOLOGY

#### INTRODUCTION

The actuarial valuation of a defined benefit retirement system is comprised of two separate processes.

First, the actuarial present value, as of the valuation date, of both current and projected benefits to be paid under the Plan is determined. In determining the actuarial present value of these benefits, actuarial assumptions must be made as to the number of participants eventually receiving benefits, the amount of benefits to be paid, and the portion of the benefit obligation to be covered by future investment earnings.

Second, the financing of these benefit obligations on an advance basis is established. An actuarial cost method is applied to establish the NORMAL COST rate, which is the rate at which future costs will accrue annually after the valuation date. The actuarial cost method is applied to determine the ACTUARIAL ACCRUED LIABILITY, which is the amount of cost that has accrued as of the valuation date.

#### ACTUARIAL ASSUMPTIONS

The true cost of a member's retirement benefit is not known until he or his beneficiary has received the final benefit payment. Consequently, the exact cost of system benefits for the current employee group will not be determinable for 50 to 75 years. Since provisions for this cost must be made prior to the exact determination, a model is established that will estimate the future cost of system benefits. The model utilizes parameters which require assumptions as to the future occurrences of various events affecting the demographic profile of the employee group and the assets of the system. Such actuarial assumptions include death, retirement, termination, disability, salary increases and investment return. Current and long-term economic factors, the nature of the employer's business and significant features of the system must be considered in the selection of a set of actuarial assumptions to assure the reasonableness of the results predicted by the assumptions.

While care is taken in the selection of actuarial assumptions, actual experience is expected to deviate from these assumptions over the short term. The suitability of actuarial assumptions is measured by how closely the experience of the system, on a long-term basis, conforms to

projected results. Deviations from projected results are called actuarial gains and losses. Periodic actuarial valuations measure the extent of these gains and losses as of a valuation date. If either actuarial gains or losses predominate, then it is possible that one or more of the actuarial assumptions is no longer appropriate. Thus, actuarial assumptions must be continually monitored for reasonableness and subsequent cost estimates may be modified accordingly. While individual assumptions are intended to be representative, it is the aggregate effect of all actuarial assumptions working together that determines their appropriateness. The most recent analysis of the experience of the Retirement System was for the five-year period ending December 31, 1998. The next five-year analysis will be for the period ending December 31, 2003, and any new assumptions will be reflected in the January 1, 2005 actuarial valuation.

#### ACTUARIAL LIABILITIES

Actuarial liabilities include the actuarial present value of all future benefits and expenses. To determine the actuarial present value of all future benefits, the probability of future events which establish benefit payments is forecast utilizing the actuarial assumptions. System provisions and current member data are used to forecast the amount of benefits to be paid. Assumptions for survival among retired members and beneficiaries are used to estimate the duration of these benefit payments. Each probable benefit payment is then discounted to the valuation date using the actuarial assumption for investment return. These discounted payments are then summed to arrive at the total actuarial present value of benefits.

#### ACTUARIAL ASSETS

The actuarial assets at any time are equal to the sum of present assets, valued on an actuarial basis, plus future assets. Future assets will result from future contributions and future investment return on all assets.

#### ASSET VALUATION METHOD

Effective January 1, 1999, the Actuarial Value of Assets is determined using the assumed yield method. Under this method, an expected actuarial asset value is determined by taking the Actuarial Value of Assets as of the previous valuation, increased by deposits and decreased by withdrawals, and adjusted by the valuation interest rate to the current valuation date. The expected actuarial asset value is compared to the market value and 20% of the difference between (a) expected assets and (b) Market Value of Assets reduced by the addition to the Investment Stabilization Reserve on the valuation date is added to the expected value. The result is the Actuarial Value of Assets.



The purpose of developing the Actuarial Value of Assets is to smooth fluctuations in Market Value between successive valuations, thereby also smoothing contribution requirements. Assets were valued at Market Value as of January 1, 1999. In order to protect the System's funding requirements against a significant shortfall in the rate of return, the Board of Trustees adopted a policy establishing an Investment Stabilization Reserve effective January 1, 2000.

#### ACTUARIAL COST METHOD

To determine the funding requirements of the System, it is necessary to employ an actuarial cost method. The choice of the cost method does not affect the balance sheet financial status, which is a function only of the System provisions, actuarial assumptions, member data and assets. However, the actuarial cost method has a direct impact on the incidence of the funding requirements. The actuarial cost method allocates the actuarial present value of future employer contributions between the past and future, and thus establishes the UNFUNDED ACTUARIAL ACCRUED LIABILITY and the NORMAL COST.

The actuarial cost method used is commonly referred to as the "entry age actuarial cost method." Entry age is determined at the date each member would have entered the System. On each actuarial valuation date, the annual cost accruals (individual normal costs for each member) are determined as a level percentage of pay for each year from entry age until retirement or termination. The sum of these individual normal costs for all active members whose attained ages are under the assumed retirement age is the normal cost for the plan year. The excess of all normal costs falling due prior to the actuarial valuation date, accumulated with interest, over the actuarial value of plan assets is the unfunded actuarial accrued liability.

The funding requirements, or Annual Required Contribution, for each plan year is equal to the sum of the "normal contribution rate" and the "unfunded accrued liability rate." The normal contribution rate is equal to the normal cost of the Plan divided by covered compensation. The unfunded accrued liability rate is equal to the annual payment necessary to amortize the unfunded accrued actuarial liability over thirty years from the actuarial valuation date, divided by covered compensation.

SECTION 4  
RESULTS OF THE ACTUARIAL VALUATION  
AS OF JANUARY 1, 2004

This section of the report shows the development of the principal elements of the actuarial valuation and the analyses of the various elements affecting the results. The actuarial valuation is based on:

- Membership data as of January 1, 2004 – This data is summarized in Exhibits F, G and H.
- The statutes in effect on January 1, 2004 – A summary of the principal provisions governing the System appears in Exhibit A.
- Actuarial assumptions and methods – The assumptions appear in Exhibits B through E. The actuarial cost method is described in Section 3.
- System assets as of January 1, 2004 – Fund values and summaries of fund activities and investment performance during 2003 are described later in Section 5 under "Valuation of the System's Assets."

DETERMINATION OF THE ANNUAL CONTRIBUTION

The Annual Required Contribution is comprised of two elements — the "normal cost contribution" and the "unfunded actuarial accrued liability contribution." The determination of the Annual Required Contribution follows in Table A.

TABLE A

DETERMINATION OF ANNUAL REQUIRED CONTRIBUTION

(1) Actuarial Present Value of all Future Benefits		
(a) Active Members		
(i) Retirement benefits	\$421,130,913	
(ii) Vested withdrawal benefits	59,108,639	
(iii) Refund of contributions	4,383,041	
(iv) Survivor benefits	20,433,015	
(v) Disability benefits	<u>16,975,165</u>	
Total		\$ 522,030,773
(b) Retired Members and Beneficiaries		424,295,073
(c) Inactive Members*		<u>5,850,616</u>
(d) Total Actuarial Present Value of Future Benefits		\$ 952,176,462
(2) Employer Normal Cost as of January 1, 2004		13,273,490
(3) Total Covered Compensation		186,528,530
(4) Employer Normal Cost Rate: (2) / (3)		7.1161%
(5) Actuarial Present Value of Future Covered Compensation of Current Members		\$1,615,002,800
(6) Actuarial Present Value of Future Employer Normal Costs: (4) x (5)		114,924,637
(7) Actuarial Present Value of Future Member Contributions		121,125,118
(8) Actuarial Accrued Liability: (1) - (6) - (7)		716,126,707
(9) Actuarial Value of Assets as of January 1, 2004		738,612,110
(10) Unfunded Actuarial Accrued Liability: (8) - (9)		(22,485,404)
(11) Payment to Amortize the Unfunded Actuarial Accrued Liability over 30 years from January 1, 2004		(1,997,321)
(12) Normal Cost Contribution due by December 31, 2004: (2) adjusted for interest at 8%		14,335,369
(13) Annual Required Contribution due December 31, 2004		12,338,049
(14) Contribution Rate: (13) / (3)		6.61%

\*Includes former Members entitled to refunds.

## TABLE B

ACTUARIAL BALANCE SHEET AS OF JANUARY 1, 2004ACTUARIAL ASSETS

Actuarial Value of Present Assets	\$738,612,110
Actuarial Present Value of Future Member Contributions	121,125,118
Actuarial Present Value of Future Employer Contributions	<u>121,125,210</u>
Total Present and Future Assets	\$980,862,438

ACTUARIAL LIABILITIES

Actuarial Present Value of Benefits Now Payable	\$424,295,073
Actuarial Present Value of Benefits Payable in the Future	
Active Members — Plan A	\$ 225,294
Active Members — Plan B	521,805,479
Terminated Members	<u>5,850,616</u>
Total Payable in the Future	<u>527,881,389</u>
Total Liabilities for Benefits	\$952,176,462
Actuarial Surplus / (Deficit)	\$ 28,685,976

TABLE C

DETERMINATION OF ACTUARIAL GAINS / (LOSSES)

Actuarial gain / (loss) experience is measured by comparing the Expected Unfunded Actuarial Accrued Liability to the Actual Unfunded Actuarial Accrued Liability. As is shown below, the Retirement System experienced a net loss during 2003. Unfavorable investment experience offset favorable non-investment experience, and increased the UAAL by about \$1.6 million.

(1) Unfunded Actuarial Accrued Liability as of January 1, 2003	\$(16,566,697)
(2) Employer Normal Cost for the 2003 Plan Year	11,533,493
(3) Interest on (1) and (2) to December 31, 2003	(402,656)
(4) Employer Contribution Paid in the 2003 Plan Year	13,429,802
(5) Interest on (4) to December 31, 2003	0
(6) Increase/(Decrease) Due to Change in Benefits and/or Actuarial Assumptions	0
(7) Expected Unfunded Actuarial Accrued Liability on January 1, 2004: (1) + (2) + (3) - (4) - (5) + (6)	(18,865,662)
(8) Actual Unfunded Actuarial Accrued Liability on January 1, 2004	(22,485,404)
(9) Actuarial Gain / (Loss) for the 2003 Plan Year: (7) - (8)	3,619,741
(10) Investment Gain / (Loss)	(12,448,367)
(11) Actuarial Gain / (Loss) From Non-investment Experience: (9) - (10)	16,068,109

TABLE D

PROJECTED BENEFIT OBLIGATION FUNDED STATUS

As of January 1, 2004 the Projected Benefit Obligation was:

Retired Members and Beneficiaries currently receiving benefits and terminated members not yet receiving benefits	\$430,145,689
Current Active Members	
- Accumulated Member Contributions, Including Interest	125,754,562
- Employer-financed Vested Benefits	<u>179,264,397</u>
Total Projected Benefit Obligation	\$735,164,648

As of January 1, 2004 the Projected Benefit Obligation was funded as follows:

Net Assets Available for Benefits at Actuarial Value	\$738,612,110
Unfunded Projected Benefit Obligation at Actuarial Value	(3,447,463)
Actuarial Value Funding Ratio	100%
Net Assets Available for Benefits at Market Value	\$688,818,642
Unfunded Projected Benefit Obligation at Market Value	46,346,006
Market Value Funding Ratio	94%

TABLE E

PRIORITIZED SOLVENCY TEST

The Funding objective of the Retirement System is to meet long-term benefit promises through contributions that remain approximately level from year to year as a percentage of covered compensation. If the contributions are level in concept and realistically determined, the System will pay all benefits when due — the ultimate test of financial soundness. Testing for level contribution rates is the long-term solvency test.

A prioritized solvency test is an additional means of checking a system's progress under its funding program. In a prioritized solvency test, the Plan's present assets (cash and investments) are compared with:

- Active member contributions, accumulated with interest;
- The liabilities for future benefits to present inactive members and beneficiaries;  
and
- The liabilities for service already rendered by active members.

In a system that has been following the discipline of level percent of payroll financing, the liabilities for active member accumulated contributions (liability 1) and the liabilities for future benefits to inactive members and beneficiaries (liability 2) will be fully covered by assets (except in unusual circumstances). In addition, the liabilities for service already rendered by active members (liability 3) are normally partially covered by the remainder of the present assets. Generally, if the system has been using level cost financing, the funded portion of liability 3 will increase over time. Liability 3 being fully funded does not necessarily result from level percent of payroll funding methods.

The schedule below illustrates the history of the liabilities of the system and is indicative of the system following the discipline of level percent of compensation funding.

Valuation Date January 1	Active Member's Accumulated Contributions	Retirants, Beneficiaries and Inactive Members	Active Members (Employer- Financed)	Valuation Assets	Percent Covered by Valuation Assets		
					(1)	(2)	(3)
1987	\$ 54,703,473	\$ 60,096,766	\$ 45,027,324	\$157,538,001	100%	100%	95%
1988	60,631,019	68,133,929	45,164,333	172,932,203	100%	100%	98%
1989	68,032,000	72,476,675	50,436,314	192,074,767	100%	100%	102%
1990	77,843,936	79,855,895	52,384,902	220,844,765	100%	100%	121%
1991	86,392,672	77,212,948	62,859,420	241,369,537	100%	100%	124%
1992	91,688,784	101,408,720	69,055,820	278,065,508	100%	100%	123%
1993	98,482,791	102,336,338	61,479,865	307,050,085	100%	100%	173%
1994	99,547,061	123,475,760	121,674,513	336,466,320	100%	100%	93%
1995	110,658,079	144,027,489	124,562,502	353,451,344	100%	100%	79%
1996	108,123,636	177,617,507	117,169,151	389,103,803	100%	100%	88%
1997	104,554,877	231,762,583	91,329,968	428,419,710	100%	100%	101%
1998	115,847,655	228,328,855	108,592,620	482,599,919	100%	100%	127%
1999	117,478,379	274,442,924	172,607,724	624,225,667	100%	100%	135%
2000	113,334,820	343,382,932	184,049,309	660,830,255	100%	100%	111%
2001	115,781,706	389,055,603	184,779,937	696,071,310	100%	100%	103%
2002	119,968,776	406,094,033	187,309,245	718,703,692	100%	100%	103%
2003	112,468,027	435,548,298	165,766,206	717,681,067	100%	100%	102%
2004	125,754,562	430,145,689	179,264,397	738,612,110	100%	100%	102%

TABLE F

INFORMATION REQUIRED FOR ACCOUNTING PURPOSES

The following information is required to satisfy the reporting requirements of the Governmental Accounting Standards Board Statement No. 25 on Financial Reporting for Deferred Benefit Plans.

Schedule of Funding Progress

<u>Actuarial Valuation Date</u>	<u>Actuarial Value of Assets</u>	<u>Actuarial Accrued Liability (AAL)</u>	<u>Unfunded Actuarial Accrued Liability (UAAL)</u>	<u>Funded Ratio</u>	<u>Covered Payroll</u>	<u>UAAL as a Percentage of Covered Payroll</u>
	(a)	(b)	(b) - (a)	(a) / (b)	(c)	((b) - (a)) / (c)
1/1/95	\$353,329,957	\$386,874,780	\$ 33,544,823	91.3%	\$185,374,096	18.1%
1/1/96	389,103,803	409,428,594	20,324,791	95.0	171,262,008	11.9
1/1/97	428,419,710	429,517,108	1,097,398	99.7	161,802,480	0.7
1/1/98	482,599,919	442,614,693	(39,985,225)	102.3	168,328,728	-23.8
1/1/99	624,225,667	564,056,509	(60,169,158)	110.7	153,733,920	-39.1
1/1/00	660,830,255	640,614,688	(20,215,567)	103.2	151,091,616	-13.4
1/1/01	696,071,310	682,531,577	(13,539,734)	102.0	165,795,367	-8.2
1/1/02	718,703,692	701,725,938	(16,977,755)	102.4	171,523,233	-9.9
1/1/03	717,681,067	701,114,370	(16,566,697)	102.4	168,391,474	-9.8
1/1/04	738,612,110	716,126,707	(22,485,404)	103.1	186,528,530	-12.1

Schedule of Employer Contributions

<u>Year Ended 12/31</u>	<u>Annual Required Contribution</u>	<u>Percentage Contributed</u>
1995	\$11,011,221	31.7%
1996	9,443,721	110.0
1997	7,055,431	121.0
1998	5,999,525	164.9
1999	5,249,589	222.3
2000	9,309,354	154.3
2001	10,996,382	110.7
2002	12,133,966	111.4
2003	10,984,595	-
2004	12,338,049	*

\*To be determined at the end of the year.



## SECTION 5

### VALUATION OF THE SYSTEM'S ASSETS

This section of the report shows the development of the actuarial value of the assets of the System and provides information regarding investment results and the various assets of the System.

The amount of assets used in the actuarial valuation is known as the "actuarial value of assets." The method is discussed in Section 3 and the development of the actuarial value of assets is shown in Table G.

As shown in Table G, the fund had a rate of return of 6.22% on an actuarial value basis and 23.59% on a market value basis, as compared to the assumed rate of return of 8.00% for 2003. The market value of assets is still below the actuarial value of assets, resulting in a negative adjustment to the expected actuarial value of assets. However, since the balance in the Investment Stabilization Reserve was \$0, no transfer from the Reserve was available to increase the rate of return, even though the rate of return was below 7.00%. The rate of return on an actuarial value basis is intended to be a stable rate of return and fluctuate less than rates of return on a market value basis. Thus, the rate of return on an actuarial basis is not always a fair measure of the investment performance of the fund. A better indicator of actual performance during the year is the rate of return on a market value basis, also presented in Table G.

TABLE G

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

	<u>Expected</u>	<u>Market</u>	<u>Actuarial</u>
(1) Assets on January 1, 2003	\$717,681,067	\$579,064,098	\$717,681,067
(2) Contributions			
Members	14,395,479	14,395,479	14,395,479
Employers	13,429,802	13,429,802	13,429,802
(3) Benefits Paid			
Retired Members & Beneficiaries	44,105,092	44,105,092	44,105,092
Refunds to Withdrawn Members	2,550,054	2,550,054	2,550,054
(4) Expenses			
Administrative	1,088,863	1,088,863	1,088,863
Investment	2,675,390	2,675,390	2,675,390
(5) Investment Increment	<u>55,973,529</u>	<u>132,348,662</u>	<u>43,525,161</u>
(6) Assets on January 1, 2004	\$751,060,478	\$688,818,642	\$738,612,110
(7) Yield for the 2003 Plan Year	8.00%	23.59%	6.22%

Development of the Actuarial Value of Assets as of January 1, 2004

(8) Expected Value of Assets on January 1, 2004	\$751,060,478
(9) Addition to Investment Stabilization Reserve	0
(10) Investment Stabilization Reserve	0
(11) Market Value of Assets on January 1, 2004	688,818,642
(12) Excess of Market Value over Expected Value: (11) - (8) - (10)	(62,241,836)
(13) Additional investment increment: 20% x (12)	(12,448,367)
(14) Actuarial Value of Assets on January 1, 2004: (8) - (9) + (13)	\$738,612,110

SECTION 6

EXHIBITS

## EXHIBIT A

### SUMMARY OF PLAN PROVISIONS OF CURRENT LAW

#### Effective Date

January 1, 1944, amended in 1978, 1981, 1982, 1984, 1990, 1993, 1994, 1995, 1996, 1998, 2000 and 2001.

#### Eligibility

All regular employees of the School District of Kansas City, Missouri, the Library District or the Retirement System and certain employees of charter schools become members as a condition of employment. Regular employment means working at least five hours per day, five days per week, nine months per year. Temporary and part-time employees are excluded.

#### Service

Creditable service is membership service, which is service for which required contributions have been made.

For Plan A members, creditable service will not exceed 40 years.

For Plan B members, there is no cap on creditable service. Prior to 1990, creditable service could not exceed 35 years.

#### Annual Compensation

A member's annual compensation level will be the regular compensation shown on the salary and wage schedules, excluding extra pay, overtime pay, or any pay not on the schedule.

For Plan A members, annual compensation is limited to \$3,000.

For Plan B members, annual compensation will be limited to the scheduled level for a principal with a master's degree for all years prior to 1989. For years after 1988, there is no limitation on annual compensation.

#### Average Final Compensation

For Plan A members, the average final compensation is the average annual compensation paid in the five years of creditable service when earnings have been highest, subject to a maximum of \$3,000.

For Plan B members, the average final compensation is the highest average annual compensation paid during any four consecutive years of service.

#### Normal Retirement

Eligibility — Plan A members may retire after the completion of five years of creditable service and the attainment of age 62.

Plan B members may retire after (a) the completion of five years of creditable service and the attainment of age 60, or (b) having a total of at least 75 credits, with each year

of creditable service and year of age, both prorated for fractional years, equal to one credit.

Benefit — For a Plan A member, the normal retirement benefit payable monthly equals one twelfth of 1.25% of his average final compensation multiplied by his years of creditable service.

For a Plan B member, the normal retirement benefit payable monthly equals one twelfth of 2.00% (1.75% for members who retired prior to June 30, 1999) of the member's average final compensation multiplied by years of creditable service, subject to a maximum of 60% of average final compensation. Any member whose years of creditable service exceeds 34.25 years on August 28, 1993 shall have a maximum greater than 60%, which shall be equal to 1.75% times the member's years of creditable service on August 28, 1993.

#### Minimum Benefit

Effective January 1, 1996, any member with at least 20 years of creditable service at retirement is entitled to a minimum benefit of \$300 per month, or the actuarial equivalent of \$300 if an option was elected. Any member with at least ten years of creditable service, but less than 20 years, is entitled to a minimum benefit of \$150 per month, plus \$15 for each full year of creditable service in excess of ten years, or its actuarial equivalent if an option was elected. Beneficiaries of deceased members who elected an option and who retired with at least ten years of creditable service receive the actuarial equivalent of the minimum benefit.

Under both Plan A and Plan B, if a member's accumulated contributions provides more than one-half of the member's retirement benefit (under the actuarial assumptions adopted by the Board of Trustees), the member's benefit will be increased by this excess.

#### Early Retirement

Eligibility - A member with 30 years of creditable service and under the age of 50 may retire early at any time.

Benefit - A member eligible for early retirement will receive a reduced benefit, calculated as for normal retirement and recognizing service and compensation to actual retirement date. The reduction in benefit will provide a benefit which is actuarially equivalent to the normal retirement benefit that would be payable at the member's minimum normal retirement date.

#### Disability Retirement

Eligibility - A member with at least five years of creditable service who is certified to be totally incapacitated for performance of duty by the Medical Board is eligible for a disability retirement.

Benefit - A disabled member will receive an unreduced benefit, calculated as for normal retirement, based on service and average final compensation at actual retirement date. The minimum disability retirement benefit will be the lesser of (a) 25% of the member's average final compensation, or (b) the member's service retirement allowance calculated on the member's average final compensation and the maximum number of years of creditable service the member would have earned had the member remained an employee until age 60.

Disability benefits are payable immediately.

## Termination Benefits

### Vested Benefits

Eligibility - A member who has at least five years of creditable service earns a vested interest in his or her accrued benefit, provided the member leaves his or her contributions in the system. Prior to 1990, there was also a minimum vesting eligibility age of 40.

Benefit - The vested benefit is calculated as a normal retirement benefit based on service and average final compensation at date of termination and is payable at minimum normal retirement date.

### Non-vested Benefits

Benefit - If the member's termination is for reasons other than death or retirement and if the member has not met the vesting or retirement requirements, the member's contributions with interest will be refunded.

## Death Benefit

Prior to Retirement - For a member who dies while actively employed, the member's accumulated contributions with interest will be paid to the member's designated beneficiary.

If an active Plan B member dies, or an inactive Plan B member dies before retirement and while eligible to retire, the member's designated dependent beneficiary has the option of selecting a monthly benefit under option 1 or receiving a refund of contributions accumulated with interest. The dependent beneficiary is either the member's spouse or person determined by the Board of Trustees to have been dependent upon the deceased member. If the beneficiary elects option 1, such benefit shall be calculated as if the deceased member had at least ten years of creditable service at the time of death. If the beneficiary is a child, the benefit is only payable until age nineteen (19).

Post Retirement - The optional form of benefit payment selected under either Plan A or B will determine what, if any, benefits are payable upon death after retirement.

Plan B members are guaranteed to receive at least their accumulated contributions at retirement, if they die before electing an option.

## Optional Forms of Benefit Payments

Plan B members may elect from the following optional forms of benefit payment:

Option 1 - Upon a retiree's death, the retiree's designated beneficiary will receive for life, the same level of monthly retirement benefit. In the event the retiree's designated beneficiary predeceases the retiree, the retiree's monthly retirement benefit will be adjusted to the amount it would have been, had the retiree not elected an option.

Option 2 - Upon a retiree's death, the retiree's designated beneficiary will receive for life, a monthly benefit equal to one-half of the retiree's retirement benefit. In the event the retiree's designated beneficiary predeceases the retiree, the retiree's monthly retirement benefit will be adjusted to the amount it would have been, had the retiree not elected an option.

Option 3 - Upon a retirant's death, no benefits are payable to the retirant's estate or any beneficiary. Retirement benefits payable under this option will be actuarially increased from the normal form.

Each of the above options produces benefits which are actuarially equivalent to the normal form of benefit which is a monthly annuity payable for the lifetime of the retirant. These options are not available under disability retirement, only service retirement.

#### Cost-of-Living Allowances

The Board of Trustees shall determine annually whether or not the system can provide an increase in benefits for those retirants who, as of the January 1 preceding the date of such increase, have been retired at least one (1) year (three (3) years prior to January 1, 2002). Any such increase also applies to optional retirement allowances paid to a retirant's beneficiary. The Board makes its determination as follows:

- (1) The actuary recommends to the Board what portion of the investment return is available for increases and the amount available to be paid on the first day of the 14th month following the end of the valuation year. The actuary's recommendation is subject to the following safeguards:
  - (a) The system's funded ratio as of the January 1st of the year preceding the year of the proposed increase must be at least 100% after adjusting for the effect of proposed increase. The funded ratio is the ratio of assets to the pension benefit obligation.
  - (b) The actuarially required contribution rate, after adjusting for the effect of the proposed increase, may not exceed the statutory contribution rate.
  - (c) The actuary must certify that the proposed increase will not impair the actuarial soundness of the system.
- (2) The Board reviews the actuary's recommendation and shall, in their discretion, determine if an increase may be granted. In accordance with Board policy, if an increase is permissible, the amount of the increase will be equal to the lesser of 3% or the percentage increase in the CPI for the preceding year, subject to a cumulative increase of 100% subsequent to December 31, 2000.
- (3) This provision does not guarantee an annual increase to any retired member.

#### Administration of the Retirement System

The Board of Trustees is responsible for the general administration and proper operation of the Retirement System. The Board consists of 12 members - four members appointed by the Board of Education, one member appointed by the Board of Trustees of the Library District, four members elected by and from the members of the Retirement System, two members elected by and from the retirants of the Retirement System, and the Superintendent of Schools of the School District of Kansas City, Missouri.

Administrative Expenses are paid out of the General Reserve Fund.

### Employee Contributions

Plan A members contribute 5% of earnable annual compensation up to \$3,000, for a maximum contribution of \$150 per year.

Plan B members contribute 7.5% of earnable annual compensation. Prior to January 1, 1999, Plan B members contributed 5.9%. Prior to 1990, Plan B members contributed 5.0% of earnable annual compensation plus 2.0% of earnable annual compensation in excess of \$6,500, the contribution earnings base.

### Employer Contributions

The employers of members contribute at the rate of 1.99% of covered compensation effective July 1, 1993; 3.99% effective July 1, 1995; 5.99% effective July 1, 1996; and 7.50% effective January 1, 1999. Prior to July 1, 1993, employer contributions were actuarially determined.



EXHIBIT B  
ACTUARIAL ASSUMPTIONS

The following actuarial assumptions were used in the valuation:

- Interest - 8% per annum.
- Expenses - The rate of interest assumed is net of investment expenses. Administrative and other expenses are assumed to equal 0.5% of covered compensation.
- Mortality - The 1983 Group Annuity Mortality Table is used for active members and retired members and beneficiaries. Rates are shown in Exhibit C.
- Disability Mortality - The 1983 Group Annuity Mortality Table with ages set up five years is used for members retired for disability. The rates used are shown in Exhibit D.
- Withdrawal - Withdrawals are assumed to occur at rates based on actual experience of the Retirement System. During the first four years of membership, withdrawals are assumed to occur at the following rates:

<u>Year of Membership</u>	<u>Non-Charter School Employees</u>	<u>Charter School Employees</u>
1st	25.0%	75.0%
2nd	15.0%	50.0%
3rd	12.5%	25.0%
4th	10.0%	15.0%

The rates used after the first four years of membership are shown in Exhibit E.

- Salary Scale - Salaries are assumed to increase at rates based on the actual experience of the Retirement System. Rates are shown in Exhibit E.
- Disability - Disabilities are assumed to occur at rates based on the actual experience of the Retirement System. The rates used are shown in Exhibit E.

- Retirement - Retirements are assumed to occur at rates based on 20% electing to retire when first eligible. Thereafter, retirements occur at rates based on the actual experience of the Retirement System. The age-related rates used are shown in Exhibit E.
- Family Structure - All members are assumed to be married and female spouses are assumed to be five years younger.
- Usage of Cash-Out Option - Members terminating in vested status are given the option of taking a refund of their accumulated member contributions (and thereby forfeiting the employer-provided benefit) or deferring their vested benefit. Terminating vested members are assumed to take a refund, unless the refund is less than the actuarial present value of their vested deferred benefit.
- Cost-of-Living-Adjustments - In accordance with the Board policy of automatically granting a COLA of up to 3% per year, it is assumed the annual COLA of 3% will be provided up to a lifetime cumulative maximum of 21%.

EXHIBIT C

MORTALITY RATES FOR ACTIVE LIVES  
AND RETIRED MEMBERS AND BENEFICIARIES

Death Rate			Death Rate		
Male	Age	Female	Male	Age	Female
.000377	20	.000189	.017579	66	.007817
.000392	21	.000201	.019804	67	.008681
.000408	22	.000212	.022229	68	.009702
.000424	23	.000225	.024817	69	.010921
.000444	24	.000238	.027530	70	.012385
.000464	25	.000253	.030354	71	.014128
.000488	26	.000268	.033370	72	.016159
.000513	27	.000283	.036680	73	.018481
.000542	28	.000301	.040388	74	.021091
.000572	29	.000320	.044597	75	.023992
.000607	30	.000342	.049388	76	.027184
.000645	31	.000364	.054758	77	.030672
.000687	32	.000388	.060678	78	.034459
.000734	33	.000414	.067125	79	.038549
.000785	34	.000443	.074070	80	.042945
.000860	35	.000476	.081484	81	.047655
.000907	36	.000502	.089320	82	.052691
.000966	37	.000535	.097525	83	.058071
.001039	38	.000573	.106047	84	.063807
.001128	39	.000617	.114836	85	.069918
.001238	40	.000665	.124170	86	.076570
.001370	41	.000716	.133870	87	.084459
.001527	42	.000775	.144073	88	.091935
.001715	43	.000841	.154859	89	.101354
.001932	44	.000919	.166307	90	.111750
.002183	45	.001010	.178214	91	.123076
.002471	46	.001117	.190460	92	.135630
.002790	47	.001237	.203007	93	.149577
.003138	48	.001366	.217904	94	.165103
.003513	49	.001505	.234086	95	.182419
.003909	50	.001647	.248436	96	.201757
.004324	51	.001793	.263954	97	.222043
.004755	52	.001948	.280803	98	.243899
.005200	53	.002119	.299154	99	.268185
.005660	54	.002315	.319185	100	.295187

Death Rate		
Male	Age	Female
.006131	55	.002541
.006618	56	.002803
.007139	57	.003103
.007719	58	.003442
.008384	59	.003821
.009158	60	.004241
.010064	61	.004702
.011133	62	.005210
.012391	63	.005769
.013868	64	.006385
.015592	65	.007064

Death Rate		
Male	Age	Female
.341086	101	.325225
.365052	102	.358897
.393102	103	.395842
.427255	104	.438360
.469531	105	.487816
.521945	106	.545886
.586518	107	.614309
.665268	108	.694884
.760215	109	.789474
1.00000		1.00000
0	110	0

## EXHIBIT D

DISABLED LIFE MORTALITY RATES

Death Rate			Death Rate		
Male	Age	Female	Male	Age	Female
.000464	20	.000253	.022229	63	.009702
.000488	21	.000268	.024817	64	.010921
.000513	22	.000283	.027530	65	.012385
.000542	23	.000301	.030354	66	.014128
.000572	24	.000320	.033370	67	.016159
.000607	25	.000342	.036680	68	.018481
.000645	26	.000364	.040388	69	.021091
.000687	27	.000388	.044597	70	.023992
.000734	28	.000414	.049388	71	.027184
.000785	29	.000443	.054758	72	.030672
.000860	30	.000476	.060678	73	.034459
.000907	31	.000502	.067125	74	.038549
.000966	32	.000535	.074070	75	.042945
.001039	33	.000573	.081484	76	.047655
.001128	34	.000617	.089320	77	.052691
.001238	35	.000665	.097525	78	.058071
.001370	36	.000716	.106047	79	.063807
.001527	37	.000775	.114836	80	.069918
.001715	38	.000841	.124170	81	.076570
.001932	39	.000919	.133870	82	.084459
.002183	40	.001010	.144073	83	.091935
.002471	41	.001117	.154859	84	.101354
.002790	42	.001237	.166307	85	.111750
.003138	43	.001366	.178214	86	.123076
.003513	44	.001505	.190460	87	.135630
.003909	45	.001647	.203007	88	.149577
.004324	46	.001793	.217904	89	.165103
.004755	47	.001948	.234086	90	.182419
.005200	48	.002119	.248436	91	.201757
.005660	49	.002315	.263954	92	.222043
.006131	50	.002541	.280803	93	.243899
.006618	51	.002803	.299154	94	.268185
.007139	52	.003103	.319185	95	.295187
.007719	53	.003442	.341086	96	.325225
.008384	54	.003821	.365052	97	.358897

Death Rate		
Male	Age	Female
.009158	55	.004241
.010064	56	.004702
.011133	57	.005210
.012391	58	.005769
.013868	59	.006385
.015592	60	.007064
.017579	61	.007817
.019804	62	.008681

Death Rate		
Male	Age	Female
.393102	98	.395842
.427255	99	.438360
.469531	100	.487816
.521945	101	.545886
.586518	102	.614309
.665268	103	.694884
.760215	104	.789474
1.00000		1.00000
0	105	0

EXHIBIT E

ACTIVE MEMBER RATES OF  
DECREMENT AND SALARY INCREASE

<u>Attained Age</u>	<u>Withdrawal Rate</u>	<u>Disability Rate</u>	<u>Retirement Rate</u>	<u>Salary Increase Rate</u>
20	18.00%	0%	-	9.00%
21	17.10	.01	-	8.85%
22	16.20	.02	-	8.70%
23	15.30	.03	-	8.55%
24	14.40	.04	-	8.40%
25	13.50	.05	-	8.25%
26	12.60	.06	-	8.10%
27	11.70	.07	-	7.95%
28	10.80	.08	-	7.80%
29	9.90	.09	-	7.65%
30	9.00	.10	-	7.50%
31	8.64	.10	-	7.40%
32	8.28	.10	-	7.30%
33	7.92	.10	-	7.20%
34	7.56	.10	-	7.10%
35	7.20	.10	-	7.00%
36	6.84	.10	-	6.90%
37	6.48	.10	-	6.80%
38	6.12	.10	-	6.70%
39	5.76	.10	-	6.60%
40	5.40	.10	-	6.50%
41	5.22	.11	-	6.40%
42	5.04	.12	-	6.30%
43	4.86	.13	-	6.20%
44	4.68	.14	-	6.10%
45	4.50	.15	2.0%	6.00%
46	4.32	.17	2.0%	5.90%
47	4.14	.19	2.0%	5.80%
48	3.96	.21	2.0%	5.70%
49	3.78	.23	2.0%	5.60%
50	3.60	.25	2.0%	5.50%
51	3.51	.28	2.0%	5.45%
52	3.42	.31	2.0%	5.40%
53	3.33	.34	2.0%	5.35%
54	3.24	.37	2.0%	5.30%

<u>Attained Age</u>	<u>Withdrawal Rate</u>	<u>Disability Rate</u>	<u>Retirement Rate</u>	<u>Salary Increase Rate</u>
55	3.15%	.40%	2.0%	5.25%
56	3.06	.42	2.0%	5.20%
57	2.97	.44	2.0%	5.15%
58	2.88	.46	2.0%	5.10%
59	2.79	.48	2.0%	5.05%
60	2.70	.50	10.0%	5.00%
61	0	.50	10.0%	5.00%
62	0	.50	25.0%	5.00%
63	0	.50	10.0%	5.00%
64	0	.50	10.0%	5.00%
65	0	0	40.0%	5.00%
66	0	0	30.0%	5.00%
67	0	0	30.0%	5.00%
68	0	0	30.0%	5.00%
69	0	0	30.0%	5.00%
70	0	0	100.0%	5.00%



EXHIBIT F

AGE — SERVICE DISTRIBUTION  
AS OF JANUARY 1, 2004

SCHOOL DISTRICT

Age Group	Years of Service														Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+	
20-24	61	41	15	3	0	0	0	0	0	0	0	0	0	0	120
25-29	75	86	63	39	16	11	0	0	0	0	0	0	0	0	290
30-34	55	63	46	39	34	72	11	0	0	0	0	0	0	0	320
35-39	53	50	38	48	33	70	72	14	0	0	0	0	0	0	378
40-44	59	70	59	60	29	89	113	98	18	0	0	0	0	0	595
45-49	66	59	53	57	36	113	102	138	57	31	0	0	0	0	712
50-54	35	58	44	60	31	108	156	159	37	79	20	0	0	0	787
55-59	40	43	47	40	30	83	130	141	28	34	62	8	0	0	686
60-64	14	15	14	22	15	63	72	58	21	25	17	24	1	0	361
65-69	2	2	0	11	3	14	28	24	5	5	4	5	3	0	106
70+	1	4	1	4	0	4	6	4	4	4	2	2	8	4	48
Total	461	491	380	383	227	627	690	636	170	178	105	39	12	4	4,403

EXHIBIT F  
(Continued)

AGE — SERVICE DISTRIBUTION  
AS OF JANUARY 1, 2004

CHARTER SCHOOLS

Age Group	Years of Service														Total
	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+	
20-24	40	6	2	0	0	0	0	0	0	0	0	0	0	0	48
25-29	29	31	16	11	7	1	0	0	0	0	0	0	0	0	95
30-34	27	21	18	9	13	0	0	0	0	0	0	0	0	0	88
35-39	16	16	13	5	8	0	0	0	0	0	0	0	0	0	58
40-44	21	17	11	11	11	1	0	0	0	0	0	0	0	0	72
45-49	17	12	10	9	8	0	0	0	0	0	0	0	0	0	56
50-54	16	23	10	9	8	0	0	0	0	0	0	0	0	0	66
55-59	11	10	7	6	7	0	0	0	0	0	0	0	0	0	41
60-64	3	6	2	3	3	0	0	0	0	0	0	0	0	0	17
65-69	1	1	1	1	0	0	0	0	0	0	0	0	0	0	4
70+	0	2	1	0	0	0	0	0	0	0	0	0	0	0	3
Total	181	145	91	64	65	2	0	0	0	0	0	0	0	0	548

EXHIBIT G

ACTIVE MEMBERS

ANNUAL EARNINGS BY AGE GROUPS  
AS OF JANUARY 1, 2004

SCHOOL DISTRICT

<u>Age Group</u>	<u>Number of Members</u>	<u>Annual Earnings</u>	
		<u>Total</u>	<u>Average</u>
0 - 24	120	\$ 2,686,000	\$22,383
25 - 29	290	8,028,000	27,683
30 - 34	320	9,620,000	30,062
35 - 39	378	12,114,000	32,048
40 - 44	595	20,398,000	34,282
45 - 49	712	26,695,000	37,493
50 - 54	787	33,374,000	42,407
55 - 59	686	30,593,000	44,596
60 - 64	361	15,342,000	42,499
65 - 69	106	3,895,000	36,745
70+	48	1,300,000	27,083
Total	4,403	164,046,000	37,258

EXHIBIT G  
(Continued)

ACTIVE MEMBERS

ANNUAL EARNINGS BY AGE GROUPS  
AS OF JANUARY 1, 2004

CHARTER SCHOOLS

<u>Age Group</u>	<u>Number of Members</u>	<u>Annual Earnings</u>	
		<u>Total</u>	<u>Average</u>
0 - 24	48	\$ 1,347,000	\$28,062
25 - 29	95	2,616,000	27,537
30 - 34	88	2,785,000	31,647
35 - 39	58	1,823,000	31,431
40 - 44	72	2,165,000	30,069
45 - 49	56	1,800,000	32,143
50 - 54	66	2,144,000	32,485
55 - 59	41	1,534,000	37,415
60 - 64	17	540,000	31,765
65 - 69	4	122,000	30,500
70+	3	70,000	23,333
Total	548	16,947,000	30,925

EXHIBIT H  
 RETIRED MEMBERS AND BENEFICIARIES  
AS OF JANUARY 1, 2004

Number of Members and Beneficiaries

<u>Option</u>	<u>Service Retirements</u>	<u>Disability Retirements</u>	<u>Survivors &amp; Beneficiaries</u>	<u>Total</u>
None	2,369	115	163	2,647
1	241	4	0	245
2	148	2	0	150
Total	2,758	121	163	3,042

Amount of Monthly Benefits

<u>Option</u>	<u>Service Retirements</u>	<u>Disability Retirements</u>	<u>Survivors &amp; Beneficiaries</u>	<u>Total</u>
None	\$3,005,265	\$102,473	\$168,125	\$3,275,863
1	317,298	3,500	0	320,798
2	223,899	1,401	0	225,300
Total	\$3,546,462	\$107,374	\$168,125	\$3,821,961

## APPENDIX

### DEFINITIONS OF ACTUARIAL TERMS

Accrued Benefit is the benefit earned by a *participant* as of the date at which the determination is made payable in the form of an annual benefit commencing at *Normal Retirement Age*. The *accrued benefit* also includes the eligibility provisions, factors and optional forms of payment associated with it.

Accumulated Plan Benefits are the *accrued benefits* and any other benefits, whether vested or not, that have been earned by the *participants* covered by the plan as of the date at which the determination is made. These other benefits include any death, early retirement or disability benefits provided under the plan. The present value of accumulated plan benefits as of the valuation date is determined for purposes of financial reporting.

Actuarial Accrued Liability is equal to the actuarial present value of future benefits less the *present value* of future annual normal costs. (See Annual Normal Cost.)

Actuarial Assumptions are the bases for estimates of future events affecting pension costs. These assumptions include projections of mortality, withdrawals, disability, ages at retirement, rates of investment earnings, plan expenses and other relevant factors.

Actuarial Cost Method is the method for allocating the *actuarial present value* of a pension plan's benefits and expenses to various time periods. The allocation is usually in the form of an annual normal cost and amortization of an actuarial accrued liability. An *actuarial cost method* is also referred to as a "funding method."

Actuarial Gain/(Loss) is the difference between the plan's actual experience and that expected based upon a set of *actuarial assumptions*. It is determined in accordance with a particular *actuarial cost method* for the period between two actuarial *valuation dates*. A gain occurs when the experience of the plan is more favorable (in terms of cost) than the assumptions projected; a loss occurs when experience is less favorable.

*Actuarial gains/(losses)* are also referred to as *experience gains/(losses)*.

Actuarial Present Value — See *Present Value*.

Actuarial Valuation is the determination, as of a *valuation date*, of the *annual normal cost*, *actuarial accrued liability*, *actuarial value of assets* and related *actuarial present values* for a pension plan.

Actuarial Value of Assets is the value of cash, investments and other property belonging to a pension plan determined by the actuary for the purpose of an *actuarial valuation*.

Amortization is the spreading of a *present value* or a cost over a period of years. A plan's *unfunded actuarial accrued liability* is amortized over a period of years.

Annual Normal Cost is that portion of the *actuarial present value* of pension plan benefits and expenses which is allocated to a valuation year by the *actuarial cost method*. The *annual normal cost* may differ depending upon the *actuarial cost method* used.

#### Contribution Amounts

- (a) The *Minimum Contribution\** is the contribution required for a plan year in order to ensure funding which satisfies the funding requirements of *ERISA*. It normally consists of the *annual normal cost* plus the *amortization* payment for the *unfunded actuarial accrued liability* as determined by the *actuarial cost method*. The *Absolute Minimum Contribution* is the contribution required to avoid a *funding deficiency* in the *Funding Standard Account*.
- (b) The *Maximum Deduction\** is the largest contribution to the plan which is currently deductible. The law limits how rapidly the *unfunded actuarial accrued liabilities* may be amortized. The *Maximum Deduction* normally consists of the *annual normal cost* plus the *amortization* payment (limit adjustment) based on the shortest period permitted by law.

Credit Balance\* is the cumulative excess of credits over charges to the *Funding Standard Account*.

Current Liability\* means the *present value* of all liabilities to *participants* and beneficiaries under the plan determined as if the plan terminated and based on the plan's *actuarial assumptions* including reasonable withdrawal and mortality rates. The interest rate used to determine *current liability* must be within a specified permissible range and may or may not equal the actuarial assumed rate of interest for purposes of determining *contribution amounts*.

ERISA is the Employee Retirement Income Security Act of 1974, as amended to date — the primary federal act governing pension and welfare plans.

Fiscal Year is the year on which the plan sponsor maintains its financial records.

Funded means provided by plan assets. A liability is "fully *funded*" when assets exceed or equal the liability.

Funding Deficiency\* is an excess of cumulative charges over credits in the plan's *Funding Standard Account*. The deficiency must be eliminated, under penalty of an excise tax, unless the Internal Revenue Service grants a funding waiver under special procedures.

Funding Standard Account\* is the account a plan is required to maintain in compliance with the minimum funding standards set by *ERISA*.

Future Service is service with the employer after the *valuation date*.

Maximum Deduction\* — See *Contribution Amounts*.

Member — See *participant*.

Minimum Contribution\* — See *Contribution Amounts*.

Normal Retirement Age is an age defined in the plan for purposes of establishing when benefits must be paid and the amount of benefit that is to be treated as non-forfeitable.

Normal Retirement Benefit is the benefit payable when it commences at the *normal retirement age*.

Offsettable Bases\* are the charge and credit *amortization* bases which are established as the result of the establishment of the plan and plan amendments. Bases created as a result of *actuarial gains/(losses)* or changes in *actuarial assumptions* are not *offsettable bases*.

Participant is a person covered by a pension plan in accordance with its terms including active participants, retired participants and beneficiaries, vested terminations and vested transfers.

Plan Year is the year on which the plan maintains its financial records.

Present Value is the value of an amount or series of amounts payable at various times, determined as of a given date by the application based on a particular set of *actuarial assumptions*. It is a single sum which reflects the time value of money (through discounts for investment yield) and the probabilities of payment (taking into account death, disability, withdrawal and age at retirement).

Projected Benefit Obligation is the *actuarial present value* of a participant's projected benefit at his or her expected retirement date, prorated for service credited on the *valuation date* over service expected to be credited at the expected retirement date. For retired participants and terminated vested participants entitled to deferred benefits, the *projected benefit obligation* is the actuarial present value of the benefit to which the *participant* is entitled on the *valuation date*.



Rate of Return is the actual or expected investment income (including interest, dividends, realized gains/(losses) and unrealized appreciation/(depreciation)) as a percentage of a plan's average assets. The rate can be measured on various bases — for example, an actuarial rate based on the *actuarial value of assets*, a market rate based on the market value of assets, etc.

Unfunded means not provided by the value of assets.

Unfunded Actuarial Accrued Liability is the excess of the *actuarial accrued liability* over the *actuarial value of assets*.

Unfunded Old Liability\* is the *unfunded current liability* of the plan as of the beginning of the first *plan year* beginning after 1987, determined without regard to any plan amendment adopted after October 16, 1987 that increases plan liabilities.

Unfunded Old Liability Amount\* is the amount necessary to amortize the *unfunded old liability* under the plan in equal annual installments over a period of 18 *plan years* beginning with the first *plan year* beginning after 1988.

Valuation — See *Actuarial Valuation*.

Valuation Date is the date as of which the actuarial status of the plan is determined.

Vested Benefit is a benefit that is not forfeited if the *participant* has a permanent break in service.

\*—These terms are used primarily for private plans covered by ERISA.