# Public School Retirement System of the School District of Kansas City, Missouri

Actuarial Valuation as of January 1, 2006

December 2006





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#### **SECTION 1**

#### REPORT OF THE ACTUARY

#### PURPOSE OF THE REPORT

This report is submitted in accordance with Section 169.291-15 Revised Statues 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, 2006. It is based on revised actuarial assumptions, adopted following the actuarial experience study for the period ending December 31, 2005. It reflects an \$800 payment as of February, 2007 as a 13th check supplement for eligible retired members and a 3.0% COLA effective January 1, 2006 for members who retired prior to January 1, 2006, payable beginning February 1, 2007. 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 10%, so the results in this report assume a cumulative maximum of 10%, not 100%. This is a decrease from the prior valuation, which assumed a 19% cumulative maximum.

Actuarial experience for 2005 combined with the effect of the change in actuarial assumptions resulted in a decrease in the cumulative maximum COLA to 10%. The net effect was to reduce the annual required contribution rate for the 2006 Plan Year to 6.28% of covered payroll from



6.52% for the 2005 Plan Year. The 2006 rate is below the statutory 7.50% which became effective January 1, 1999. As in prior years, 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 to the active member records where it appeared necessary to provide information which would provide a more accurate basis for the actuarial valuation.

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 decreased to a negative \$8,125,277 on January 1, 2006 as compared to a negative \$15,973,408 on January 1, 2005. Investment experience was unfavorable for 2005. The actuarial value of assets had a 7.17% rate of return or a loss of \$6,170,714. Experience from non-investment sources was favorable and resulted in an overall net gain of \$8,896,298. The increase in the UAAL is primarily the result of the change in actuarial assumptions. 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 6.28% 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.

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,

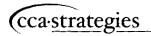
James S. Rubie, Jr., ES.A



# SECTION 2 SUMMARY OF PRINCIPAL VALUATION RESULTS AND COMPARISON WITH THE PRIOR YEAR

	_January 1, 2006_	_January 1, 2005
Plan Members	····	
Active Members Retired Members & Beneficiaries	4,808 3,140	5,005 2,951
Inactive Members* Total	869 8,817	1,043 8,999
Annual Covered Compensation	\$187,445,140	\$195,866,663
Actuarial Present Value of Future Benefits	949,233,213	978,325,615
Actuarial Present Value of Projected Accrued		
Benefits	789,187,546	760,423,378
Unfunded Actuarial Accrued Liability	(8,125,277)	(15,973,408)
Assets		
Actuarial Value Market Value	788,788,666 764,105,809	763,684,602 736,538,823
Employer Normal Cost — Due December 31	12,495,799	14,188,510
As a % of Covered Compensation	6.67%	7.24%
Annual Required Employer Contribution		
Due December 31 As a % of Covered Compensation	\$ 11,774,051 6.28%	\$ 12,769,634 6.52%
Projected Actual — Due December 31 of the following year	\$ 14,058,386	\$ 14,690,000
As a % of Covered Compensation	7.50%	7.50%
Ratio of Assets to Actuarial Present Value of Projected Accrued Benefits		
At Actuarial Value At Market Value	100% 97%	100% 97%

<sup>\*</sup>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 period ending December 31, 2005. The next five-year analysis will be for the period ending December 31, 2010, and any new assumptions will be reflected in the January 1, 2011 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**

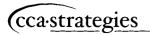
To determine the funding requirements of the System, it is necessary to employ an actuarial cost method. The choice of the cost method does not affect the balance sheet financial status, which



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, 2006

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, 2006 This data is summarized in Exhibits F,
   G and H.
- The statutes in effect on January 1, 2006 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, 2006 Fund values and summaries of fund activities and investment performance during 2005 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) (ii) (iii) (iv) (v)	Retirement benefits Vested withdrawal benefits Refund of contributions Survivor benefits Disability benefits	\$382,589,163 52,222,980 8,469,526 15,670,870 12,436,468		
		Tota	I		\$	471,389,007
	(b)	Reti	red Members and Beneficiaries			472,540,070
	(c)	Inac	tive Members*		_	5,304,136
	(d)	Tota	I Actuarial Present Value of Future Benefits		\$	949,233,213
(2)	Emp	oloyer	Normal Cost as of January 1, 2006			11,570,184
(3)	Tota	I Cov	ered Compensation			187,445,140
(4)	Employer Normal Cost Rate: (2) / (3) 6.1726%					6.1726%
(5)	) Actuarial Present Value of Future Covered Compensation of Current Members					,232,905,100
(6)	Actuarial Present Value of Future Employer Normal Costs: (4) x (5)					76,101,942
(7)	7) Actuarial Present Value of Future Member Contributions 92					92,467,883
(8)	Actu	ıarial	Accrued Liability: (1) - (6) - (7)			780,663,389
(9)	Actu	ıarial	Value of Assets as of January 1, 2006			788,788,666
(10)	Unfu	unded	Actuarial Accrued Liability: (8) - (9)			(8,125,277)
(11)			to Amortize the Unfunded Actuarial Liability over 30 years from January 1, 2006			(721,748)
(12)			ost Contribution due by December 31, 2006: ed for interest at 8%			12,495,799
(13)	Ann	ual R	equired Contribution due December 31, 2006	5		11,774,051
(14)	Contribution Rate: (13) / (3) 6.28%					6.28%

<sup>\*</sup>Includes former Members entitled to refunds.



# TABLE B ACTUARIAL BALANCE SHEET AS OF JANUARY 1, 2006

#### **ACTUARIAL ASSETS**

Actuarial Value of Present Assets	\$788,788,666		
Actuarial Present Value of Future Member Contributions			92,467,883
Actuarial Present Value of Future Employer Contributions			92,467,883
Total Present and Future Assets			\$973,724,432
ACTUARIAL LIABILITIE	<u>S</u>		
Actuarial Present Value of Benefits Now Payable	\$472,540,070		
Actuarial Present Value of Benefits Payable in the Future			
Active Members — Plan A	\$	71,047	
Active Members — Plan B	471	,317,960	
Terminated Members	5	<u>,304,136</u>	
Total Payable in the Future			476,693,143
Total Liabilities for Benefits			\$949,233,213
Actuarial Surplus / (Deficit)			\$ 24,491,219



# TABLE C <u>DETERMINATION OF ACTUARIAL GAINS / (LOSSES)</u>

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 2005. Unfavorable investment experience combined with unfavorable non-investment experience increased the UAAL by about \$7.9 million.

(16,013,212) 13,142,313
13,142,313
(229,672)
14,403,912
0
18,275,504
771,021
(8,125,277)
8,896,298
(6,170,714)
15,067,012



# TABLE D PROJECTED BENEFIT OBLIGATION FUNDED STATUS

As of January 1, 2006 the Projected Benefit Obligation was:

Retired Members and Beneficiaries currently receiving benefits and terminated members not yet receiving benefits	\$477,844,206
Current Active Members	
<ul> <li>Accumulated Member Contributions, Including Interest</li> </ul>	133,811,729
- Employer-financed Vested Benefits	<u>177,531,611</u>
Total Projected Benefit Obligation	\$789,187,546
of January 1, 2006 the Projected Reposit Obligation was funded as fo	llowe

As of January 1, 2006 the Projected Benefit Obligation was funded as follows:

Net Assets Available for Benefits at Actuarial Value	\$788,788,666
Unfunded Projected Benefit Obligation at Actuarial Value	398,880
Actuarial Value Funding Ratio	100%
Net Assets Available for Benefits at Market Value	\$764,105,809
Unfunded Projected Benefit Obligation at Market Value	25,081,737
Market Value Funding Ratio	97%



#### **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 on the following page illustrates the history of the liabilities of the system and is indicative of the system following the discipline of level percent of compensation funding.



TABLE E PRIORITIZED SOLVENCY TEST

Valuation Date January 1	Active Member's Accumulated Contributions	Retirants, Beneficiaries and Inactive Members	Active Members (Employer- Financed)	Valuation Assets		ent Covere	
	(1)	(2)	(3)		(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%
2005	127,221,118	431,366,177	201,836,083	763,684,602	100%	100%	102%
2006	133,811,729	477,844,206	177,531,611	788,788,666	100%	100%	100%



# 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.

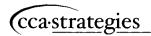
Schedule of Funding Progress

Contradict of Fanding Frogress						
Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)			Covered Payroll	UAAL as a Percentage of Covered Payroll
	(a)	(b)	(b) - (a)	(a) / (b)	(c)	((b) - (a)) / (c)
1/1/95 1/1/96 1/1/97 1/1/98 1/1/99 1/1/00 1/1/01 1/1/02 1/1/03	\$353,329,957 389,103,803 428,419,710 482,599,919 624,225,667 660,830,255 696,071,310 718,703,692 717,681,067 738,612,110	\$386,874,780 409,428,594 429,517,108 442,614,693 564,056,509 640,614,688 682,531,577 701,725,938 701,114,370 716,126,707	\$ 33,544,823 20,324,791 1,097,398 (39,985,225) (60,169,158) (20,215,567) (13,539,734) (16,977,755) (16,566,697) (22,485,404)	91.3% 95.0 99.7 102.3 110.7 103.2 102.0 102.4 102.4	\$185,374,096 171,262,008 161,802,480 168,328,728 153,733,920 151,091,616 165,795,367 171,523,233 168,391,474 186,528,530	18.1% 11.9 0.7 -23.8 -39.1 -13.4 -8.2 -9.9 -9.8
1/1/05 1/1/06	763,684,602 788,788,666	747,711,194 780,663,389	(15,973,408) (8,125,277)	102.1 101.0	195,866,663 187,445,140	-8.2 -4.3

#### Schedule of Employer Contributions

Year Ended 12/31	Annual Required Contribution	Percentage Contributed
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	122,3
2004	12,338,049	113.5
2005	12,769,634	112.8
2006	11,774,051	*

<sup>\*</sup>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 7.17% on an actuarial value basis and 7.79% on a market value basis, as compared to the assumed rate of return of 8.00% for 2005. 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. Furthermore, since the rate of return was above 7.00%, no transfer would have been made had there been a balance in the Reserve. 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.

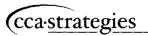


TABLE G

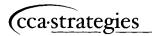
<u>DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS</u>

		Expected	Market	Actuarial
(1)	Assets on January 1, 2005	\$763,684,602	\$736,538,823	\$763,684,602
(2)	Contributions			
	Members	14,691,137	14,691,137	14,691,137
	Employers	14,403,912	14,403,912	14,403,912
(3)	Benefits Paid			
	Retired Members & Beneficiaries	49,578,062	49,578,062	49,578,062
	Refunds to Withdrawn Members	3,452,453	3,452,453	3,452,453
(4)	Expenses			
	Administrative	1,111,506	1,111,506	1,111,506
	Investment	3,072,099	3,072,099	3,072,099
(5)	Investment Increment	59,393,849	55,686,057	53,223,135
(6)	Assets on January 1, 2006	\$794,959,380	\$764,105,809	\$788,788,666
(7)	Yield for the 2005 Plan Year	8.00%	7.79%	7.17%
	Development of the Actuarial Value of As	sets as of January 1	, 2006	
(8)	Expected Value of Assets on January 1, 2	2006		\$794,959,380
(9)	Addition to Investment Stabilization Reser	rve		0
(10)	Investment Stabilization Reserve			0
(11)	Market Value of Assets on January 1, 200	06		764,105,809
(12)	Excess of Market Value over Expected Va	alue:		
	(11) - (8) - (10)			(30,853,571)
(13)	Additional investment increment: 20% x (	(12)		(6,170,714)
(14)	Actuarial Value of Assets on January 1, 2	006:		
	(8) - (9) + (13)			\$788,788,666



**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, 2001, 2003, and 2004.

#### 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

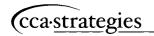
For Plan A members, the average final compensation is the average annual compensation paid in the five years of creditable service when earnings have been highest, subject to a maximum of \$3,000.

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

#### **Normal Retirement**

<u>Eligibility</u> — 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.



<u>Benefit</u> — 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

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

<u>Benefit</u> - 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

<u>Eligibility</u> - 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.

<u>Benefit</u> - 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**

<u>Eligibility</u> - 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.

<u>Benefit</u> - 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

<u>Benefit</u> - 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**

<u>Prior to Retirement</u> - 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).

<u>Post Retirement</u> - 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.

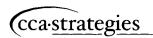
#### Optional Forms of Benefit Payments

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

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

Option 2 - Upon a retirant's death, the retirant's designated beneficiary will receive for life, a monthly benefit equal to one-half of the retirant's retirement benefit. In the event the retirant's designated beneficiary predeceases the retirant, the retirant's monthly retirement benefit will be adjusted to the amount it would have been, had the retirant 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 RP-2000 Combined Healthy Lives Mortality Table is used for active members and retired members and beneficiaries. Rates are shown in Exhibit C.

Disability Mortality -

The RP-2000 Combined Healthy Lives 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:

Year of Membership	Non-Charter School Employees	Charter School Employees
1st	25.0%	75.0%
2nd	20.0%	50.0%
3rd	15.0%	25.0%
4th	12.5%	20.0%
5th	10.0%	15.0%
6th	9.0%	12.5%
7th	8.0%	10.0%
8th	7.5%	7.5%

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

Salary Scale -

Salaries are assumed to increase at the rate of 5% per year.

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 40%

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 10%.



EXHIBIT C

MORTALITY RATES FOR ACTIVE LIVES
AND RETIRED MEMBERS AND BENEFICIARIES

	Death Rate		•		Death Rate	
Male	Age	Female		Male	<u>Age</u>	Female
.000345 .000357 .000366 .000373	20 21 22 23 24	.000191 .000192 .000194 .000197 .000201		.014409 .016075 .017871 .019802 .022206	66 67 68 69 70	.010954 .012163 .013445 .014860 .016742
.000376	25	.000207		.024570	71	.018579
.000378	26	.000214		.027281	72	.020665
.000382	27	.000223		.030387	73	.022970
.000393	28	.000235		.033900	74	.025458
.000412	29	.000248		.037834	75	.028106
.000444	30	.000264		.042169	76	.030966
.000499	31	.000307		.046906	77	.034105
.000562	32	.000350		.052123	78	.037595
.000631	33	.000394		.057927	79	.041506
.000702	34	.000435		.064368	80	.045879
.000773 .000841 .000904 .000964 .001021	35 36 37 38 39	.000475 .000514 .000554 .000598		.072041 .080486 .089718 .099779 .110757	81 82 83 84 85	.050780 .056294 .062506 .069517 .077446
.001079	40	.000706		.122797	86	.086376
.001142	41	.000774		.136043	87	.096337
.001215	42	.000852		.150590	88	.107303
.001299	43	.000937		.166420	89	.119154
.001397	44	.001029		.183408	90	.131682
.001508	45	.001124		.199769	91	.144604
.001616	46	.001223		.216605	92	.157618
.001734	47	.001326		.233662	93	.170433
.001860	48	.001434		.250693	94	.182799
.001995	49	.001550		.267491	95	.194509
.002138	50	.001676		.283905	96	.205379
.002449	51	.001852		.299852	97	.215240
.002667	52	.002018		.315296	98	.223947
.002916	53	.002207		.330207	99	.231387
.003196	54	.002424		.344556	100	.237467



	Death Rate			Death Rate	
Male	<u>Age</u>	Female	Male	<u>Age</u>	Female
.003624 .004200 .004693 .005273	55 56 57 58	.002717 .003090 .003478 .003923	.358628 .371685 .353040 .392003	101 102 103 104	.244834 .254498 .266044 .279055
.005945 .006747 .007676 .008757	59 60 61 62	.004441 .005055 .005814 .006657	.397886 .40000 .40000 .40000	105 106 107 108 109	.293116 .307811 .322725 .337441
.010012 .011280 .012737	63 64 65	.007648 .008619 .009706	.400000 .400000	110	.351544 .364617



EXHIBIT D

<u>DISABLED LIFE MORTALITY RATES</u>

	Death Rate			Death Rate	
Male	<u>Age</u>	Female	<u>Male</u>	<u>Age</u>	Female
.000376	20	.000207	.017871	63	.013445
.000378	21	.000214	.019802	64	.014860
.000382	22	.000223	.022206	65	.016742
.000393	23	.000235	.024570	66	.018579
.000412	24	.000248	.027281	67	.020665
.000444	25	.000264	.030387	68	.022970
.000499	26	.000307	.033900	69	.025458
.000562	27	.000350	.037834	70	.028106
.000631	28	.000394	.042169	71	.030966
.000702	29	.000435	.046906	72	.034105
.000773	30	.000475	.052123	73	.037595
.000841	31	.000514	.057927	74	.041506
.000904	32	.000554	.064368	75	.045879
.000964	33	.000598	.072041	76	.050780
.001021	34	.000648	.080486	77	.056294
.001079	35	.000706	.089718	78	.062506
.001142	36	.000774	.099779	79	.069517
.001215	37	.000852	.110757	80	.077446
.001299	38	.000937	.122797	81	.086376
.001397	39	.001029	.136043	82	.096337
.001508	40	.001124	.150590	83	.107303
.001616	41	.001223	.166420	84	.119154
.001734	42	.001326	.183408	85	.131682
.001860	43	.001434	.199769	86	.144604
.001995	44	.001550	.216605	87	.157618
.002138	45	.001676	.233662	88	.170433
.002449	46	.001852	.250693	89	.182799
.002667	47	.002018	.267491	90	.194509
.002916	48	.002207	.283905	91	.205379
.003196	49	.002424	.299852	92	.215240
.003624	50	.002717	.315296	93	.223947
.004200	51	.003090	.330207	94	.231387
.004693	52	.003478	.344556	95	.237467
.005273	53	.003923	.358628	96	.244834
.005945	54	.004441	.371685	97	.254498



	Death Rate			Death Rate	
Male	Age	<u>Female</u>	<u>Male</u>	<u>Age</u>	Female
.006747	55	.005055	.353040	98	.266044
.007676	56	.005814	.392003	99	.279055
.008757	57	.006657	.397886	100	.293116
.010012	58	.007648	.400000	101	.307811
.011280	59	.008619	.400000	102	.322725
.012737	60	.009706	.400000	103	.337441
.014409	61	.010954	.400000	104	.351544
.016075	62	.012163	.400000	105	.364617



# EXHIBIT E ACTIVE MEMBER RATES OF DECREMENT AND SALARY INCREASE

Attained	Withdrawal	Disability	Retirement
Age	Rate	<u>Rate</u>	Rate
20 21 22 23 24	18.00% 17.10 16.20 15.30 14.40	0% .01 .02 .03 .04	- - - -
25 26 27 28 29	13.50 12.60 11.70 10.80 9.90	.05 .06 .07 .08 .09	- - - -
30 31 32 33 34	9.00 8.64 8.28 7.92 7.56	.10 .10 .10 .10 .10	- - - -
35	7.20	.10	-
36	6.84	.10	-
37	6.48	.10	-
38	6.12	.10	-
39	5.76	.10	
40 41 42 43 44	5.40 5.22 5.04 4.86 4.68	.10 .11 .12 .13 .14	- - - -
45	4.50	15	2.0%
46	4.32	.17	2.0%
47	4.14	.19	2.0%
48	3.96	.21	2.0%
49	3.78	.23	2.0%
50	3.60	.25	2.0%
51	3.51	.28	2.0%
52	3.42	.31	2.0%
53	3.33	.34	2.0%
54	3.24	.37	2.0%



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

#### **EXHIBIT F**

### AGE — SERVICE DISTRIBUTION AS OF JANUARY 1, 2006

#### SCHOOL DISTRICT

Years of Service

Age Group	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40-44	45+	Total
					<u> </u>										
20-24	43	35	11	7	4	0	0	0	0	0	0	0	0	0	100
25-29	81	64	41	50	25	27	0	0	0	0	0	0	0	0	288
30-34	48	43	36	34	28	76	9	0	0	0	0	0	0	0	274
35-39	35	38	29	34	26	90	52	25	0	0	0	0	0	0	, 329
40-44	51	43	38	39	35	116	73	77	15	. 0	0	0	0	0	487
45-49	55	55	48	46	37	124	87	104	63	24	0	0	0	0	643
50-54	66	51	37	45	34	126	119	146	69	57	22	0	0	0	772
55-59	49	38	41	29	48	113	107	160	66	36	42	18	0	0	747
60-64	17	17	28	20	13	74	73	63	36	26	16	22	4	0	409
65-69	5	7	6	7	2	21	18	25	9	7	5	8	2	0	122
70+	1	4	3	3	2	9	4	8	3	3	2	2	4	3	51
Total	451	395	318	314	254	776	542	608	261	153	87	50	10	3	4,222

### EXHIBIT F (Continued)

### AGE — SERVICE DISTRIBUTION AS OF JANUARY 1, 2006

#### **LIBRARY**

Years of Service

Age Group	0	1	_2_	_3_	4_	5-9	10-14	<u>15-19</u>	20-24	25-29	30-34	35-39	40-44	<u>45+</u>	Total
20-24	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29	1	0	1	0	3	1	0	0	0	0	0	0	0	0	6
30-34	0	0	0	1	1	2	0	0	0	0	0	0	0	0	4
35-39	0	0	1	2	1	3	3	1	0	0	0	0	0	0	11
40-44	0	1	1	0	3	6	1	2	1	0	0	0	0	0	15
45-49	1	2	2	1	2	3	6	2	4	1	0	0	0	0	24
50-54	0	0	0	1	1	5	3	6	1	2	2	0	0	0	21
55-59	0	0	0	1	0	3	2	3	2	3	3	2	0	0	19
60-64	0	0	0	1	0	2	4	4	0	1	1	1	0	0	14
65-69	0	0	0	0	0	0	1	0	0	0	0	0	0	0	1
70+	0	0	0	0	0	0	0	1	2	0	0	0	0	0	3
Total	2	3	5	7	11	25	20	19	10	7	6	3	0	0	118

### EXHIBIT F (Continued)

### AGE — SERVICE DISTRIBUTION \_\_\_AS OF JANUARY 1, 2006

#### **CHARTER SCHOOLS**

Year:	പെ	S	>rvi	0
(Cal	3 VI	- 0	- V	1.0

Age Group	_0_	1	_2_	3_	_4_	5-9	10-14	<u>15-19</u>	20-24	25-29	30-34	35-39	40-44	45+	Total
20-24	7	7	0	0	0	0	0	0	0	0	0	0	0	0	14
25-29	10	26	15	6	2	4	0	0	0	0	0	0	0	0	63
30-34	18	20	8	13	8	12	0	0	0	0	0	0	0	0	79
35-39	19	14	8	7	7	8	0	0	0	0	0	0	0	0	63
40-44	11	14	9	7	1	8	0	0	0	0	0	0	0	0	50
45-49	10	12	9	7	6	5	0	0	0	0	0	0	0	0	49
50-54	12	12	9	9	5	10	0	0	0	0	0	0	0	0	57
55-59	10	7	4	8	3	14	0	0	0	0	0	0	0	0	46
60-64	10	6	5	1	2	7	0	0	0	0	0	0	0	0	31
65-69	1	1	0	1	1	1	0	0	0	0	0	0	0	0	5
70+	2	0	0	2	1	0	0	0	0	0	0	0	0	0	5
Total	110	119	67	61	36	69	0	0	0	0	0	0	0	0	462