Minneapolis Teachers' Retirement Fund Association

Actuarial Valuation and Review as of July 1, 2004

Copyright © 2004

THE SEGAL GROUP, INC.,
THE PARENT OF THE SEGAL COMPANY
ALL RIGHTS RESERVED



The Segal Company 6300 S. Syracuse Way, Suite 750 Englewood, CO 80111 T 303.714.9900 F 303.714.9990 www.segalco.com

December 16, 2004

Ms. Karen U. Kilberg Minneapolis Teachers' Retirement Fund Association 730 Second Avenue South, Suite 815 Minneapolis, Minnesota 55402

Dear Ms. Kilberg:

We are pleased to submit this Actuarial Valuation and Review as of July 1, 2004. It summarizes the actuarial data used in the valuation, establishes the funding requirements for fiscal 2004 and analyzes the preceding year's experience.

The census information on which our calculations were based was prepared by the Fund and the financial information was provided by the Fund. That assistance is gratefully acknowledged. The actuarial calculations were completed under our supervision.

This actuarial valuation has been completed in accordance with generally accepted actuarial principles and practices. To the best of our knowledge, the information supplied in this actuarial valuation is complete and accurate.

We look forward to reviewing this report at your next meeting and to answering any questions.

Sincerely,

THE SEGAL COMPANY

By:

Leslie L. Thompson, FSA, MAAA, EA Wally Malles, ASA, MAAA, EA Susan M. Hogarth
Senior Vice President and Actuary Associate Actuary Actuarial Associate

cc: Legislative Commission on Pensions and Retirement (3 copies)
Minnesota Legislative Reference Library (6 copies)
Minnesota Department of Finance (2 copies)

SECTION 1

VALUATION COMMAN	
Purpose	i
Significant Issues in Valuation Year	ii
Summary of Key Valuation Resultsi	ii

VALUATION SUMMARY

SECTION 2

VA	ALUATION RESULTS
A.	Member Data 1
B.	Financial Information4
C.	Actuarial Experience 5
D.	Information Required by the GASB

SECTION 3

SUPPLEMENTAL

INFORMATION EXHIBIT A Table of Plan Coverage7 EXHIBIT B Members in Active Service as of June 30. 20048 EXHIBIT C Retired Participants as of June 30, 2004......11 EXHIBIT D Disabled Members as of June 30, 2004......14 EXHIBIT E EXHIBIT F Reconciliation of Member Data.....20 EXHIBIT G Statement of Change in Assets Available for Benefits for Year EXHIBIT H Accounting Balance Sheet for Year EXHIBIT I Development of the Fund Through June 30, 200423 EXHIBIT J

Development of

EXHIBIT K

Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 200424

Definitions of Pension Terms25

SECTION 4

REPORTING INFORMATION
EXHIBIT I Summary of Actuarial Valuation Results27
EXHIBIT I (continued) Summary of Actuarial Valuation Results28
EXHIBIT II Actuarial Balance Sheet29
EXHIBIT III Supplementary Information Required by the GASB – Schedule of Employer Contributions
EXHIBIT IV Supplementary Information Required by the GASB – Schedule of Funding Progress
EXHIBIT V Determination of Contribution Sufficiency – Total32
EXHIBIT VI Determination of Contribution Sufficiency – Basic
EXHIBIT VII Determination of Contribution Sufficiency – Coordinated
EXHIBIT VIII Supplementary Information Required by the GASB
EXHIBIT IX Actuarial Assumptions and Actuarial Cost Method36
EXHIBIT X Summary of Plan Provisions - Basic 43
EXHIBIT XI Summary of Plan Provisions – Coordinated

Purpose

This report has been prepared by The Segal Company to present a valuation of the Minneapolis Teachers' Retirement Fund Association as of July 1, 2004. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits. The contribution requirements presented in this report are based on:

- > Section 356.215 of the Minnesota Statutes;
- > The benefit provisions of the Retirement Fund, as administered by the Legislative Commission on Pensions and Retirement;
- > The characteristics of covered active members, inactive vested members, pensioners and beneficiaries as of July 1, 2004, provided by the Fund;
- > The assets of the Fund as of June 30, 2004, provided by the Fund;
- > Economic assumptions regarding future salary increases and investment earnings; and
- > Other actuarial assumptions, regarding employee terminations, retirement, death, etc.

Significant Issues in Valuation Year

The following key findings were the result of this actuarial valuation:

- > The actuarial accrued liability funded ratio based on the actuarial value of assets over the actuarial accrued liability as of July 1, 2004 is 50.75% compared to 57.23% as of July 1, 2003. This ratio is a measure of funding status, and its history is a measure of funding progress, and is the ratio required to be reported under GASB 25.
- > As indicated on page 4 of this report, the total unrecognized investment loss as of June 30, 2004 is \$114,674,701. This investment loss will be recognized in the determination of the actuarial value of assets for funding purposes in the next few years, to the extent it is not offset by recognition of investment gains derived from future experience.
- > The statutory contribution rate under Chapter 354A is equal to 22.87% of payroll compared to the required contribution rate under Chapter 356 of 38.11% of payroll. Therefore, the contribution deficiency is 15.24% of payroll as of July 1, 2004.
- > There were no changes in plan provisions, actuarial assumptions or actuarial cost methods since the prior valuation. This is the first year that The Segal Company prepared the actuarial valuation of the Fund.

SECTION 1: Valuation Summary for the Minneapolis Teachers' Retirement Fund Association

Summary of Key Valuation Results	2004	2003
Contributions (% of payroll) for plan year beginning January 1:		
Statutory – Chapter 354A	22.87%	22.49%
Required – Chapter 356	38.11%	31.96%
Sufficiency/(Deficiency)	-15.24%	-9.47%
Funding elements for plan year beginning July 1:		
Normal cost	\$23,889,438	\$27,426,000
Market value of assets	763,089,276	719,599,000
Actuarial value of assets (AVA)	877,763,977	956,913,000
Actuarial accrued liability (AAL)	1,729,551,327	1,671,982,000
Unfunded/(Overfunded) actuarial accrued liability	851,787,350	715,069,000
Funded ratios:		
Accrued Benefit Funded Ratio	52.44%	58.97%
Current assets (AVA)	\$877,763,977	\$956,913,000
Current benefit obligations	1,673,999,414	1,622,719,000
Projected Benefit Funded Ratio	72.96%	79.63%
Current and expected future assets	\$1,425,914,880	\$1,532,096,000
Current and expected future benefit obligations (Present Value of Benefits)	1,954,384,577	1,924,098,000
GASB 25/27 for plan year beginning January 1:		
Annual required employer contributions	\$58,809,150	\$55,202,000
Accrued Liability Funded Ratio (AVA/AAL)	50.75%	57.23%
Covered actual payroll	\$232,386,459	\$247,418,000
Demographic data for plan year beginning July 1:		
Number of pensioners and beneficiaries	3,764	3,642
Number of vested terminated members	1,243	1,123
Number of other non-vested terminated members	3,384	3,057
Number of active members	5,023	5,381
Number of members on leave of absence*	51	56
Total projected payroll**	\$249,069,999	\$264,766,000
Average annual payroll (projected dollars)**	49,088	49,204

^{*} For 2004, members on leave of absence treated as active members. For 2003, members on leave of absence treated as vested terminated members.

^{**} Includes members on leave of absence for 2004.

A. MEMBER DATA

The Actuarial Valuation and Review considers the number and demographic characteristics of covered members, including active members, vested terminated members, pensioners and beneficiaries. This section presents a summary of significant statistical data on these member groups.

More detailed information for this valuation year and the preceding valuation can be found in Section 3, Exhibits A, B, C, D, E and F.

A historical perspective of how the member population has changed over the past three valuations can be seen in this chart.

CHART 1 Member Population: 2002 – 2004

Year Ended June 30	Active Members*	Vested Terminated Members**	Pensioners and Beneficiaries	Ratio of Non-Actives to Actives
2002	5,720	1,043	3,572	0.81
2003	5,381	1,123	3,642	0.89
2004	5,074	1,243	3,764	0.99

^{*} For 2004, includes 51 members on leave of absence.

^{**} Excludes terminated members due a refund of employee contributions.

Active Members

Plan costs are affected by the age, years of service and payroll of active members. In this year's valuation, there were 5,074 active members (including 51 members on leave of absence) with an average age of 43.8, average years of service of 9.5 years and average projected payroll of \$49,088. The 5,381 active members in the prior valuation had an average age of 42.8, average service of 9.0 years and average projected payroll of \$49,204.

Inactive Members

In this year's valuation, there were 1,243 members with a vested right to a deferred or immediate vested benefit.

In addition, there were 3,384 other non-vested terminated members entitled to a return of their employee contributions.

These graphs show a distribution of active members by age and by years of service.

CHART 2
Distribution of Active Members by Age as of June 30, 2004

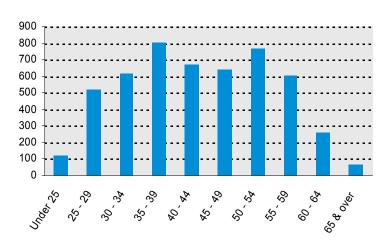
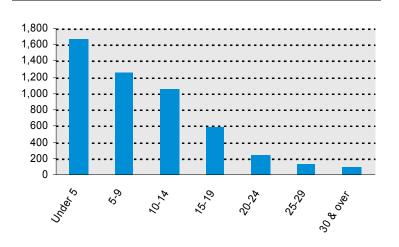


CHART 3
Distribution of Active Members by Years of Service as of June 30, 2004



Pensioners and Beneficiaries

As of June 30, 2004, 3,473 pensioners (including 24 disabled participants) and 291 beneficiaries were receiving total monthly benefits of \$10,016,143. For comparison, in the previous valuation, there were 3,357 pensioners (including 23 disableds) and 285 beneficiaries receiving monthly benefits of \$9,505,787.

These graphs show a distribution of the current pensioners and beneficiaries based on their monthly amount and age, by type of pension.

■ Disability
■ Survivor
■ Service

CHART 4
Distribution of Pensioners and Beneficiaries by Type and by Monthly Amount as of June 30, 2004

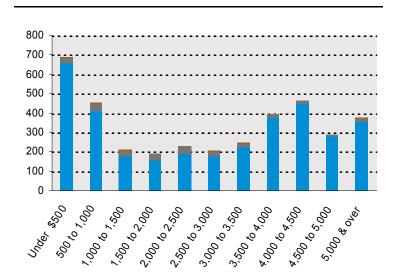
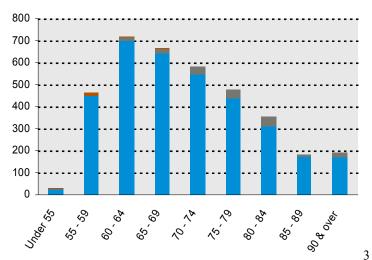


CHART 5

Distribution of Pensioners and Beneficiaries by Type and by Age as of June 30, 2004



B. FINANCIAL INFORMATION

It is desirable to have level and predictable plan costs from one year to the next. For this reason, the Minnesota Statutes require an asset valuation method that gradually adjusts to market value. Under this valuation method, the full value of market fluctuations is not recognized in a single year and, as a result, the asset value and the plan costs are more stable. The amount of the adjustment to recognize market value is treated as income, which may be positive or negative. Realized and unrealized gains and losses are treated equally and, therefore, the sale of assets has no immediate effect on the actuarial value

Both the actuarial value and market value of assets are representations of the Fund's financial status. As investment gains and losses are gradually taken into account, the actuarial value of assets tracks the market value of assets. The actuarial asset value is significant because the Fund's liabilities are compared to these assets to determine what portion, if any, remains unfunded. Amortization of the unfunded actuarial accrued liability is an important element in determining the contribution requirement.

The chart shows the determination of the actuarial value of assets as of the valuation date.

CHART 6

Determination of Actuarial Value of Assets for Year Ended June 30, 2004

1.	Market value of assets available for benefits			\$763,089,276
		Original Amount	% Not Recognized	
2.	Calculation of unrecognized return			
	(a) Year ended June 30, 2004	\$48,441,874	80%	\$38,753,499
	(b) Year ended June 30, 2003	-57,727,000	60%	-34,636,200
	(c) Year ended June 30, 2002	-187,993,000	40%	-75,197,200
	(d) Year ended June 30, 2001	-217,974,000	20%	<u>-43,594,800</u>
	(e) Total unrecognized return			-\$114,674,701
3.	Actuarial value of assets: (1) – (2e) ("Current Assets")			<u>\$877,763,977</u>

C. ACTUARIAL EXPERIENCE

To calculate the required contribution, assumptions are made about future events that affect the amount and timing of benefits to be paid and assets to be accumulated. Each year actual experience is measured against the assumptions. If overall experience is more favorable than anticipated (an actuarial gain), the contribution requirement will decrease from the previous year. On the other hand, the contribution requirement will increase if overall actuarial experience is less favorable than expected (an actuarial loss).

Taking account of experience gains or losses in one year without making a change in assumptions reflects the belief that the single year's experience was a short-term development and that, over the long term, experience will return to the original assumptions.

For contribution requirements to remain stable, assumptions should approximate experience.

If assumptions are changed, the contribution requirement is adjusted to take into account a change in experience anticipated for all future years.

The total loss is \$104,251,651, which includes a loss of \$94,369,236 from investments and a loss of \$9,882,415 from all other sources. The net experience variation from individual sources other than investments was 0.6% of the actuarial accrued liability, which is less than 1.0% of the actuarial accrued liability, and includes age/service retirements, disability, mortality (pre and post-retirement), withdrawal, and salary increases.

5

This chart provides a summary of the actuarial experience during the past year.

*SEGAL

CHART 7

Actuarial Experience for Year Ended June 30, 2004

1.	Net gain/(loss) from investments	-\$94,369,236
2.	Net gain/(loss) from other experience	<u>-9,882,415</u>
3.	Net experience gain/(loss): $(1) + (2)$	-\$104,251,651

D. INFORMATION REQUIRED BY THE GASB

Governmental Accounting Standards Board (GASB) reporting information provides standardized information for comparative purposes of governmental pension plans. This information allows a reader of the financial statements to compare the funding status of one governmental plan to another on relatively equal terms.

Critical information to GASB is the historical comparison of the GASB required contribution to the actual contributions. This comparison demonstrates whether a plan is being funded on an actuarially sound basis and in accordance with the GASB funding requirements. Section 4, Exhibit III presents a schedule of this information for the Fund.

The other critical piece of information regarding the Fund's financial status is the funded ratio. This ratio compares the actuarial value of assets to the actuarial accrued liabilities of the plan as calculated under GASB. High ratios indicate a well-funded plan with assets sufficient to pay most benefits. Lower ratios may indicate recent changes to benefit structures, funding of the plan below actuarial requirements, poor asset performance, or a variety of other changes.

GASB requires that the actuarial value of assets be used to determine the funded ratio, as shown in Section 4, Exhibit IV.

SECTION 3: Supplemental Information for the Minneapolis Teachers' Retirement Fund Association

EXHIBIT A

Table of Plan Coverage

	Year End	ed June 30	
Category	2004	2003	— Change From Prior Year
Active members in valuation*:			
Number	5,074	5,381	-5.7%
Average age	43.8	42.8	N/A
Average service	9.5	9.0	N/A
Total projected payroll	\$249,069,999	\$264,766,000	-5.9%
Average projected payroll	49,088	49,204	-0.2%
Total active vested members	4,011	4,045	-0.8%
Vested terminated members	1,243	1,179	5.4%
Retired participants:			
Number in pay status	3,449	3,334	3.4%
Average age	70.3	70.2	N/A
Average monthly benefit	\$2,699	\$2,656	1.6%
Disabled members:			
Number in pay status	24	23	4.3%
Average age	57.1	58.0	N/A
Average monthly benefit	\$2,932	\$3,052	-3.9%
Beneficiaries:			
Number in pay status	291	285	2.1%
Average age	75.5	75.9	N/A
Average monthly benefit	\$2,189	\$2,168	3.1%
Other non-vested terminated members	3,384	3,057	10.7%

^{*} For 2004, includes 51 members on leave of absence.

EXHIBIT B-1

Members in Active Service as of June 30, 2004

By Age, Years of Service, and Average Projected Payroll - Total

_	Years of Service										
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & Over			
Under 25	120	120									
	\$10,481	\$10,481									
25 - 29	519	426	93								
	26,402	22,568	\$43,965					-			
30 - 34	615	279	298	38				-			
	38,950	29,093	46,509	\$52,045				-			
35 - 39	805	305	302	189	9			-			
	43,832	31,211	48,353	55,920	\$65,949						
40 - 44	672	131	163	223	130	25		-			
	54,328	34,657	52,701	61,638	61,316	\$66,481		-			
45 - 49	642	138	147	168	129	50	10	-			
	55,748	33,789	53,842	62,347	66,796	68,701	\$68,644				
50 - 54	765	128	116	221	148	67	68	11			
	60,952	32,660	56,453	63,402	71,923	72,708	74,885	\$75,24			
55 - 59	607	89	93	140	116	77	46	40			
	60,697	29,369	57,598	61,427	68,288	70,675	74,030	76,173			
60 - 64	262	39	31	65	56	27	15	29			
	60,615	32,310	47,266	60,998	69,926	72,501	78,834	73,622			
65 & Over	67	17	11	14	8	4	2	1			
	48,054	15,709	34,178	58,103	62,138	75,957	79,585	73,00			
Total	5,074	1,672	1,254	1,058	596	250	141	103			
	\$49,088	\$27,532	\$50,082	\$60,639	\$67,383	\$70,687	\$74,650	\$74,963			

EXHIBIT B-2
Members in Active Service as of June 30, 2004
By Age, Years of Service, and Average Projected Payroll - Basic

Age	Years of Service										
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & over			
Under 25											
25 - 29											
30 - 34											
35 - 39											
40 - 44											
45 - 49	9				1	1	7				
	\$67,604				\$26,331	\$76,084	\$72,289				
50 - 54	102			5	11	15	54	17			
	75,020			\$73,215	73,134	73,830	75,832	\$75,241			
55 - 59	134			7	18	25	39	45			
	71,667			60,944	66,245	69,627	72,806	75,649			
60 - 64	61			2	6	12	14	27			
	73,699			48,089	77,046	69,425	78,112	74,464			
65 & Over	16				1	2	2	11			
	74,522				71,745	79,176	79,585	73,007			
Total	322			14	37	55	116	100			
	\$73,142			\$63,490	\$69,114	\$71,194	\$74,940	\$74,969			

EXHIBIT B-3

Members in Active Service as of June 30, 2004

By Age, Years of Service, and Average Projected Payroll - Coordinated

Age	Years of Service										
	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30 & over			
Under 25	120	120									
	\$10,481	\$10,481									
25 - 29	519	426	93					-			
	26,402	22,568	\$43,965					-			
30 - 34	615	279	298	38							
	38,950	29,093	46,509	\$52,045							
35 - 39	805	305	302	189	9						
	43,832	31,211	48,353	55,920	\$65,949						
40 - 44	672	131	163	223	130	25					
	54,328	34,657	52,701	61,638	61,316	\$66,481					
45 - 49	633	138	147	168	128	49	3				
	55,579	33,789	53,842	62,347	67,112	68,550	\$60,137				
50 - 54	663	128	116	216	137	52	14				
	58,788	32,660	56,453	63,175	71,826	72,384	71,232				
55 - 59	473	89	93	133	98	52	7	1			
	57,589	29,369	57,598	61,452	68,663	71,179	80,852	\$99,776			
60 - 64	201	39	31	63	50	15	1	2			
	56,644	32,310	47,266	61,408	69,071	74,962	88,950	62,251			
65 & Over	51	17	11	14	7	2					
	39,751	15,709	34,178	58,103	60,765	72,738					
Total	4,752	1,672	1,254	1,044	559	195	25	3			
	\$47,458	\$27,532	\$50,082	\$60,601	\$67,268	\$70,544	\$73,303	\$74,759			

EXHIBIT C-1
Retired Participants as of June 30, 2004
By Age, Years Retired and Average Annual Benefit - Total

	Years Retired										
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over		
Under 45											
									-		
45 - 49									-		
									-		
50 - 54	36	36							-		
	\$39,313	\$39,313							-		
55 - 59	494	358	136						-		
	38,136	37,432	\$39,989						-		
60 - 64	710	314	342	53	1				-		
	31,714	25,568	37,518	\$31,199	\$3,541				-		
65 - 69	627	129	278	180	38	1	1		-		
	31,333	20,871	28,630	43,389	30,236	\$20,642	\$14,914		-		
70 - 74	536	16	141	224	125	30			-		
	33,504	26,818	27,124	35,117	40,102	27,515			-		
75 - 79	434	4	19	98	194	106	12	1	-		
	34,986	7,323	28,941	33,967	35,544	39,490	14,819	\$16,654	-		
80 - 84	294		2	8	83	153	41	6			
	30,186		52,057	32,935	31,921	30,454	26,717	13,700	\$20,532		
85 - 89	168				15	70	70	10	,		
	25,727				36,347	27,067	24,362	13,395	14,33		
90 & Over	150				1	5	67	57	20		
	19,665				7,222	31,469	19,655	19,693	17,29		
Total	3,449	857	918	563	457	365	191	74	24		
	\$32,388	\$30,333	\$33,450	\$37,162	\$35,586	\$32,174	\$22,567	\$18,315	\$17,050		

EXHIBIT C-2
Retired Participants as of June 30, 2004
By Age, Years Retired and Average Annual Benefit - Basic

				Y	ears Retired	ł			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
Under 45									
45 - 49									
50 - 54	32	32							
	\$41,634	\$41,634							
55 - 59	430	302	128						- :
	42,234	42,391	\$41,864						
60 - 64	620	239	327	53	1				
	34,542	29,619	38,778	\$31,199	\$3,541				
65 - 69	536	72	247	177	38	1	1		
	34,908	28,687	31,090	43,964	30,236	\$20,642	\$14,914		
70 - 74	504	10	122	217	125	30			
	35,027	36,666	29,665	36,081	40,102	27,515			-
75 - 79	421	2	14	92	194	106	12	1	
	35,798	4,350	35,791	35,707	35,544	39,490	14,819	\$16,654	
80 - 84	293		2	7	83	153	41	6	1
	30,279		52,057	37,214	31,921	30,454	26,717	13,700	\$20,532
85 - 89	168				15	70	70	10	3
	25,727				36,347	27,067	24,362	13,395	14,331
90 & Over	150				1	5	67	57	20
	19,665				7,222	31,469	19,655	19,693	17,291
Total	3,154	657	840	546	457	365	191	74	24
	\$34,397	\$36,003	\$35,646	\$38,114	\$35,586	\$32,174	\$22,567	\$18,315	\$17,056

EXHIBIT C-3
Retired Participants as of June 30, 2004
By Age, Years Retired and Average Annual Benefit - Coordinated

				Υ	ears Retired	i			
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over
45 & Under									
45 - 49									
50 - 54	1	1							
	\$12,932	\$12,932							
55 - 59	67	59	8						
	11,173	11,334	\$9,988						
60 - 64	90	75	15						
	12,226	12,661	10,051						
65 - 69	91	57	31	3					
	10,273	10,997	9,023	\$9,450					
70 - 74	32	6	19	7					
	9,513	10,404	10,808	\$5,236					
75 - 79	13	2	5	6					
	8,703	10,296	9,760	7,292					
80 - 84	1			1					
	2,979			2,979					
85 - 89									
90 & Over									
Total	295	200	78	17					
	\$10,906	\$11,705	\$9,802	\$6,572					

SECTION 3: Supplemental Information for the Minneapolis Teachers' Retirement Fund Association

EXHIBIT D-1
Disabled Members as of June 30, 2004
By Age, Years Disabled and Average Annual Benefit - Total

		Years Disabled												
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over					
Under 45														
45 - 49	2	2												
	\$3,223	\$3,223												
50 - 54	5	1	3	1										
	23,383	9,123	\$22,003	\$41,782										
55 - 59	10	6	2	1	1									
	38,308	32,015	56,945	39,900	\$37,198									
60 - 64	7	1	2	3	1									
	48,281	7,614	70,984	51,768	33,082									
65 - 69														
70 - 74														
75 - 79														
80 - 84														
85 - 89														
90 & Over														
Total	24	10	7	5	2									
	\$35,183	\$21,527	\$45,981	\$47,397	\$35,140									

SECTION 3: Supplemental Information for the Minneapolis Teachers' Retirement Fund Association

EXHIBIT D-2
Disabled Members as of June 30, 2004
By Age, Years Disabled and Average Annual Benefit - Basic

	Years Disabled												
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & over				
45 & Under													
45 - 49													
50 - 54	3		2	1									
	\$32,547		\$27,929	\$41,782									
55 - 59	6	2	2	1	1								
	49,578	\$53,241	56,945	39,900	\$37,198								
60 - 64	7	1	2	3	1								
	48,281	7,614	70,984	51,768	33,082								
65 - 69													
70 - 74													
75 - 79													
80 - 84													
85 - 89													
90 & Over													
Total	16	3	6	5	2								
	\$45,817	\$38,032	\$51,952	\$47,397	\$35,140								

EXHIBIT D-3
Disabled Members as of June 30, 2004
By Age, Years Disabled and Average Annual Benefit - Coordinated

	Years Disabled												
Age	Total	Under 5	5-9	10-14	15-19	20-24	25-29	30-34	35 & ove				
Under 45									-				
									-				
45 - 49	2	2							-				
	\$3,223	\$3,223							-				
50 - 54	2	1	1						-				
	9,636	9,123	\$10,149						-				
55 - 59	4	4							-				
	21,402	21,402							-				
60 - 64									-				
									-				
65 - 69									-				
									-				
70 - 74									-				
									-				
75 - 79									-				
									-				
80 - 84									_				
									-				
85 - 89									-				
									_				
90 & Over									-				
									_				
Total	8	7	1						_				
	\$13,916	\$14,454	\$10,149						-				

EXHIBIT E-1
Beneficiaries as of June 30, 2004
By Age, Years Since Death and Average Annual Benefit - Total

			Y	ears Since Dea	ıth		
Age	Total	Under 5	5-9	10-14	15-19	20-24	25 & Ove
Under 50	52	16	24	3	5	3	1
	\$15,365	\$20,574	\$14,906	\$13,557	\$3,187	\$16,367	\$6,315
50 - 54	9	4	2	1	1	1	
	12,123	11,751	15,515	17,478	6,441	7,149	
55 - 59	7	4	2	1			_
	39,300	24,140	44,707	89,127			-
60 - 64	17	12	5				-
	21,133	26,059	9,310				-
65 - 69	32	13	8	10			
	39,925	41,027	28,533	49,802			17,97
70 - 74	42	13	13	6	8		2
	30,879	29,813	31,349	33,357	31,850		23,43
75 - 79	51	22	9	7	7	5	
	29,790	29,692	19,687	43,462	37,107	21,871	15,539
80 - 84	47	18	12	7		5	:
	26,191	26,153	26,402	30,410		25,775	20,330
85 & Over	34	7	6	8	3	6	4
	22,810	28,100	28,371	20,388	20,619	17,668	19,41
Total	291	109	81	43	24	20	14
	\$26,267	\$27,771	\$22,528	\$35,480	\$24,949	\$20,024	\$19,00

EXHIBIT E-2 Beneficiaries as of June 30, 2004 By Age, Years Since Death and Average Annual Benefit - Basic

			Y	ears Since Dea	th		
Age	Total	Under 5	5-9	10-14	15-19	20-24	25 & Over
Under 50	52	16	24	3	5	3	1
	\$15,365	\$20,574	\$14,906	\$13,557	\$3,187	\$16,367	\$6,315
50 - 54	9	4	2	1	1	1	
	12,123	11,751	15,515	17,478	6,441	7,149	-
55 - 59	7	4	2	1			
	39,300	24,140	44,707	89,127			_
60 - 64	17	12	5				-
	21,133	26,059	9,310				_
65 - 69	31	12	8	10]
	40,463	42,508	28,533	49,802			17,974
70 - 74	42	13	13	6	8		2
	30,879	29,813	31,349	33,357	31,850		23,438
75 - 79	51	22	9	7	7	5]
	29,790	29,692	19,687	43,462	37,107	21,871	15,539
80 - 84	47	18	12	7		5	:
	26,191	26,153	26,402	30,410		25,775	_
85 & Over	34	7	6	8	3	6	2
	22,810	28,100	28,371	20,388	20,619	17,668	19,413
Total	290	108	81	43	24	20	14
	\$26,274	\$27,813	\$22,528	\$35,480	\$24,949	\$20,024	\$19,001

SECTION 3: Supplemental Information for the Minneapolis Teachers' Retirement Fund Association

EXHIBIT E-3
Beneficiaries as of June 30, 2004
By Age, Years Since Death and Average Annual Benefit - Coordinated

	Years Since Death										
Age	Total	Under 5	5-9	10-14	15-19	20-24	25 & Over				
Under 45											
45 - 49											
50 - 54											
55 - 59											
60 - 64											
							-				
65 - 69	1	1									
	\$23,250	\$23,250									
70 - 74							-				
							-				
75 - 79											
							-				
80 - 84											
85 & Over											
Total	1	1									
	\$23,250	\$23,250									

SECTION 3: Supplemental Information for the Minneapolis Teachers' Retirement Fund Association

EXHIBIT F
Reconciliation of Member Data

	Active Members	Leave of Absence	Vested Terminated Members	Other Non-Vested Terminated Members	Retired Participants	Disableds	Beneficiaries	Other Beneficiaries	Total
A. Number as of June 30, 2003	5,381	56	1,123	3,057	3,307	23	285	27	13,259
B. Additions	446	4	204	459	178	2	18	7	1,318
C. Deletions:									
1. Retirements	-131	-6	-39	-2	-	-	-	-	-178
2. Disability	-	-1	-	-	-1	-	-	-	-2
3. Died with beneficiary	-	-	-	-	-18	-	-	-	-18
4. Died without beneficiary	-3	-	-	-2	-64	-1	-11	-	-81
5. Terminated - deferred	-204	-	-	-	-	-	-	-	-204
6. Terminated – other non-vested	-459	-	-	-	-	_	-	-	-459
7. Refunds	-73	-1	-31	-87	-	-	-	-	-192
8. Rehired as active	70	-1	-26	-43	-	-	-	-	-
9. Leave of absence	-4	-	-	-	-	-	-	-	-4
10. Expired benefits	-	-	-	-	-	-	-22	-	-22
D. Data adjustments	_=	_=	_12	2	<u>13</u>		21	<u>_</u>	_48
E. Total as of June 30, 2004	5,023	51	1,243	3,384	3,415	24	291	34	13,465

EXHIBIT G
Statement of Change in Assets Available for Benefits for Year Ended June 30, 2004

		Market Value	Cost Value
A. A	Assets available at beginning of period	\$719,598,888	\$739,591,208
B. O	Operating revenues		
	1. Member contributions	\$15,461,562	\$15,461,562
	2. Employer contributions	19,801,636	19,801,636
	3. Supplemental contributions*	21,201,448	21,201,448
	4. Investment income	21,559,737	21,559,737
	5. Net realized gain/(loss)	28,402,016	28,402,016
	6. Other	0	0
	7. Net change in unrealized gain/(loss)	59,553,858	0
	8. Total Additions	\$165,980,257	\$106,426,399
C. O	Operating expenses:		
	1. Service retirements	\$110,425,898	\$110,425,898
	2. Disability benefits	850,241	850,241
	3. Survivor benefits	7,075,893	7,075,893
	4. Refunds	803,680	803,680
	5. Administrative expenses	730,892	730,892
	6. Investment expenses	2,603,265	2,603,265
	7. Total operating expenses	\$122,489,869	\$122,489,869
D. C	Change in accounting method	0	0
E. A	Assets available at end of period	\$763,089,276	\$723,527,738
F. D	Determination of current year unrecognized asset return		
	1. Average balance:		
	(a) Assets available at BOY: (A)		\$719,598,888
	(b) Assets available at EOY: (E)		763,089,276
	(c) Average balance [(a) + (b) – Net Investment Income] / 2		687,887,909
	[Net Investment Income: $(B.4) + (B.5) + (B.6) + (B.7) - (C.6)$]		
	2. Expected return: 8.50% x (F.1)		\$58,470,472
	3. Actual return: $(B.4) + (B.5) + (B.6) + (B.7) - (C.6)$		<u>106,912,346</u>
	4. Current year unrecognized asset return: (F.3) – (F.2)		\$48,441,874

^{*} Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

EXHIBIT H
Accounting Balance Sheet for Year Ended June 30, 2004

	Market Value	Cost Value
Assets		
Cash, equivalents, short-term securities	\$118,151,117	\$118,146,078
Investments:		
Fixed income	\$252,706,658	\$255,950,983
Equity	456,054,739	406,294,933
Real estate	0	0
Other assets	20,104,999	27,063,981
Total assets	\$847,017,513	\$807,455,975
Amounts currently payable	\$83,928,237	\$83,928,237
Assets available for benefits		
Member reserves	\$187,379,252	\$187,379,252
Employer reserves	<u>575,710,024</u>	536,148,486
Total assets available for benefits	\$763,089,276	\$723,527,738
Total amounts currently payable and assets available for benefits	<u>\$847,017,513</u>	<u>\$807,455,975</u>
Net Assets at Market/Cost Value	\$847,017,513	\$807,455,975

EXHIBIT I

Development of the Fund Through June 30, 2004

Year Ended June 30	Employer Contributions	Employee Contributions	Supplemental Contributions	Net Investment Return*	Administrative Expenses	Benefit Payments	Actuarial Value of Assets at End of Year
2002							\$1,027,883,000
2003	\$21,104,000	\$16,673,000	\$21,082,000	-\$14,707,000	\$804,000	\$114,318,000	956,913,000
2004	19,801,636	15,461,562	21,201,448	-15,727,065	730,892	119,155,712	877,763,977

^{*} Net Investment Return on an Actuarial Value of Assets basis and net of investment fees.

EXHIBIT J Development of Unfunded/(Overfunded) Actuarial Accrued Liability for Year Ended June 30, 2004

1.	Unfunded/(Overfunded) actuarial accrued liability at beginning of year		\$715,069,000
2.	Normal cost at beginning of year, including expenses		28,156,892
3.	Total contributions		56,464,646
4.	Interest		
	(a) For whole year on $(1) + (2)$	\$63,174,200	
	(b) For half year on (3)	2,399,747	
	(c) Total interest: (4a) – (4b)		60,774,453
5.	Expected unfunded/(overfunded) actuarial accrued liability		\$747,535,699
6.	Changes due to (gain)/loss from:		
	(a) Investments	\$94,369,236	
	(b) Demographics*	<u>9,882,415</u>	
	(c) Total changes due to (gain)/loss		<u>\$104,251,651</u>
7.	Unfunded/(Overfunded) actuarial accrued liability at end of year		<u>\$851,787,350</u>

^{*} Includes (gain)/loss due to age/service retirements, disability, mortality (pre and post-retirement), withdrawal and salary increases.

EXHIBIT K

Definitions of Pension Terms

The following list defines certain technical terms for the convenience of the reader:

Assumptions or Actuarial Assumptions:

The estimates on which the cost of the Fund is calculated including:

- (a) <u>Investment return</u> the rate of investment yield that the Fund will earn over the long-term future;
- (b) <u>Mortality rates</u> the death rates of employees and pensioners; life expectancy is based on these rates;
- (c) <u>Retirement rates</u> the rate or probability of retirement at a given age;
- (d) <u>Turnover rates</u> the rates at which employees of various ages are expected to leave employment for reasons other than death, disability, or retirement.

Normal Cost:

The amount of contributions required to fund the benefit allocated to the current year of service.

Actuarial Accrued Liability For Actives:

The equivalent of the accumulated normal costs allocated to the years before the valuation date.

Actuarial Accrued Liability For Pensioners:

The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and the interest that the sum is expected to earn before it is entirely paid out in benefits.

Unfunded Actuarial Accrued Liability:

The extent to which the actuarial accrued liability of the Fund exceeds the assets of the Fund. There is a wide range of approaches to paying off the unfunded actuarial accrued liability, from meeting the interest accrual only to amortizing it over a specific period of time.

Amortization of the Unfunded

Actuarial Accrued Liability: Payments made over a period of years equal in value to the Fund's unfunded actuarial

accrued liability.

Investment Return: The rate of earnings of the Fund from its investments, including interest, dividends

and capital gain and loss adjustments, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from

one year to the next.

Accrued Benefit Funded Ratio: A current year funded status that measures the percent of benefits covered by Current

Assets. This ratio is based on benefits earned to the valuation date (accrued service) and includes future salary increases to retirement. The liability for these benefits is defined as the Current Benefit Obligations. The Accrued Benefit Funded Ratio is calculated as the Actuarial Value of Assets (Current Assets) divided by the Current

Benefit Obligations.

Projected Benefit Funded Ratio: A projected funded status that measures contribution sufficiency/deficiency, which is

based on a present value of all plan benefits for the lifetime of all plan members. The liability for these benefits is defined as the Current and Expected Future Benefit Obligations, or Present Value of Benefits. The Current and Expected Future Assets are determined as the sum of the Actuarial Value of Assets (Current Assets), the Present Value of Expected Future Statutory Supplemental Contributions and the Present Value of Future Normal Costs. The Projected Benefit Funded Ratio is calculated as the Current and Expected Future Assets divided by the Current and Expected Future Benefit Obligations. If the ratio is equal to or more than 100%, there

is a contribution sufficiency, and if it is less than 100% there is a contribution

deficiency.

SECTION 4: Reporting Information for the Minneapolis Teachers' Retirement Fund Association

EXHIBIT I

Summary of Actuarial Valuation Results

Th	e valuation was made with respect to the following data supplied to us:		
1.	Pensioners as of the valuation date (including 291 beneficiaries in pay status)		3,764
2.	Members inactive during year ended June 30, 2004 with vested rights		1,243
3.	Members active during the year ended June 30, 2004*		5,074
	Fully vested	4,011	
	Not vested	1,063	
4.	Other non-vested terminated members as of June 30, 2004		3,384

^{*} Includes 51 members on leave of absence.

SECTION 4: Reporting Information for the Minneapolis Teachers' Retirement Fund Association

EXHIBIT I (continued)

Summary of Actuarial Valuation Results

			Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability	
A. Det	termin	ation of Actuarial Accrued Liability				
1.	Acti	ve members:				
	(a)	Retirement benefits	\$622,793,291	\$185,310,161	\$437,483,130	
	(b)	Disability benefits	6,253,991	2,884,053	3,369,938	
	(c)	Death benefits	8,303,378	3,421,131	4,882,247	
	(d)	Withdrawal benefits	<u>37,907,886</u>	33,217,905	<u>4,689,981</u>	
	(e)	Total	\$675,258,546	\$224,833,250	\$450,425,296	
2.	Ves	sted terminated members	\$43,495,962	\$0	\$43,495,962	
3.	Oth	er non-vested terminated members	4,439,210	0	4,439,210	
4.	Anr	nuitants	1,231,190,859	0	1,231,190,859	
5.	Tota	al	\$1,954,384,577	\$224,833,250	\$1,729,551,327	
3. Det	termin	ation of Unfunded Actuarial Accrued Liability				
1.	Act	uarial Accrued Liability			\$1,729,551,327	
2.	Act	uarial Value of Assets			<u>877,763,977</u>	
3.	Unf	funded Actuarial Accrued Liability: (1) – (2)			\$851,787,350	
C. Det	Determination of Supplemental Contribution Rate					
1.	Pres	sent value of future payrolls through the amortization date of June 30, 2020			\$3,016,477,006	
2.	Sup	pplemental contribution rate: (B.3) / (C.1)			28.24%	

SECTION 4: Reporting Information for the Minneapolis Teachers' Retirement Fund Association

EXHIBIT II Actuarial Balance Sheet					
A.	Current Assets			\$877,763,977	
B.	Expected Future Assets				
	1. Present Value of Expected Future Statutory Supplemental Contributions			\$323,317,653	
	2. Present Value of Future Normal Costs			224,833,250	
	3. Total Expected Future Assets			\$548,150,903	
C.	Total Current and Expected Future Assets			\$1,425,914,880	
D.	Current Benefit Obligations	Non-Vested	Vested	<u>Total</u>	
	1. Benefit recipients:				
	(a) Retirement annuities	\$0	\$1,170,023,931	\$1,170,023,931	
	(b) Disability benefits	0	8,049,353	8,049,353	
	(c) Beneficiaries	0	53,117,575	53,117,575	
	2. Vested terminated members	0	43,495,962	43,495,962	
	3. Other non-vested terminated members	0	4,439,210	4,439,210	
	4. Active members:				
	(a) Retirement benefits	\$2,674,580	\$361,781,022	\$364,455,602	
	(b) Disability benefits	50,368	3,459,109	3,509,477	
	(c) Death benefits	60,110	4,444,124	4,504,234	
	(d) Withdrawal benefits	1,076,360	21,327,710	22,404,070	
	5. Total Current Benefit Obligations	\$3,861,418	\$1,670,137,996	\$1,673,999,414	
E.	Expected Future Benefit Obligations			280,385,163	
F.	Total Current and Expected Future Benefit Obligations - Present Value of Benefits: (D.5 + E)			\$1,954,384,577	
G.	Current Unfunded Actuarial Liability (D.5 - A)			\$796,235,437	
Н.				\$528,469,697	

EXHIBIT III Supplementary Information Required by the GASB – Schedule of Employer Contributions

Plan Year Ended June 30	Actuarially Required Contribution Rate (Prior Year) (a)	Actual Covered Payroll (b)	Actual Member Contributions (c)	Annual Required Contributions [(a) x (b)] – (c) = (d)	Actual Employer Contributions* (e)	Percentage Contributed (e) / (d)
1991	30.40%	\$119,065,000	\$9,337,000	\$26,859,000	\$12,358,000	46.01%
1992	30.55	136,870,000	10,307,000	31,507,000	13,638,000	43.29
1993	27.43	135,505,000	10,713,000	26,456,000	13,711,000	51.83
1994	25.83	155,671,000	11,507,000	28,703,000	16,355,000	56.98
1995	25.03	163,824,000	10,470,000	30,535,000	21,194,000	69.41
1996	25.18	171,060,000	11,294,000	31,779,000	23,085,000	72.64
1997	25.15	185,229,000	11,697,000	34,888,000	24,021,000	68.85
1998	28.23	199,376,000	13,852,000	42,432,000	43,640,000	102.85
1999	25.80	230,189,000	14,935,000	44,454,000	40,476,000	91.05
2000	23.88	242,072,000	16,169,000	41,638,000	42,556,000	102.20
2001	25.25	254,100,000	16,321,000	47,839,000	42,904,000	89.68
2002	25.45	248,304,000	17,715,000	45,478,000	42,105,000	92.58
2003**	29.05	247,418,000	16,673,000	55,202,000	42,186,000	76.42
2004	31.96	232,386,459	15,461,562	58,809,150	41,003,084	69.72

 ^{*} Includes contributions from other sources (if applicable)
 ** Actuarially Required Contribution Rate prior to change in actuarial assumptions and plan provisions is 17.89%.

EXHIBIT IV

Supplementary Information Required by the GASB – Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded/ (Overfunded) AAL (UAAL) (b) – (a)	Funded Ratio (a) / (b)	Actual Covered Payroll (Previous FY) (c)	UAAL as a Percentage of Covered Payroll [(b) – (a)] / (c)
07/01/1991	\$424,677,000	\$826,574,000	\$401,897,000	51.38%	\$119,065,000	337.54%
07/01/1992	457,978,000	840,840,000	382,862,000	54.47	136,870,000	279.73
07/01/1993	501,741,000	878,693,000	376,952,000	57.10	135,505,000	278.18
07/01/1994	514,138,000	920,470,000	406,332,000	55.86	155,671,000	261.02
07/01/1995	554,960,000	983,249,000	428,289,000	56.44	163,824,000	261.43
07/01/1996	612,852,000	1,055,063,000	442,211,000	58.09	171,060,000	258.51
07/01/1997	673,209,000	1,173,412,000	500,203,000	57.37	185,229,000	270.05
07/01/1998	809,978,000	1,267,424,000	457,446,000	63.91	199,376,000	229.44
07/01/1999	939,459,000	1,394,357,000	454,898,000	67.38	230,189,000	197.62
07/01/2000	1,027,633,000	1,544,358,000	516,725,000	66.54	242,072,000	213.46
07/01/2001	1,061,983,000	1,610,364,000	548,381,000	65.95	254,100,000	215.81
07/01/2002	1,027,883,000	1,659,512,000	631,629,000	61.94	248,304,000	254.38
07/01/2003	956,913,000	1,671,982,000	715,069,000	57.23	247,418,000	289.01
07/01/2004	877,763,977	1,729,551,327	851,787,350	50.75	232,386,459	366.54

EXHIBIT V

Determination of Contribution Sufficiency – Total

	July 1, 2	004	
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount	
. Employee contributions	5.78%	\$14,405,402	
. Employer contributions	8.52	21,216,367	
. Supplemental contributions*			
(a) 1993 Legislation	2.01	5,000,000	
(b) 1996 Legislation	1.21	3,015,000	
(c) 1997 Legislation	5.35	13,314,000	
. Administrative expense assessment	<u>0.00</u>		
. Total	<u>22.87%</u>	\$56,950,769	
8. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount	
. Normal Cost:			
(a) Retirement	8.09%	\$20,160,525	
(b) Disability	0.12	286,700	
(c) Death	0.14	350,240	
(d) Withdrawal	<u>1.24</u>	3,091,967	
(e) Total	<u>9.59%</u>	\$23,889,438	
. Supplemental contribution amortization	28.24%	\$70,337,368	
. Allowance for administrative expenses	0.28	697,396	
. Total	<u>38.11%</u>	\$94,924,202	
C. Contribution Sufficiency / (Deficiency): (A.5) – (B.4)	-15.24%	-\$37,973,433	
Projected annual payroll for fiscal year beginning on the valuation d	ate	\$249,069,999	

^{*} Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

EXHIBIT VI

Determination of Contribution Sufficiency – Basic

	July 1, 2004			
a. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount		
. Employee contributions	8.50%	\$2,001,898		
. Employer contributions	12.14	2,859,181		
. Supplemental contributions*				
(a) 1993 Legislation	2.01	473,390		
(b) 1996 Legislation	1.21	284,976		
(c) 1997 Legislation	5.35	1,260,018		
. Administrative expense assessment	<u>0.00</u>	0		
. Total	<u>29.21%</u>	<u>\$6,879,463</u>		
3. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount		
. Normal Cost:				
(a) Retirement	12.59%	\$2,964,628		
(b) Disability	0.18	42,224		
(c) Death	0.22	51,925		
(d) Withdrawal	<u>2.35</u>	553,331		
(e) Total	<u>15.34%</u>	\$3,612,108		
Projected annual payroll for fiscal year beginning on the valuation date		\$23,551,739		

^{*} Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

EXHIBIT VII

Determination of Contribution Sufficiency – Coordinated

	July 1, 2004			
A. Statutory Contributions – Chapter 354A	Percent of Payroll	Dollar Amount		
Employee contributions	5.50%	\$12,403,504		
2. Employer contributions	8.14	18,357,186		
3. Supplemental contributions*				
(a) 1993 Legislation	2.01	4,532,917		
(b) 1996 Legislation	1.21	2,728,771		
(c) 1997 Legislation	5.35	12,065,227		
4. Administrative expense assessment	<u>0.00</u>	0		
5. Total	<u>22.21%</u>	<u>\$50,087,605</u>		
3. Required Contributions – Chapter 356	Percent of Payroll	Dollar Amount		
. Normal Cost:				
(a) Retirement	7.63%	\$17,195,897		
(b) Disability	0.11	244,476		
(c) Death	0.13	298,321		
(d) Withdrawal	<u>1.13</u>	2,538,637		
(e) Total	<u>9.00%</u>	<u>\$20,277,331</u>		
Projected annual payroll for fiscal year beginning on the valuation date	to.	\$225,518,261		

^{*} Includes contributions from School District #1, the City of Minneapolis, and matching State contributions.

EXHIBIT VIII

Supplementary Information Required by the GASB

Valuation date	July 1, 2004			
Actuarial cost method	Entry Age Normal			
Amortization method	Level percentage of payroll, assuming payroll increases of 5.00% per annum			
Remaining amortization period	16 years remaining as of July 1, 2004			
Asset valuation method	Market Value, adjusted for amortization obligations receivable at the end of each fiscal year, less a percentage of the Unrecognized Asset Return determined at the close of each of the four preceding fiscal years. Unrecognized Asset Return is the difference between actual net return on Market Value of Assets and the asset return expected during that fiscal year (based on the assumed interest rate employed in the July 1 Actuarial Valuation of the fiscal year).			
Actuarial assumptions:				
Investment rate of return:				
Pre-retirement	8.50% per annum			
Post-retirement	8.50% per annum (6.50% per annum is valued to imply a 2.00% per annum COLA)			
Projected salary increases	Select and ultimate rates by age, with ultimate rates of 5.00% - 6.50%			
Plan membership:				
Pensioners and beneficiaries receiving benefits	3,764			
Terminated vested members entitled to, but not yet receiving benefits	1,243			
Other terminated non-vested members	3,384			
Active members*	<u>5,074</u>			
Total	13,465			

^{*} Includes 51 members on leave of absence.

EXHIBIT IX

Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

Healthy Pre-Retirement:

Male: 1983 Group Annuity Mortality Table for males set back 12 years

Female: 1983 Group Annuity Mortality Table for females set back 10 years

Healthy Post-Retirement:

Male: 1983 Group Annuity Mortality Table for males set back 4 years

Female: 1983 Group Annuity Mortality Table for females set back 1 year

Disabled:

Male: 1977 Railroad Retirement Board Mortality Table for Disabled Lives

Female: 1977 Railroad Retirement Board Mortality Table for Disabled Lives

SECTION 4: Reporting Information for the Minneapolis Teachers' Retirement Fund Association

Summary of Rates:

Shown below for selected ages:

Rate (%)

		Pre-Retirement Mortality		etirement rtality			Post-Disability
Age	Male	Female	Male	Female	Withdrawal	Disability	Mortality
20	0.03	0.01	0.03	0.02	13.00	0.00	2.71
25	0.03	0.01	0.04	0.02	10.50	0.00	2.72
30	0.04	0.02	0.05	0.03	8.00	0.00	2.72
35	0.04	0.03	0.06	0.04	5.50	0.01	2.73
40	0.05	0.03	0.09	0.06	3.00	0.03	2.73
45	0.07	0.05	0.14	0.09	2.25	0.06	2.74
50	0.10	0.07	0.25	0.15	1.50	0.10	2.89
55	0.17	0.10	0.43	0.23	0.75	0.15	3.71
60	0.31	0.16	0.66	0.38	0.00	0.21	4.73
65	0.52	0.25	1.01	0.64	0.00	0.00	5.98
70	0.77	0.42	1.76	1.09	0.00	0.00	7.46

SECTION 4: Reporting Information for the Minneapolis Teachers' Retirement Fund Association

Summary of Retirement Rates:

Shown below for selected ages:

Rate (%)

	· ·					
Age	Basic Members Eligible for 30 and Out Provision	Basic Members Not Eligible for 30 and Out Provision	Coordinated Members Eligible for Rule of 90 Provision	Coordinated Members Not Eligible For Rule of 90 Provision		
55 & under	40.0	5.0	40.0	5.0		
60	25.0	25.0	20.0	8.0		
65	40.0	40.0	45.0	45.0		
70	60.0	60.0	60.0	60.0		
75	60.0	60.0	60.0	60.0		
80 & over	100.0	100.0	100.0	100.0		

Withdrawal Rates:

Select and ultimate rates are based on recent plan experience. Ultimate rates after the third year are shown in the rate table. Select rates are as follows:

First year: 30%
Second year: 15%
Third year: 10%*

* Ultimate rate is used if greater than 10%

Salary Increases:

Reported salary for prior fiscal year, with new hires annualized, increased to current fiscal year and annually for each future year according to the ultimate rate table below. During a ten-year select period, 0.40% x (10-T) where T is completed years of service is added to the ultimate rate.

Age	Ultimate Rate of Annual Salary Increases
25 & under	6.50%
30	6.50
35	6.50
40	6.50
45	6.50
50	6.00
55	5.50
60 & over	5.00

Retirement Age:

Active Members: Active members are assumed to retire according to the graded rates shown in the rate

table. Rates are applied beginning at the participant's first early retirement age.

Deferred Members: Basic members are assumed to retire at age 60. Coordinated members are assumed to

retire at age 63. If over the assumed retirement age, one year from valuation date.

Other Non-Vested Members: Return of contributions is assumed to occur immediately.

SECTION 4: Reporting Information for the Minneapolis Teachers' Retirement Fund Association

Unknown Data for Members:	The submitted participant data has been reviewed for reasonableness and consistency with data submitted for prior valuations. We have not audited this data, and the results of this valuation may change based on the accuracy of the underlying data. In cases where submitted data was missing or incomplete, the following assumptions were applied:			
	Date of birth:	Average age of participant group based on prior year's valuation report. Assumed date of birth for July 1, 2004 is July 1, 1961.		
	Date of hire:	Current valuation date minus years of service.		
	Years of service:	Years of service from last year's valuation data plus one year.		
	Sex:	Male		
	Deferred benefit:	Calculated using service at termination date assuming termination on the valuation date in which the participant is first reported in vested status. Salary at termination is estimated based on assumed termination date if not available.		
Percent Married:	80% of male memb	ers and 60% of female members are assumed to be married.		
Age of Spouse:	Females three years	s younger than males.		
Net Investment Return:				
Pre-Retirement:	8.50% per annum (6.50% per annum is valued to imply a 2.00% per annum COLA)			
Post-Retirement:				
Administrative Expenses:	Prior year administration percentage of prior	rative expenses (excluding investment expenses) expressed as a year payroll.		
Allowance for Combined Service Annuity:				

SECTION 4: Reporting Information for the Minneapolis Teachers' Retirement Fund Association

Return of Contributions:	All employees withdrawing after becoming eligible for a deferred benefit were assumed to take the larger of their contributions accumulated with interest or the value of their deferred benefit.			
Special Consideration:	Additional post retirement benefit increase is accounted for by increasing the reserve value for all service retirements, disability retirements and survivors eligible for the increase by an amount that equals the excess of the five year time weighted total rate of return over the assumed interest rate of 8.50% multiplied by the quantity of one minus the rate of contribution deficiency.			
Benefit Increases After Retirement:	2.00% per annum.			
Optional Benefit Forms:	Married members are assumed to elect the following forms of benefit:			
	Males:	25% elect life annuity option		
		15% elect 50% J&S option		
		20% elect 75% J&S option		
		40% elect 100% J&S option		
	Females:	65% elect life annuity option		
		15% elect 50% J&S option		
		5% elect 75% J&S option		
		15% elect 100% J&S option		
Asset Valuation Method:	fiscal year, close of eac difference b expected du	ue, adjusted for amortization obligations receivable at the end of each less of a percentage of the Unrecognized Asset Return determined at the h of the four preceding fiscal years. Unrecognized Asset Return is the retween actual net return on Market Value of Assets and the asset return tring that fiscal year (based on the assumed interest rate employed in the arial Valuation of the fiscal year).		

SECTION 4: Reporting Information for the Minneapolis Teachers' Retirement Fund Association

Actuarial Cost Method:	Entry Age Normal Cost Method. Entry age is the age at the time the participant commenced employment. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are expressed as a level percentage of payroll, with Normal Cost determined as if the current benefit accrual rate had always been in effect.		
Payment on the Unfunded Actuarial Accrued Liability:	The Unfunded Actuarial Accrued Liability is amortized as level percentage of payroll each year to the statutory amortization date assuming payroll increases of 5.00% per annum.		
Supplemental Contributions:	The City of Minneapolis, the Minneapolis School District, and the State of Minnesota are scheduled to make the following supplemental contributions to the Fund:		
1993 Legislation:	Supplemental contributions of \$5,000,000 annually are assumed to be made until the amortization date of June 30, 2020.		
1996 Legislation:	Supplemental contributions of \$1,015,000 annually are assumed to be made until the amortization date of June 30, 2020 plus additional supplemental contributions according to the following schedule:		
	Year Amount		
	June 30, 2004 - 2020 \$2,000,000		
1997 Legislation:	Supplemental contributions of \$13,314,000 annually are assumed to be made beginning July 1, 2003 and continuing until the amortization date of June 30, 2020.		
Changes in Actuarial Assumptions and Cost Methods:	There have been no changes made to the actuarial assumptions and cost methods since the prior valuation.		

EXHIBIT X

Summary of Plan Provisions - Basic

This summary of provisions reflects the interpretation of applicable Statues for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

Plan Year:	July 1 through June 30		
Eligibility: A teacher who is employed by the Board of Education of Special 1, other than a charter school, and who is not covered by the Social Certain part-time licensed employees are covered as well as employees Teachers Retirement Fund.			
Contributions:	Member: 8.50% of Salary. Employer: 12.14% of Salary.		
Teaching Service:	A year is earned during a calendar year if the member is employed in a covered position and employee contributions are deducted. Certain part-time service and military service is also included.		
Salary:	Total compensation. Excludes lump sum payments for unused vacation leave or unused sick leave at separation.		
Average Salary:	Average of the five highest consecutive years of Salary.		

Retirement:

Normal Retirement:

Age/Service Requirement:

Age 60, or any age with 30 years of Teaching Service.

Amount:

2.50% of Average Salary for each year of Teaching Service.

Early Retirement:

Age/Service Requirement:

Age 55 with less than 30 years of Teaching Service.

Amount:

The greater of (a) or (b):

- (a) 2.25% of Average Salary for each year of Teaching Service with reduction of 0.25% for each month the Member is under age first eligible for a normal retirement benefit.
- (b) 2.50% of Average Salary for each year of Teaching Service assuming augmentation to the age first eligible for a normal retirement benefit at 3.00% per year and actuarial reduction for each month the member is under the age first eligible for a normal retirement benefit.

An alternative benefit is available to members who are at least age 50 and have seven years of Teaching Service. The benefit is based on the accumulation of the 6.50% "city deposits" to the Retirement Fund. Other benefits are also provided under this alternative depending on the member's age and Teaching Service.

Form of Payment:

Life annuity. Actuarially equivalent options are:

- (a) 10 or 15-year Certain and Life.
- (b) 50%, 75%, or 100% Joint and Survivor with bounce back feature without additional reduction (option is canceled if member is predeceased by beneficiary).

Benefit Increases:

Benefits are increased 2.00% annually beginning on the January 1 or July 1 if the member has been receiving benefits for at least 12 months. Beneficiaries are entitled to the same increase the member would have received

In addition, if the time weighted rate of return over the last five years exceeds 8.50%, the Board of Trustees will increase benefits by the excess rate of return multiplied by the quantity of one minus the rate of contribution deficiency.

Members retired under laws in effect before May 1, 1974 and before any adjustment under Laws 1987, Chapter 372, receive an additional lump sum payment each year. In 1989, this lump sum payment is the greater of \$25 times each full year of Teaching Service and the sum of the benefits paid from any Minnesota public pension plan plus cash payments from the Social Security Administration for the preceding fiscal year July 1, 1988 through June 30, 1989. In each following year the lump sum will increase by the same increase that is applied to regular annuities. Effective January 1, 2002, annual lump sum payment is divided by 12 and paid as monthly life annuity in the annuity form elected.

Disability:

Age/Service Requirement:

Amount:

Total and permanent disability with three years of Teaching Service.

An annuity based on the continued accumulation of member and city contributions at the current rate for a period of 15 years (but not beyond age 65) plus an additional benefit equal to the smaller of 100% of the annuity provided by city contributions only or \$150 per month. A member with 20 years of Teaching Service also receives an additional \$7.50 per month.

Payments stop if disability ceases or death occurs. Benefits may be reduced on resumption of partial employment.

Form of Payment: Same as for retirement.

Benefit Increases: Same as for retirement.

Death:

Choice of Benefit A, Benefit B or Benefit C.

<u>Benefit A</u>:

Age/Service Requirement:

Death before retirement.

Amount:

The accumulation of member and city contributions plus 5.00% interest if death occurred before May 16, 1989, or 6.00% interest if death occurred on or after May 16, 1989. Paid as a life annuity, 15-year Certain and Life, or lump sum. If an annuity is chosen the beneficiary also receives additional benefits.

Benefit B:

Age/Service Requirement: An active member with seven years of Teaching Service. A former member age 60

with seven years of Teaching Service who dies before retirement or disability benefits

begin.

Amount: The actuarial equivalent of any benefits the member could have received if he had

resigned on the date of death. Paid to the beneficiary in the form of a life annuity or a

15-year Certain and Life annuity.

Benefit C:

Age/Service Requirement: An active member who dies and leaves surviving children.

Amount: A monthly benefit of \$248.30 to the surviving widow while caring for a child and an

additional \$248.30 per month for each surviving dependent child. The maximum family benefit is \$579.30 per month. These benefits may be increased by the Board of

Trustees.

Benefits to the widow cease upon death or when no longer caring for an eligible child.

Benefits for dependent children cease upon marriage or age 18 (age 22 if a full time

student).

Benefit Increases: Same as retirement.

Withdrawal:

<u>Deferred Annuity</u>:

Age/Service Requirement:

Seven years of Teaching Service.

Amount:

Benefit computed under law in effect at termination and increased by the following annual percentage:

ilituai percentage.

(a) 3.00% until January 1 of the year following the attainment of 55, and

(b) 5.00% thereafter until the annuity begins.

In addition, the interest earned on the member and city contributions between termination and age 60 can be applied to provide an additional annuity.

Refund of Contributions:

Age/Service Requirement: Termination of Teaching Service.

Amount: Member's contributions with 6.00% interest. A deferred annuity may be elected in

lieu of a refund.

EXHIBIT XI

Summary of Plan Provisions – Coordinated

This summary of provisions reflects the interpretation of applicable Statues for purposes of preparing this valuation. This interpretation is not intended to create or rescind any benefit rights in conflict with any Minnesota Statutes.

Plan Year:	July 1 through June 30
Eligibility:	A teacher who is employed by the Board of Education of Special School District No. 1, other than a charter school, and who is not covered by the Social Security Act. Certain part-time licensed employees are covered as well as employees of the Minneapolis Teachers Retirement Fund (unless they belong to the Minneapolis Employees Retirement Fund).
Contributions:	Member: 5.50% of Salary. Employer: 8.14% of Salary.
Allowable Service:	A year is earned during a school year if the member is employed in a covered position and employee contributions are deducted. May also include certain part-time service, extended leaves of absence, sabbatical leaves, and military service.
Salary:	Total compensation. Excludes lump sum payments for unused vacation leave or unused sick leave at separation.
Average Salary:	Average of the five highest consecutive years of Salary. Average Salary is based on all Allowable Service if less than five years.

Retirement:

Normal Retirement:

Age/Service Requirement:

First hired before July 1, 1989:

- (a) Age 65 and three years of Allowable Service.
- (b) Proportionate Retirement Annuity is available at age 65 and one year of Allowable Service.

First hired after July 1, 1989:

- (a) The greater of age 65 or the age eligible for full Social Security retirement benefits (but not later than age 66) and three years of Allowable Service.
- (b) Proportionate Retirement Annuity is available at Normal Retirement Age and one year of Allowable Service.

Amount:

1.70% of Average Salary for each year of Allowable Service.

Early Retirement:

Age/Service Requirement:

- (a) Age 55 and three years of Allowable Service.
- (b) Any age with 30 years of Allowable Service.
- (c) Rule of 90: Age plus Allowable Service totals 90.

Amount:

First hired before July 1, 1989:

The greater of (a) or (b):

- (a) 1.20% of Average Salary for each of the first ten years of Allowable Service plus 1.70% of Average Salary for each subsequent year of Allowable Service with reduction of 0.25% for each month the member is under age 65 (age 62 if 30 years of Allowable Service). No reduction if age plus years of Allowable Service totals 90.
- (b) 1.70% of Average Salary for each year of Allowable Service assuming augmentation to age 65 at 3.00% per year and actuarial reduction for each month the member is under age 65.

First hired after July 1, 1989:

1.70% of Average Salary for each year of Allowable Service assuming augmentation to the age eligible for Normal Retirement benefits at 3.00% per year and actuarial reduction for each month the member is under the Normal Retirement Age.

Form of Payment:

Life annuity. Actuarially equivalent options are:

- (a) Guaranteed refund
- (b) 10 or 15-year Certain and Life.
- (c) 50%, 75% or 100% Joint and Survivor with bounce back feature without additional reduction (option is canceled if member is predeceased by beneficiary).

Benefit Increases:

Benefits are increased 2.00% annually beginning on the January 1 or July 1 if the member has been receiving benefits for at least 12 months. Beneficiaries are entitled to the increase the member would have received.

In addition, if the time weighted rate of return over the last five years exceeds 8.50%, the Board of Trustees will increase benefits by the excess rate of return multiplied by the quantity of one minus the rate of contribution deficiency.

Disability:

Age/Service Requirement: Total and permanent disability before the Normal Retirement Age with three years of

Allowable Service. Also, at least two of the years of Allowable Service must have

been uninterrupted.

Amount: Normal Retirement Benefit based on Allowable Service and Average Salary at

disability without reduction for commencement before the Normal Retirement Age.

Benefit is reduced by Workers' Compensation.

Payments are recomputed as a retirement at the Normal Retirement Age. Payments stop if disability ceases or death occurs. Benefits may be reduced on resumption of

partial employment.

Form of Payment: Same as for retirement.

Benefit Increases: Same as for retirement.

Retirement After Disability:

Age/Service Requirement: Normal Retirement Age with continued disability.

Amount: Any optional annuity continues, otherwise the larger of the disability benefit paid

before Normal Retirement Age or the normal retirement benefit available at the

Normal Retirement Age, or an actuarially equivalent optional annuity.

Benefit Increases: Same as for retirement.

Death:

Surviving Spouse Optional Annuity:

Age/Service Requirement: Any active member who dies with three years of Allowable Service prior to retirement

or disability benefits commence.

Any former member who dies before retirement or disability benefits commence, if age 50 with three years of Allowable Service or any age with 30 years of Allowable Service. If the former member dies prior to age 55 benefits are deferred to age 55.

Amount: Survivor's payment of the 100% Joint and Survivor benefit the member could have

elected if terminated.

Upon the death of any vested active member, the benefit is calculated using 50% of otherwise applicable early retirement reduction from the member's age 55 to the

member's benefit commencement age.

Benefit Increases: Same as for retirement.

Refund of Contributions:

Age/Service Requirement: Member or former member dies before receiving any retirement benefits and

survivor's benefits are not payable.

Amount: Member's contributions with 6.00% interest.

Withdrawal:	
<u>Deferred Annuity</u> :	
Age/Service Requirement:	Three years of Allowable Service.
Amount:	Benefit computed under law in effect at termination and increased by the following annual percentage:
	(a) 3.00% until January 1 of the year following the attainment of age 55, and,
	(b) 5.00% thereafter until the annuity begins.
	Amount is payable as a normal or early retirement benefit.
Refund of Contributions:	
Age/Service Requirement:	Termination of Teaching Service.
Amount:	Member's contributions with 6.00% interest. A deferred annuity may be elected in lieu of a refund.
Changes in Plan Provisions:	There have been no changes made to the plan provisions since the prior valuation.