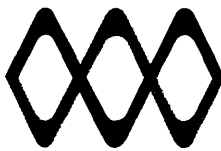


**Minneapolis Teachers' Retirement Fund**  
***ACTUARIAL VALUATION REPORT***

July 1, 1996



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November 11, 1996

Legislative Commission on  
Pensions and Retirement  
55 State Office Building  
St. Paul, Minnesota 55155

Re: ***Minneapolis Teachers' Retirement Fund***

Commission Members:

Pursuant to the terms of our actuarial services contract, we have performed an actuarial valuation of the Minneapolis Teachers' Retirement Fund as of July 1, 1996.

The results of our calculations are set forth in the following report, as are the actuarial assumptions upon which our calculations have been made. We have relied on the basic employee data and asset figures as submitted by the Minneapolis Teachers' Retirement Fund.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards of Actuarial Work, adopted by the Commission on July 8, 1992.

Respectfully submitted,

Thomas K. Custis, F.S.A., M.A.A.A.  
Consulting Actuary

Lance M. Burma, F.S.A., M.A.A.A.  
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Enclosure

**Minneapolis Teachers' Retirement Fund**  
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# Minneapolis Teachers' Retirement Fund

## Report Highlights

(dollars in thousands)

	July 1, 1995 Valuation	July 1, 1996 Valuation
<b>A. CONTRIBUTIONS (Table 11)</b>		
1. Statutory Contributions - Chapter 354A % of Payroll	19.00%	19.18%
2. Required Contributions - Chapter 356 % of Payroll	25.18%	25.15%
3. Sufficiency (Deficiency): (A1-A2)	(6.18)%	(5.97)%
<b>B. FUNDING RATIOS</b>		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$ 554,960	\$ 612,852
b. Current Benefit Obligations (Table 8)	\$ 936,977	\$ 1,008,933
c. Funding Ratio: (a/b)	59.23%	60.74%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 554,960	\$ 612,852
b. Actuarial Accrued Liability (Table 9)	\$ 983,249	\$ 1,055,063
c. Funding Ratio: (a/b)	56.44%	58.09%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 923,541	\$ 1,030,664
b. Current and Expected Future Benefit Obligations	\$ 1,173,787	\$ 1,248,989
c. Funding Ratio: (a/b)	78.68%	82.52%

**Minneapolis Teachers' Retirement Fund**

**Report Highlights**

*(dollars in thousands)*

	<u>July 1, 1995</u> <u>Valuation</u>	<u>July 1, 1996</u> <u>Valuation</u>
<b>C. PLAN PARTICIPANTS</b>		
1. Active Members		
a. Number (Table 3)	4,686	4,690
b. Projected Annual Earnings	\$ 174,473	\$ 182,179
c. Average Annual Earnings (Actual \$)	\$ 37,233	\$ 38,844
d. Average Age	43.3	43.2
e. Average Service	9.6	9.7
f. Additional Members on Leave of Absence *	92	88
2. Others		
a. Service Retirements (Table 4)	2,482	2,590
b. Disability Retirements (Table 5)**	49	22
c. Survivors (Table 6)	225	232
d. Deferred Retirements (Table 7)	628	640
e. Terminated Other Non-Vested (Table 7)	895	1,106
f. Total	<u>4,279</u>	<u>4,590</u>

\* Valued as deferred retirements, liability included with actives.

\*\* Disability retirements over age 65 have been reclassified as service retirements.

## **Minneapolis Teachers' Retirement Fund**

### ***Commentary***

#### ***Purpose***

The purpose of this valuation is to determine the financial status of the Plan. To achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Section 356.215 of Minnesota Statutes.

#### ***Report Highlights***

The financial status of the Plan can be measured by three different funding ratios:

The *Accrued Benefit Funding Ratio* is a measure of current funding status and, when viewed over a period of years, presents a view of the funding progress. It is based upon benefits which have been earned by service to the valuation date. This year's ratio is 60.74%. The corresponding ratio for the prior year was 59.23%.

The *Accrued Liability Funding Ratio* is also a measure of funding status and funding progress. It is based on the actuarial cost method that has historically been used by the State. For 1996 the ratio is 58.09%, which is an increase from the 1995 value of 56.44%.

The *Projected Benefit Funding Ratio* is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 82.52% shows that the current statutory contributions are insufficient.

#### ***Asset Information (Tables 1 and 2)***

Minnesota Statutes require that the asset value used for actuarial purposes recognize only one third of the unrealized gains and losses. This requirement exists because market values (which include all unrealized gains and losses) are typically volatile and can produce erratic changes in the contribution requirements from year to year.

The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F.1 to F.6. It combines the cost value of the Assets Available for Benefits and one-third of the difference between the market value and cost value of those assets.

The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as "Current Assets", the latter phrase will be used in the remainder of this report.

#### ***Actuarial Balance Sheet (Table 8)***

An actuarial balance sheet provides a method for evaluating current and future levels of funding. The Current Benefit Obligation used to measure current funding level is calculated in accordance with Statement No. 5 of the Governmental Accounting Standards Board (GASB). Those requirements are:

For Active Members - salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be used in calculating the current funding level.

For Non-active Members - the discounted value of benefits, including augmentation in cases where benefits have not commenced.

### ***GASB Disclosure***

The Current Benefit Obligation amounts in Table 8 are required to be disclosed by Statement No. 5 of the Governmental Accounting Standards Board (GASB). However, Statement No. 5 uses the terms "Actuarial Present Value of Credited Projected Benefits" and "Pension Benefit Obligation" rather than "Current Benefit Obligation".

The July 1, 1996 Pension Benefit Obligation reported in Table 8 is reformatted for GASB reporting purposes in the following table:

Retirees and beneficiaries currently receiving benefits and terminated employees not yet receiving benefits	\$	592,242,000
Current Employees		
Accumulated employee contributions including allocated investment income	\$	136,710,000 *
Employer-financed vested		250,295,000
Employer-financed non-vested		29,686,000
Total Pension Benefit Obligation	\$	1,008,933,000
Net Assets Available for Benefits at Cost	\$	570,085,000
Total Benefit Obligation less Assets	\$	438,848,000
Funded Ratio		56.50%

\*Estimated

### ***Actuarial Cost Method (Table 9)***

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Actuarial Cost Method. The primary characteristic of this method is that it allocates costs as a level of percentage of payroll.

A comparison of this actuarial method (Table 9) to the actuarial balance sheet (Table 8) illustrates the two techniques for allocating liabilities of active Members to past and future. As noted in the prior section, the balance sheet allocates benefits and the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A.6, column 1, of Table 9).

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Actuarial Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B.3, is funded over the remaining years to the amortization date by a series of payments that remain a constant percentage of payroll each year.



The payments will increase 6.5% each year because that is the assumed rate of increase in payroll. Although the payment schedule will be adequate to amortize the existing unfunded, the lower payments in the earlier years will not be sufficient to cover the interest on the unfunded liability. After a few years, the annual payment will cover the interest and also repay a portion of the unfunded.

***Sources of Actuarial Gains and Losses (Table 10)***

The assumptions used in making the calculations using the Entry Age Normal Actuarial Cost Method are based on long-term expectations. Each year, the actual experience will deviate from the long-term expectation. For an analysis of the major components of the Actuarial Gain or Loss refer to Table 10.

***Contribution Sufficiency (Table 11)***

This report determines the adequacy of Statutory Contributions by comparing the Statutory Contributions to the Required Contributions.

The Required Contributions, set forth in Chapter 356, consist of:

Normal Costs based on the Entry Age Normal Actuarial Cost Method.

A Supplemental Contribution for amortizing any Unfunded Actuarial Accrued Liability.

An Allowance for Expenses.

Table 11 shows the Fund has a contribution deficiency since the Statutory Contribution Rate is 19.18% compared to the Required Contribution Rate of 25.15%.

***Changes in Actuarial Assumptions***

All actuarial assumptions are the same as those used in the prior valuation. Table 12 contains a summary of actuarial assumptions and methods.

***Changes in Plan Provisions***

Effective July 1, 1996 additional funding is provided through a redirection of 49% of excess police and fire amortization aid to the fund.

Effective July 1, 1998 the city of Minneapolis and Minneapolis Public Schools are each required to make additional contributions to the fund.

TABLE 1

**Minneapolis Teachers' Retirement Fund**  
**Accounting Balance Sheet**  
*(dollars in thousands)*

July 1, 1996

	Market Value	Cost Value
<b>A. ASSETS</b>		
1. Cash, Equivalents, Short-Term Securities	\$ 55,650	\$ 55,650
2. Investments		
a. Fixed Income	153,936	157,925
b. Equity	430,221	298,552
c. Real Estate	49,170	49,170
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	0	0
4. Other	12,344	11,723
<b>B. TOTAL ASSETS</b>	<b>\$ 701,321</b>	<b>\$ 573,020</b>
<b>C. AMOUNTS CURRENTLY PAYABLE</b>	<b>\$ 2,935</b>	<b>\$ 2,935</b>
<b>D. ASSETS AVAILABLE FOR BENEFITS</b>		
1. Member Reserves	\$ 286,713	\$ 286,713
2. Employer Reserves	411,673	283,372
3. MPRIF Reserves	0	0
4. Non-MPRIF Reserves	0	0
5. Total Assets Available for Benefits	\$ 698,386	\$ 570,085
<b>E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS</b>	<b>\$ 701,321</b>	<b>\$ 573,020</b>
<b>F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS</b>		
1. Cost Value of Assets Available for Benefits (D5)		\$ 570,085
2. Market Value (D5)	\$ 698,386	
3. Cost Value (D5)	570,085	
4. Market Over Cost: (F2-F3)	\$ 128,301	
5. 1/3 of Market Over Cost: (F4)/3		42,767
6. Actuarial Value of Assets (F1+F5)		<b>\$ 612,852</b>

TABLE 2

**Minneapolis Teachers' Retirement Fund**  
**Change In Assets Available For Benefits**  
*(dollars in thousands)*

Year Ending June 30, 1996

	<u>Market Value</u>	<u>Cost Value</u>
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 609,877	\$ 527,502
B. OPERATING REVENUES		
1. Member Contributions	\$ 11,294	\$ 11,294
2. Employer Contributions	17,079	17,079
3. Supplemental Contributions *	6,006	6,006
4. Investment Income	22,904	22,904
5. MPRIF Income	0	0
6. Net Realized Gain (Loss)	43,221	43,221
7. Other	0	0
8. Net Change in Unrealized Gain (Loss)	45,926	0
9. Total Revenue	<u>\$ 146,430</u>	<u>\$ 100,504</u>
C. OPERATING EXPENSES		
1. Service Retirements	\$ 48,463	\$ 48,463
2. Disability Benefits	908	908
3. Survivor Benefits	5,029	5,029
4. Refunds	265	265
5. Administrative Expenses	538	538
6. Investment Expenses	2,718	2,718
7. Total Disbursements	<u>\$ 57,921</u>	<u>\$ 57,921</u>
D. CHANGES IN ACCOUNTING METHOD	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	<u>\$ 698,386</u>	<u>\$ 570,085</u>

\* Includes contributions from School District Number 1, the city of Minneapolis and matching State contributions.

TABLE 3

**Minneapolis Teachers' Retirement Fund**  
**Active Members as of June 30, 1996**

<u>AGE</u>	<u>YEARS OF SERVICE</u>								<u>TOTAL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	63	12	-	-	-	-	-	-	75
25-29	147	346	8	-	-	-	-	-	501
30-34	129	346	101	16	-	-	-	-	592
35-39	53	251	122	118	9	-	-	-	553
40-44	41	223	164	118	38	12	-	-	596
45-49	40	231	161	120	87	114	104	-	857
50-54	15	126	111	90	52	94	284	52	824
55-59	9	55	56	58	45	41	115	52	431
60-64	3	19	32	13	15	22	38	11	153
65+	-	15	13	2	6	2	12	9	59
ALL	500	1,624	768	535	252	285	553	124	4,641

**AVERAGE ANNUAL EARNINGS**  
**YEARS OF SERVICE**

<u>AGE</u>	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>ALL</u>
<25	8,284	7,959	-	-	-	-	-	-	8,232
25-29	11,387	22,773	34,502	-	-	-	-	-	19,620
30-34	12,647	25,900	35,693	43,500	-	-	-	-	25,159
35-39	14,669	30,253	38,937	45,153	36,258	-	-	-	33,952
40-44	13,518	29,628	40,588	44,328	48,498	47,355	-	-	36,006
45-49	14,884	30,062	42,748	48,381	48,877	52,720	54,872	-	42,237
50-54	13,405	30,582	44,320	48,885	49,997	53,709	55,898	57,077	48,380
55-59	11,608	27,146	42,697	48,568	48,992	51,125	54,907	55,952	47,169
60-64	7,223	24,881	40,735	47,220	48,339	50,074	53,990	57,935	45,277
65+	-	9,390	30,076	48,227	43,352	56,271	59,143	50,500	36,698
ALL	12,163	27,119	40,593	46,705	48,457	52,412	55,438	56,204	36,858

**PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
6,081	44,042	31,176	24,987	12,211	14,937	30,657	6,969	171,060

TABLE 4

**Minneapolis Teachers' Retirement Fund**  
***Service Retirements as of June 30, 1996***

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>TOTAL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	-	-	-	-	-	-	0
50-54	5	34	-	-	-	-	-	39
55-59	11	168	39	-	-	-	-	218
60-64	6	255	120	23	-	-	-	404
65-69	5	126	237	101	26	-	1	496
70-74	-	16	125	183	87	11	1	423
75-79	-	3	21	105	166	35	7	337
80-84	-	-	2	26	119	97	14	258
85+	1	1	-	-	7	160	246	415
ALL	28	603	544	438	405	303	269	2,590

**AVERAGE ANNUAL BENEFIT**

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>ALL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	-	-	-	-	-	-	0
50-54	10,652	13,791	-	-	-	-	-	13,388
55-59	25,163	27,405	13,343	-	-	-	-	24,776
60-64	13,364	23,503	28,807	10,142	-	-	-	24,167
65-69	11,490	19,653	23,651	25,326	17,824	-	10,174	22,521
70-74	-	27,468	21,487	22,002	22,200	5,495	8,399	21,636
75-79	-	22,565	23,329	17,793	19,369	10,907	12,175	18,125
80-84	-	-	11,465	23,164	15,601	13,513	9,612	15,221
85+	14,260	33,564	-	-	9,385	13,257	12,227	12,632
ALL	17,212	23,355	23,495	21,206	18,598	12,786	12,068	19,802

**TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS RETIRED**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
482	14,084	12,781	9,288	7,532	3,874	3,246	51,287

TABLE 5

**Minneapolis Teachers' Retirement Fund**  
***Disability Retirements as of June 30, 1996***

<u>AGE</u>	<u>YEARS DISABLED</u>							<u>TOTAL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	3	-	1	-	-	-	4
50-54	-	4	1	1	-	-	-	6
55-59	-	3	1	-	-	-	-	4
60-64	-	2	2	3	1	-	-	8
65+	-	-	-	-	-	-	-	0 *
ALL	0	12	4	5	1	0	0	22

<u>AGE</u>	<u>YEARS DISABLED</u>							<u>ALL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	30,615	-	13,659	-	-	-	26,376
50-54	-	32,968	32,704	23,949	-	-	-	31,421
55-59	-	25,795	21,180	-	-	-	-	24,641
60-64	-	14,308	23,076	24,954	9,549	-	-	19,898
65+	-	-	-	-	-	-	-	0
ALL	0	27,477	25,009	22,494	9,549	0	0	25,081

**TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS DISABLED**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
0	330	100	112	10	0	0	552

\* Disability retirements over the age of 65 have been reclassified as service retirements

TABLE 6

**Minneapolis Teachers' Retirement Fund**  
***Survivors as of June 30, 1996***  
**YEARS SINCE MEMBER'S RETIREMENT \***

<u>AGE</u>	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
<50	-	12	17	19	4	-	-	52
50-54	-	2	-	1	-	-	-	3
55-59	-	5	1	2	2	-	1	11
60-64	-	4	11	6	2	3	-	26
65-69	-	2	11	10	8	-	1	32
70-74	-	-	4	12	15	-	1	32
75-79	-	-	1	2	4	6	1	14
80-84	-	1	2	1	5	10	6	25
85+	1	1	2	2	1	10	20	37
ALL	1	27	49	55	41	29	30	232

**AVERAGE ANNUAL BENEFIT**  
**YEARS SINCE MEMBER'S RETIREMENT**

<u>AGE</u>	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>ALL</u>
<50	-	9,456	13,555	5,816	5,730	-	-	9,180
50-54	-	25,446	-	8,147	-	-	-	19,680
55-59	-	13,031	6,814	9,574	12,042	-	8,133	11,212
60-64	-	35,948	21,865	14,118	18,749	11,844	-	20,848
65-69	-	16,599	26,244	28,124	14,082	-	8,399	22,631
70-74	-	-	25,591	14,782	17,278	-	6,399	17,041
75-79	-	-	13,178	8,106	15,561	14,103	7,199	13,103
80-84	-	39,272	10,895	2,000	12,910	12,960	12,450	13,277
85+	39,004	23,426	17,771	6,718	1,200	15,166	11,413	13,312
ALL	39,004	17,378	19,170	12,960	14,252	13,842	11,103	14,996

**TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS SINCE MEMBER'S  
RETIREMENT**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
39	469	939	713	584	401	333	3,478

\* Due to insufficient data, this table is based upon the Member's date of retirement rather than the Member's date of death

TABLE 7

**Minneapolis Teachers' Retirement Fund**  
**Reconciliation of Members**

	Actives*	Terminated	
		Deferred Retirement	Other Non-Vested
A. ON JUNE 30, 1995	4,778	628	895
B. ADDITIONS	519	68	305
C. DELETIONS			
1. Service Retirement	(124)	(45)	(10)
2. Disability	(4)	-	-
3. Death - Survivor	-	(1)	-
4. Death - Other	(1)	-	-
5. Terminated - Deferred	(66)	-	-
6. Terminated - Refund	(101)	(3)	(66)
7. Terminated - Other Non-Vested	(272)	-	-
8. Returned as Active	-	(7)	(18)
D. DATA ADJUSTMENTS	-	-	-
1. Vested	3,454		
2. Non-Vested	1,275		
E. TOTAL ON June 30, 1996	4,729	640	1,106

	Recipients		
	Retirement Annuitants	Disabled	Survivors
A. ON JUNE 30, 1995	2,482	49	225
B. ADDITIONS	179	4	45
C. DELETIONS			
1. Service Retirement	-	-	-
2. Death	(98)	(3)	(23)
3. Annuity Expired	-	-	(15)
4. Returned as Active	-	-	-
D. DATA ADJUSTMENTS	27	(28) **	-
E. TOTAL ON June 30, 1996	2,590	22	232

\* Includes 88 members on leave of absence.

\*\* Disabled members over age 65 have been reclassified as retirement annuitants.



TABLE 8

**Minneapolis Teachers' Retirement Fund**  
**Actuarial Balance Sheet**  
*(dollars in thousands)*

July 1, 1996

A.	CURRENT ASSETS (TABLE 1, F6)			\$	612,852
B.	EXPECTED FUTURE ASSETS				
1.	Present Value of Expected Future Statutory Supplemental Contributions				223,886
2.	Present Value of Future Normal Costs				193,926
3.	Total Expected Future Assets				<u>417,812</u>
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS			\$	<u>1,030,664</u>
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested		Total
1.	Benefit Recipients				
a.	Retirement Annuities	\$	539,357	\$	539,357
b.	Disability Benefits		7,696		7,696
c.	Surviving Spouse and Child Benefits		27,647		27,647
2.	Deferred Retirements With Future Augmentation		16,151		16,151
3.	Former Members Without Vested Rights		1,391		1,391
4.	Active Members				
a.	Retirement Annuities*	1,414	369,475		370,889
b.	Disability Benefits	20,131	0		20,131
c.	Survivors' Benefits	8,014	0		8,014
d.	Deferred Retirements	127	15,130		15,257
e.	Refund Liability Due to Death or Withdrawal	0	2,400		2,400
5.	Total Current Benefit Obligations	\$ <u>29,686</u>	\$ <u>979,247</u>	\$	<u>1,008,933</u>
E.	EXPECTED FUTURE BENEFIT OBLIGATIONS			\$	<u>240,056</u>
F.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			\$	<u>1,248,989</u>
G.	CURRENT UNFUNDED ACTUARIAL LIABILITY: (D5-A)			\$	396,081
H.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY: (F-C)			\$	218,325

\* Includes members on leave of absence.

TABLE 9

**Minneapolis Teachers' Retirement Fund**  
**Determination of Unfunded Actuarial Accrued Liability (UAAL) and**  
**Supplemental Contribution Rate**  
*(dollars in thousands)*

July 1, 1996			
	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
	(1)	(2)	(3)
<b>A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)</b>			
1. Active Members			
a. Retirement Annuities*	\$ 581,680	150,217	431,463
b. Disability Benefits	34,898	16,467	18,431
c. Survivors' Benefits	12,505	4,778	7,727
d. Deferred Retirements	22,580	15,087	7,493
e. Refunds Due to Death or Withdrawal	5,084	7,377	(2,293)
f. Total	\$ 656,747	\$ 193,926	\$ 462,821
2. Deferred Retirements With Future Augmentation	16,151		16,151
3. Former Members Without Vested Rights	1,391		1,391
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	574,700		574,700
6. Total	\$ 1,248,989	\$ 193,926	\$ 1,055,063
<b>B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)</b>			
1. AAL: (A6)		\$ 1,055,063	
2. Current Assets (Table 1, F6)		612,852	
3. UAAL: (B1-B2)		\$ 442,211	
<b>C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE</b>			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020		\$ 3,404,962	
2. Supplemental Contribution Rate: (B3/C1)			12.99%

\* Includes members on leave of absence

**Minneapolis Teachers' Retirement Fund**  
**Changes in Unfunded Actuarial Accrued Liability (UAAL)**  
*(dollars in thousands)*

Year Ending June 30, 1996

A.	UAAL AT BEGINNING OF YEAR	\$ 428,289
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1.	Normal Cost and Expenses	\$ 21,736
2.	Contribution	(34,379)
3.	Interest on A, B1 and B2	36,791
4.	Total: (B1+B2+B3)	\$ 24,148
C.	EXPECTED UAAL AT END OF YEAR: (A+B4)	\$ 452,437
D.	INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1.	Salary Increases	\$ (9,193)
2.	Investment Return *	(9,411)
3.	MPRIF Mortality	0
4.	Mortality of Other Benefit Recipients	4,757
5.	Other Items	3,621
6.	Total	\$ (10,226)
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS: (C+D5)	\$ 442,211
F.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	
G.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
H.	UAAL AT END OF YEAR: (E+F+G)	\$ 442,211

\* The gain due to investment return consists of gross investment gain of \$(32,429) offset by \$23,018 applied to provide increases in actual annuitant benefits as of January 1, 1997.

**Minneapolis Teachers' Retirement Fund**  
**Determination of Contribution Sufficiency**  
*(dollars in thousands)*

July 1, 1996

	Percent of Payroll	Dollar Amount
<b>A. STATUTORY CONTRIBUTIONS - CHAPTER 354A</b>		
1. Employee Contributions	6.03%	\$ 10,983
2. Employer Contributions	9.67%	17,615
3. Supplemental Contribution		
a. 1993 Legislation *	2.74%	5,000
b. 1996 Legislation	0.59%	1,080
4. Administrative Expense Assessment	0.15%	264
5. Total	19.18%	\$ 34,942
<b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>		
1. Normal Cost		
a. Retirement Benefits	9.26%	\$ 16,865
b. Disability Benefits	0.96%	1,752
c. Survivors' Benefits	0.29%	531
d. Deferred Retirement Benefits	0.92%	1,672
e. Refunds Due to Death or Withdrawal	0.42%	771
f. Total	11.85%	\$ 21,591
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	12.99%	\$ 23,665
3. Allowance for Expenses	0.31%	\$ 565
4. Total	25.15%	\$ 45,821
<b>C. CONTRIBUTION SUFFICIENCY (DEFICIENCY):     (A5-B4)</b>	(5.97)%	\$ (10,879)

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1996 is \$182,179.

\* Includes contributions from School District Number 1, the City of Minneapolis and matching State contributions.

**Minneapolis Teachers' Retirement Fund**  
**Summary of Actuarial Assumptions and Methods**

<i>Interest:</i>	Pre-Retirement:	8.50% per annum
	Post-Retirement:	8.50% per annum
<i>Salary Increases:</i>	Total reported pay for prior fiscal year increased 6.50% to current fiscal year and 6.50% annually for each future year.	
<i>Mortality:</i>	Pre-Retirement:	
	Male -	1971 Group Annuity Mortality Table male rates set back 8 years.
	Female -	1971 Group Annuity Mortality Table male rates set back 8 years.
	Post-Retirement:	
	Male -	same as above.
	Female -	same as above.
	Post-Disability:	
	Male -	same as above.
	Female -	same as above.
<i>Retirement Age:</i>	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. In addition, 30% of Coordinated Members are assumed to retire each year that they are eligible for the Rule of 90.	
<i>Separation:</i>	Graded rates shown in the rate table.	
<i>Disability:</i>	Graded rates shown in the rate table.	
<i>Administrative Expenses:</i>	Prior year administrative expenses (excluding investment expenses) expressed as a percentage of prior year payroll.	
<i>Return of Contributions:</i>	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.	
<i>Family Composition:</i>	80% of male Members and 60% of female Members are assumed to be married. Female is assumed to be three years younger than male.	
<i>Social Security:</i>	N/A	

**TABLE 12**  
**(cont)**

*Benefit Increases  
After Retirement:*

2.0% per annum

*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.

Married Members are assumed to elect subsidized joint and survivor forms of annuity as follows:

Males -	15% elect 50% J&S option
	50% elect 100% J&S option
Females -	10% elect 50% J&S option
	10% elect 100% J&S option

*Actuarial Cost Method:*

Entry Age Normal Actuarial Cost Method with normal costs expressed as a level percentage of earnings. Under this method Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.

*Asset Valuation Method:*

Cost Value plus one-third of Unrealized Gains or Losses.

*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 6.50% per annum.

**TABLE 12**  
(cont)

**Minneapolis Teachers' Retirement Fund**  
**Summary of Actuarial Assumptions and Methods**

*Separations Expressed as the Number of Occurrences per 10,000:*

<u>Age</u>	<u>Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
20	4	4	1,200	1,200	3	4	0	0
21	4	4	1,150	1,150	3	4	0	0
22	4	4	1,100	1,100	3	4	0	0
23	4	4	1,050	1,050	3	5	0	0
24	4	4	1,000	1,000	3	5	0	0
25	5	5	950	950	3	5	0	0
26	5	5	900	900	4	5	0	0
27	5	5	850	850	4	5	0	0
28	5	5	800	800	4	6	0	0
29	5	5	750	750	4	6	0	0
30	5	5	700	700	4	6	0	0
31	6	6	650	650	4	6	0	0
32	6	6	600	600	4	7	0	0
33	6	6	550	550	5	7	0	0
34	7	7	500	500	5	8	0	0
35	7	7	450	450	5	8	0	0
36	7	7	400	400	6	8	0	0
37	8	8	350	350	6	9	0	0
38	8	8	300	300	6	9	0	0
39	9	9	250	250	6	10	0	0
40	9	9	200	200	7	10	0	0
41	10	10	190	190	7	11	0	0
42	10	10	180	180	8	12	0	0
43	11	11	170	170	8	13	0	0
44	12	12	160	160	9	14	0	0
45	13	13	150	150	10	15	0	0
46	14	14	140	140	11	16	0	0
47	15	15	130	130	12	18	0	0
48	16	16	120	120	14	20	0	0
49	18	18	110	110	16	23	0	0
50	20	20	100	100	18	26	0	0
51	23	23	90	90	20	29	0	0
52	26	26	80	80	23	33	0	0
53	29	29	70	70	26	37	0	0
54	33	33	60	60	30	42	0	0

**TABLE 12**  
(cont)

**Minneapolis Teachers' Retirement Fund**  
**Summary of Actuarial Assumptions and Methods**

*Separations Expressed as the Number of Occurrences per 10,000:*

<u>Age</u>	<u>Death</u>		<u>Withdrawal</u>		<u>Disability</u>		<u>Retirement</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	38	38	50	50	36	49	0	0
56	42	42	40	40	42	58	0	0
57	47	47	30	30	50	68	0	0
58	53	53	20	20	59	80	0	0
59	59	59	10	10	69	94	0	0
60	65	65	0	0	90	121	0	0
61	71	71	0	0	116	154	0	0
62	78	78	0	0	146	193	0	0
63	85	85	0	0	0	0	10,000	10,000
64	93	93	0	0	0	0	0	0
65	100	100	0	0	0	0	0	0
66	109	109	0	0	0	0	0	0
67	119	119	0	0	0	0	0	0
68	131	131	0	0	0	0	0	0
69	144	144	0	0	0	0	0	0
70	159	159	0	0	0	0	0	0



TABLE 3A

## BASIC

**Minneapolis Teachers' Retirement Fund**  
**Active Members as of June 30, 1996**

**YEARS OF SERVICE**

<u>AGE</u>	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
<25	-	-	-	-	-	-	-	-	0
25-29	-	-	-	-	-	-	-	-	0
30-34	-	-	-	-	-	-	-	-	0
35-39	-	-	-	-	-	-	-	-	0
40-44	-	1	4	7	19	12	-	-	43
45-49	-	2	18	23	52	113	104	-	312
50-54	-	1	10	26	39	93	284	52	505
55-59	-	1	6	15	25	41	113	52	253
60-64	-	-	9	1	13	22	38	11	94
65+	-	-	1	-	4	2	12	9	28
ALL	0	5	48	72	152	283	551	124	1,235

**AVERAGE ANNUAL EARNINGS****YEARS OF SERVICE**

<u>AGE</u>	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>ALL</u>
<25	-	-	-	-	-	-	-	-	0
25-29	-	-	-	-	-	-	-	-	0
30-34	-	-	-	-	-	-	-	-	0
35-39	-	-	-	-	-	-	-	-	0
40-44	-	38,353	38,625	37,017	48,121	47,355	-	-	44,989
45-49	-	45,201	44,866	48,335	48,418	52,795	54,872	-	51,923
50-54	-	21,281	37,776	50,302	50,779	53,473	55,898	57,077	54,462
55-59	-	27,623	43,898	49,928	50,009	51,125	54,912	55,952	53,363
60-64	-	-	37,678	53,677	47,934	50,074	53,990	57,935	51,132
65+	-	-	2,070	-	40,486	56,271	59,143	50,500	51,456
ALL	0	35,532	40,509	48,351	48,998	52,358	55,441	56,204	52,944

**PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
0	178	1,945	3,481	7,448	14,817	30,548	6,969	65,386

TABLE 4A

BASIC

**Minneapolis Teachers' Retirement Fund**  
***Service Retirements as of June 30, 1996***

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>TOTAL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	-	-	-	-	-	-	0
50-54	4	31	-	-	-	-	-	35
55-59	11	160	39	-	-	-	-	210
60-64	6	243	119	23	-	-	-	391
65-69	5	116	232	101	26	-	1	481
70-74	-	15	125	183	87	11	1	422
75-79	-	3	21	105	166	35	7	337
80-84	-	-	2	26	119	97	114	258
85+	1	1	-	-	7	160	246	415
ALL	27	569	538	438	405	303	269	2,549

**AVERAGE ANNUAL BENEFIT**

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>ALL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	-	-	-	-	-	-	0
50-54	11,826	14,588	-	-	-	-	-	14,272
55-59	25,163	28,489	13,343	-	-	-	-	25,502
60-64	13,364	24,379	29,022	10,142	-	-	-	24,785
65-69	11,490	20,923	24,100	25,326	17,824	-	10,174	23,092
70-74	-	29,172	21,487	22,002	22,200	5,495	8,399	21,683
75-79	-	22,565	23,329	17,793	19,369	10,907	12,175	18,125
80-84	-	-	11,465	23,164	15,601	13,513	9,612	15,221
85+	14,260	33,564	-	-	9,385	13,257	12,227	12,632
ALL	17,629	24,429	23,725	21,206	18,598	12,786	12,068	20,039

**TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS RETIRED**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
476	13,901	12,764	9,288	7,532	3,874	3,246	51,081

TABLE 5A

BASIC

**Minneapolis Teachers' Retirement Fund**  
**Disability Retirements as of June 30, 1996**

<u>AGE</u>	<u>YEARS DISABLED</u>							<u>TOTAL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	3	-	1	-	-	-	4
50-54	-	4	1	1	-	-	-	6
55-59	-	2	1	-	-	-	-	3
60-64	-	2	2	3	1	-	-	8
65+	-	-	-	-	-	-	-	0 *
ALL	0	11	4	5	1	0	0	21

**AVERAGE ANNUAL BENEFIT**

<u>AGE</u>	<u>YEARS DISABLED</u>							<u>ALL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	30,615	-	13,659	-	-	-	26,376
50-54	-	32,968	32,704	23,949	-	-	-	31,421
55-59	-	35,660	21,180	-	-	-	-	30,833
60-64	-	14,308	23,076	24,954	9,549	-	-	19,898
65+	-	-	-	-	-	-	-	0
ALL	0	29,423	25,009	22,494	9,549	0	0	25,986

**TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS DISABLED**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
0	324	100	112	10	0	0	546

\* Disability retirements over the age of 65 have been reclassified as service retirements

TABLE 6A

BASIC

**Minneapolis Teachers' Retirement Fund**  
***Survivors as of June 30, 1996***  
**YEARS SINCE MEMBER'S RETIREMENT \***

<u>AGE</u>	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
<50	-	12	17	19	4	-	-	52
50-54	-	2	-	1	-	-	-	3
55-59	-	5	1	2	2	-	1	11
60-64	-	4	11	6	2	3	-	26
65-69	-	2	11	10	8	-	1	32
70-74	-	-	4	12	15	-	1	32
75-79	-	-	1	2	4	6	1	14
80-84	-	1	2	1	5	10	6	25
85+	1	1	2	2	1	10	20	37
ALL	1	27	49	55	41	29	30	232

**AVERAGE ANNUAL BENEFIT**  
**YEARS SINCE MEMBER'S RETIREMENT**

<u>AGE</u>	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>ALL</u>
<50	-	9,456	13,555	5,816	5,730	-	-	9,180
50-54	-	25,446	-	8,147	-	-	-	19,680
55-59	-	13,031	6,814	9,574	12,042	-	8,133	11,212
60-64	-	35,948	21,865	14,118	18,749	11,844	-	20,848
65-69	-	16,599	26,244	28,124	14,082	-	8,399	22,631
70-74	-	-	25,591	14,782	17,278	-	6,399	17,041
75-79	-	-	13,178	8,106	15,561	14,103	7,199	13,103
80-84	-	39,272	10,895	2,000	12,910	12,960	12,450	13,277
85+	39,004	23,426	17,771	6,718	1,200	15,166	11,413	13,312
ALL	39,004	17,378	19,170	12,960	14,252	13,842	11,103	14,996

**TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS SINCE MEMBER'S  
RETIREMENT**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
39	469	939	713	584	401	333	3,478

\* Due to insufficient data, this table is based upon the Member's date of retirement rather than the Member's date of death

**Minneapolis Teachers' Retirement Fund**  
**Determination of Contribution Sufficiency**  
*(dollars in thousands)*

July 1, 1996

	Percent of Payroll	Dollar Amount
<b>A. STATUTORY CONTRIBUTIONS - CHAPTER 354A</b>		
1. Employee Contributions	8.50%	\$ 5,919
2. Employer Contributions	12.14%	8,454
3. Supplemental Contribution		
a. 1993 Legislation *	2.74%	1,908
b. 1996 Legislation	0.59%	411
4. Administrative Expense Assessment	0.15%	104
5. Total	<u>24.12%</u>	<u>\$ 16,796</u>
<b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>		
1. Normal Cost		
a. Retirement Benefits	12.39%	\$ 8,631
b. Disability Benefits	1.20%	834
c. Survivors' Benefits	0.41%	283
d. Deferred Retirement Benefits	1.60%	1,115
e. Refunds Due to Death or Withdrawal	0.69%	483
f. Total	<u>16.29%</u>	<u>\$ 11,346</u>

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1996 is \$69,636.

**Minneapolis Teachers' Retirement Fund**  
***Summary of Plan Provisions***

**GENERAL**

<i>Eligibility:</i>	A teacher who is employed by the Board of Education of Special School District No. 1 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).
<i>Contributions:</i>	Member: 8.50% of Salary. Employer: 12.14% of Salary.
<i>Teaching Service:</i>	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.
<i>Salary:</i>	Total compensation. Excludes lump sum payments for unused vacation leave or unused sick leave at separation.
<i>Average Salary:</i>	Average of the 5 highest consecutive years of Salary.

**RETIREMENT*****Normal Retirement Benefit:***

<i>Eligibility:</i>	Age 60. Any age with 30 years of Teaching Service.
<i>Amount:</i>	2.50% of Average Salary for each year of Teaching Service.

***Early Retirement Benefit:***

<i>Eligibility:</i>	Age 55 with less than 30 years of Teaching Service.
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**TABLE 13A**  
**(cont)**  
**BASIC**

*Amount:*

The greater of:

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.

or

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 7 years of Teaching Service. The benefit is based on the accumulation of the 6.5% "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:

- 10 or 15 year certain and life
- 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 2.0% 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 5 years exceeds 8.5%, 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.

## **DISABILITY**

### **Disability Benefit:**

*Eligibility:* Total and permanent disability with 3 years of Teaching Service.

*Amount:* 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**

A choice of Benefit A, Benefit B, or Benefit C.

### **Benefit A:**

*Eligibility:* Death before retirement.

*Amount:* The accumulation of Member and city contributions plus 5% interest if death occurred before May 16, 1989, or 6% 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:**

*Eligibility:* An active Member with 7 years of Teaching Service. A former Member age 60 with 7 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:***

<i>Eligibility:</i>	An active Member who dies and leaves surviving children.
<i>Amount:</i>	<p>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.</p> <p>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).</p>
<i>Benefit Increases:</i>	Same as retirement.

**TERMINATION**

***Deferred Annuity:***

<i>Eligibility:</i>	7 years of Teaching Service.
<i>Amount:</i>	<p>Benefit computed under law in effect at termination and increased by the following annual percentage:</p> <p>3.00% until January 1 of the year following the attainment of 55, and,</p> <p>5.00% thereafter until the annuity begins.</p> <p>In addition, the interest earned on the Member and city contributions between termination and age 60 can be applied to provide an additional annuity.</p>

***Refund of Contributions:***

<i>Eligibility:</i>	Termination of teaching service.
<i>Amount:</i>	Member's contributions with 6.00% interest. A deferred annuity may be elected in lieu of a refund.

TABLE 3B

COORDINATED

**Minneapolis Teachers' Retirement Fund**  
**Active Members as of June 30, 1996**

<u>AGE</u>	<u>YEARS OF SERVICE</u>								<u>TOTAL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	63	12	-	-	-	-	-	-	75
25-29	147	346	8	-	-	-	-	-	501
30-34	129	346	101	16	-	-	-	-	592
35-39	53	251	122	118	9	-	-	-	553
40-44	41	222	160	111	19	-	-	-	553
45-49	40	229	143	97	35	1	-	-	545
50-54	15	125	101	64	13	1	-	-	319
55-59	9	54	50	43	20	-	2	-	178
60-64	3	19	23	12	2	-	-	-	59
65+	-	15	12	2	2	-	-	-	31
ALL	500	1,619	720	463	100	2	2	0	3,406

**AVERAGE ANNUAL EARNINGS**

<u>AGE</u>	<u>YEARS OF SERVICE</u>								<u>ALL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<25	8,284	7,959	-	-	-	-	-	-	8,232
25-29	11,387	22,773	34,502	-	-	-	-	-	19,620
30-34	12,647	25,900	35,693	43,500	-	-	-	-	25,159
35-39	14,669	30,253	38,937	45,153	36,258	-	-	-	33,952
40-44	13,518	29,588	40,637	44,789	48,874	-	-	-	35,307
45-49	14,884	29,930	42,482	48,392	49,557	44,296	-	-	36,692
50-54	13,405	30,656	44,968	48,310	47,651	75,625	-	-	38,752
55-59	11,608	27,137	42,553	48,094	47,719	-	54,657	-	38,367
60-64	7,223	24,881	41,931	46,682	50,971	-	-	-	35,948
65+	-	9,390	32,410	48,227	49,085	-	-	-	23,368
ALL	12,163	27,093	40,598	46,449	47,634	59,961	54,657	0	31,026

**PRIOR FISCAL YEAR EARNINGS (IN THOUSANDS) BY YEARS OF SERVICE**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	<u>TOTAL</u>
6,081	43,864	29,231	21,506	4,763	120	109	0	105,674

TABLE 4B

COORDINATED

**Minneapolis Teachers' Retirement Fund**  
***Service Retirements as of June 30, 1996***

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>TOTAL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	-	-	-	-	-	-	0
50-54	1	3	-	-	-	-	-	4
55-59	-	8	-	-	-	-	-	8
60-64	-	12	1	-	-	-	-	13
65-69	-	10	5	-	-	-	-	15
70-74	-	1	-	-	-	-	-	1
75-79	-	-	-	-	-	-	-	0
80-84	-	-	-	-	-	-	-	0
85+	-	-	-	-	-	-	-	0
ALL	1	34	6	0	0	0	0	41

**AVERAGE ANNUAL BENEFIT**

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>ALL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	-	-	-	-	-	-	0
50-54	-	-	-	-	-	-	-	0
55-59	5,953	5,551	-	-	-	-	-	5,652
60-64	-	5,737	-	-	-	-	-	5,737
65-69	-	5,770	3,206	-	-	-	-	5,573
70-74	-	4,925	2,838	-	-	-	-	4,229
75-79	-	1,907	-	-	-	-	-	1,907
80-84	-	-	-	-	-	-	-	0
85+	-	-	-	-	-	-	-	0
ALL	5,953	5,381	2,899	0	0	0	0	5,032

**TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS RETIRED**

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
6	183	17	0	0	0	0	206

TABLE 5B

## COORDINATED

**Minneapolis Teachers' Retirement Fund**  
***Disability Retirements as of June 30, 1996***

<u>AGE</u>	<u>YEARS DISABLED</u>							<u>TOTAL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	-	-	-	-	-	-	0
50-54	-	-	-	-	-	-	-	0
55-59	-	1	-	-	-	-	-	1
60-64	-	-	-	-	-	-	-	0
65+	-	-	-	-	-	-	-	0 *
ALL	0	1	0	0	0	0	0	1

## AVERAGE ANNUAL BENEFIT

<u>AGE</u>	<u>YEARS DISABLED</u>							<u>ALL</u>
	<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	
<50	-	-	-	-	-	-	-	0
50-54	-	-	-	-	-	-	-	0
55-59	-	6,065	-	-	-	-	-	6,065
60-64	-	-	-	-	-	-	-	0
65+	-	-	-	-	-	-	-	0
ALL	0	6,065	0	0	0	0	0	6,065

## TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS DISABLED

<u>&lt;1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25+</u>	<u>TOTAL</u>
0	6	0	0	0	0	0	6

\* Disability retirements over the age of 65 have been reclassified as service retirements

## COORDINATED

**Minneapolis Teachers' Retirement Fund**  
**Determination of Contribution Sufficiency**  
*(dollars in thousands)*

July 1, 1996

	Percent of Payroll	Dollar Amount
<b>A. STATUTORY CONTRIBUTIONS - CHAPTER 354A</b>		
1. Employee Contributions	4.50%	\$ 5,064
2. Employer Contributions	8.14%	9,161
3. Supplemental Contribution		
a. 1993 Legislation *	2.74%	3,092
b. 1996 Legislation	0.59%	669
4. Administrative Expense Assessment	0.15%	160
5. Total	<u>16.12%</u>	<u>\$ 18,146</u>
<b>B. REQUIRED CONTRIBUTIONS - CHAPTER 356</b>		
1. Normal Cost		
a. Retirement Benefits	7.32%	\$ 8,234
b. Disability Benefits	0.81%	918
c. Survivors' Benefits	0.22%	248
d. Deferred Retirement Benefits	0.49%	557
e. Refunds Due to Death or Withdrawal	0.26%	288
f. Total	<u>9.10%</u>	<u>\$ 10,245</u>

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1996 is \$112,543

**Minneapolis Teachers' Retirement Fund**  
**Summary of Plan Provisions**

**GENERAL**

<i>Eligibility:</i>	A teacher who is employed by the Board of Education of Special School District No. 1 and who is 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).
<i>Contributions:</i>	Member: 4.50% of Salary. Employer: 8.14% of Salary.
<i>Allowable Service:</i>	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.
<i>Salary:</i>	Total compensation. Excludes lump sum payments for unused vacation leave or unused sick leave at separation.
<i>Average Salary:</i>	Average of the 5 highest consecutive years of Salary. Average Salary is based on all Allowable Service if less than 5 years.

**RETIREMENT**

**Normal Retirement Benefit:**

<i>Eligibility:</i>	
<b>First hired before July 1, 1989:</b>	Age 65 and 3 years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and 1 year of Allowable Service.
<b>First hired after July 1, 1989:</b>	The greater of age 65 or the age eligible for full Social Security retirement benefits and 3 years of Allowable Service. Proportionate Retirement Annuity is available at normal retirement age and 1 year of Allowable Service.
<i>Amount:</i>	1.50% of Average Salary for each year of Allowable Service.

**TABLE 13B**  
**(cont)**  
**COORDINATED**

***Early Retirement Benefit:***

***Eligibility:***

Age 55 and 3 years of Allowable Service. Any age with 30 years of Allowable Service. Rule of 90: Age plus Allowable Service totals 90.

***Amount:***

**First hired before  
July 1, 1989:**

The greater of:

1.00% of Average Salary for each of the first 10 years of Allowable Service plus 1.50% 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.

or

1.50% 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:**

1.50% of Average Salary for each year of Allowable Service assuming augmentation to the age eligible for full Social Security retirement benefits at 3.00% per year and actuarial reduction for each month the Member is under the Social Security retirement age.

***Form of Payment:***

Life annuity. Actuarial equivalent options are:

- Guaranteed refund
- 10 or 15 year certain and life
- 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 2.0% 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 5 years exceeds 8.5%, 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**

### ***Disability Benefit:***

*Eligibility:* Total and permanent disability before the normal retirement age with 3 years of Allowable Service. Also, at least 2 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:***

*Eligibility:* 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 Annuity:***

*Eligibility:* Any active Member who dies with 3 years of Allowable Service prior to retirement or disability benefits commence.



**TABLE 13B**  
**(cont)**  
**COORDINATED**

Any former Member who dies before retirement or disability benefits commence, if age 50 with 3 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:***

*Eligibility:*

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.

**TERMINATION**

***Deferred Annuity:***

*Eligibility:*

3 years of Allowable Service.

*Amount:*

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

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

5.00% thereafter until the annuity begins.

Amount is payable as a normal or early retirement benefit.

***Refund of Contributions:***

*Eligibility:*

Termination of teaching service.

**TABLE 13B**  
**(cont)**  
**COORDINATED**

*Amount:*

Member's contributions with 6.00% interest. A deferred annuity may be elected in lieu of a refund.