

St. Paul 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: *St. Paul Teachers' Retirement Fund*

Commission Members:

Pursuant the terms of our actuarial services contract, we have performed an actuarial valuation of the St. Paul 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 St. Paul 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,

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Enclosure

St. Paul Teachers' Retirement Fund
Table of Contents

REPORT HIGHLIGHTS

COMMENTARY

Purpose
Report Highlights
Asset Information
Actuarial Balance Sheet
GASB Disclosure
Actuarial Cost Method
Sources of Actuarial Gains and Losses
Contribution Sufficiency
Changes in Actuarial Assumptions
Changes in Plan Provisions
Reconciliation of Funding Ratios and Contributions Sufficiency

ASSET INFORMATION

Table 1 - Accounting Balance Sheet
Table 2 - Change in Assets Available for Benefits

MEMBERSHIP DATA

Table 3 - Active Members
Table 4 - Service Retirements
Table 5 - Disability Retirements
Table 6 - Survivors
Table 7 - Reconciliation of Members

FUNDING STATUS

Table 8 - Actuarial Balance Sheet
Table 9 - Determination of Unfunded Actuarial Accrued Liability (UAAL) and
 Supplemental Contribution Rate
Table 10 - Changes in Unfunded Actuarial Accrued Liability (UAAL)
Table 11 - Determination of Contribution Sufficiency

ACTUARIAL ASSUMPTIONS

Table 12 - Summary of Actuarial Assumptions and Methods

BASIC PLAN

MEMBERSHIP DATA

Table 3A -	Active Members
Table 4A -	Service Retirements
Table 5A -	Disability Retirements
Table 6A -	Survivors

FUNDING STATUS

Table 11A -	Determination of Contribution Sufficiency
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PLAN PROVISIONS

Table 13A -	Summary of Plan Provisions
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COORDINATED PLAN

MEMBERSHIP DATA

Table 3B -	Active Members
Table 4B -	Service Retirements
Table 6B -	Survivors

FUNDING STATUS

Table 11B -	Determination of Contribution Sufficiency
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PLAN PROVISIONS

Table 13B -	Summary of Plan Provisions
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St. Paul Teachers' Retirement Fund
Report Highlights
(dollars in thousands)

	July 1, 1995 Valuation	July 1, 1996 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 354A % of Payroll	15.87%	15.91%
2. Required Contributions - Chapter 356 % of Payroll	17.96%	16.97%
3. Sufficiency (Deficiency): (A1-A2)	(2.09)%	(1.06)%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$ 445,733	\$ 494,931
b. Current Benefit Obligations (Table 8)	\$ 600,437	\$ 631,393
c. Funding Ratio: (a/b)	74.23%	78.39%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 445,733	\$ 494,931
b. Actuarial Accrued Liability (Table 9)	\$ 633,070	\$ 664,072
c. Funding Ratio: (a/b)	70.41%	74.53%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 706,209	\$ 773,227
b. Current and Expected Future Benefit Obligations	\$ 768,231	\$ 801,818
c. Funding Ratio: (a/b)	91.93%	96.43%

St. Paul Teachers' Retirement Fund
Report Highlights
(dollars in thousands)

	July 1, 1995 Valuation	July 1, 1996 Valuation
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	3,742	3,805
b. Projected Annual Earnings	\$148,221	\$155,146
c. Average Annual Earnings (Actual \$)	\$39,610	\$40,774
d. Average Age	43.9	43.8
e. Average Service	11.2	11.2
f. Additional Members on Leave of Absence*	110	129
2. Others		
a. Service Retirements (Table 4)	1,334	1,395
b. Disability Retirements (Table 5) **	35	22
c. Survivors (Table 6)	170	178
d. Deferred Retirements (Table 7)	107	136
e. Terminated Other Non-Vested (Table 7)	1,066	1,011
f. Total	2,712	2,742

* Valued as deferred retirements; liability included with actives.

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

St. Paul 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 78.39%. The corresponding ratio for the prior year was 74.23%.

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 74.53%, which is an increase from the 1995 value of 70.41%.

The *Projected Benefit Funding Ratio* is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 96.43% shows that the current statutory contributions are nearly sufficient.

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.

The following table presents the components of Table 1, line A.4:

Other Assets
Table 1 Item A.4
(dollars in thousands)

	<u>Market Value</u>	<u>Cost Value</u>
Accounts Receivable		
Employer Contribution	\$ 809	\$ 809
Employee Contribution	67	67
State Amortization Aid	464	464
Interest	1,681	1,681
Dividends	550	550
Bond Sales	0	0
Net Gain on Bond Sales	0	0
Repaid Principal	609	609
Stock Sales	239	239
Net Gain on Stock Sales	29	29
Commission Recapture	7	7
Security Lending	11	11
Total Accounts Receivable	<u>\$4,466</u>	<u>\$4,466</u>
Fixed Assets	<u>16</u>	<u>16</u>
Total Other Assets	<u><u>\$4,482</u></u>	<u><u>\$4,482</u></u>

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	\$	275,344,000
Current Employees		
Accumulated employee contributions including allocated investment income		143,087,000
Employer-financed vested		181,065,000
Employer-financed non-vested		31,897,000
Total Pension Benefit Obligation	\$	631,393,000
Net Assets Available for Benefits at Cost	\$	468,124,000
Total Benefit Obligation less Assets	\$	163,269,000
Funded Ratio		74.14%

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 A6, 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 B3, 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 15.91% compared to the Required Contribution Rate of 16.97%.

Changes in Actuarial Assumptions

The 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 21% of excess police and fire amortization aid to the Fund.

Effective July 1, 1998 St. Paul Public Schools is required to make additional contributions to the Fund.

TABLE 1

St. Paul Teachers' Retirement Fund
Accounting Balance Sheet
(dollars in thousands)

July 1, 1996

	<u>Market Value</u>	<u>Cost Value</u>
A. ASSETS		
1. Cash, Equivalents, Short-Term Securities	\$ 40,491	\$ 40,438
2. Investments		
a. Fixed Income	189,131	193,328
b. Equity	319,192	234,634
c. Real Estate	678	671
3. Equity in Minnesota Post-Retirement Investment Fund (MPRIF)	0	0
4. Other	4,482*	4,482*
B. TOTAL ASSETS	<u>\$ 553,974</u>	<u>\$ 473,553</u>
C. AMOUNTS CURRENTLY PAYABLE	<u>\$ 5,429</u>	<u>\$ 5,429</u>
D. ASSETS AVAILABLE FOR BENEFITS		
1. Member Reserves	\$ 90,305	\$ 90,305
2. Employer Reserves	458,240	377,819
3. MPRIF Reserves	0	0
4. Non-MPRIF Reserves	0	0
5. Total Assets Available for Benefits	<u>\$ 548,545</u>	<u>\$ 468,124</u>
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	<u>\$ 553,974</u>	<u>\$ 473,553</u>
F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Cost Value of Assets Available for Benefits (D5)		\$ 468,124
2. Market Value (D5)	\$ 548,545	
3. Cost Value (D5)	468,124	
4. Market Over Cost: (F2-F3)	<u>\$ 80,421</u>	
5. 1/3 of Market Over Cost: (F4)/3		26,807
6. Actuarial Value of Assets (F1+F5)		<u>\$ 494,931</u>

* See "Asset Information" in Commentary Section of this report.

TABLE 2

St. Paul 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	\$ 480,184	\$ 428,507
B. OPERATING REVENUES		
1. Member Contributions	\$ 9,093	\$ 9,093
2. Employer Contributions	15,101	15,101
3. State Contributions	*	*
4. Investment Income	22,200	22,200
5. MPRIF Income	0	0
6. Net Realized Gain (Loss)	25,474	25,474
7. Other	0	0
8. Net Change in Unrealized Gain (Loss)	28,744	0
9. Total Revenue	<u>\$ 100,612</u>	<u>\$ 71,868</u>
C. OPERATING EXPENSES		
1. Service Retirements	\$ 27,384	\$ 27,384
2. Disability Benefits	871	871
3. Survivor Benefits	1,670	1,670
4. Refunds	357	357
5. Administrative Expenses	334	334
6. Investment Expenses	1,635	1,635
7. Total Disbursements	<u>\$ 32,251</u>	<u>\$ 32,251</u>
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	<u>\$ 548,545</u>	<u>\$ 468,124</u>

* included in Employer Contributions

TABLE 3

St. Paul Teachers' Retirement Fund
Active Members as of June 30, 1996

<u>AGE</u>	<u>YEARS OF SERVICE</u>								<u>TOTAL</u>
	<u><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	73	18	-	-	-	-	-	-	91
25-29	146	255	12	-	-	-	-	-	413
30-34	72	188	116	23	-	-	-	-	399
35-39	45	141	109	74	10	-	-	-	379
40-44	60	150	101	106	94	8	-	-	519
45-49	50	138	108	79	132	132	98	-	737
50-54	40	86	74	75	73	83	196	34	661
55-59	13	29	32	31	45	47	100	88	385
60-64	7	17	16	13	26	26	43	35	183
65+	5	6	5	4	7	-	6	5	38
ALL	511	1,028	573	405	387	296	443	162	3,805

AVERAGE ANNUAL EARNINGS

<u>AGE</u>	<u>YEARS OF SERVICE</u>								<u>ALL</u>
	<u><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	5,623	27,427	-	-	-	-	-	-	9,936
25-29	7,587	28,438	34,899	-	-	-	-	-	21,255
30-34	9,709	28,833	35,032	42,952	-	-	-	-	27,998
35-39	7,263	30,713	35,640	43,300	48,528	-	-	-	32,273
40-44	5,579	30,755	39,877	44,685	50,937	57,031	-	-	36,525
45-49	6,823	31,935	40,718	46,407	51,004	54,270	56,130	-	43,703
50-54	8,049	37,762	42,233	47,578	53,077	55,646	55,889	56,893	47,874
55-59	4,921	32,513	39,339	48,017	53,324	58,062	56,264	57,413	50,809
60-64	3,173	17,104	40,926	48,303	51,365	56,094	56,223	57,322	48,161
65+	2,027	16,824	27,778	49,339	53,544	-	54,745	51,187	37,014
ALL	7,120	30,252	38,342	45,622	51,655	55,493	56,044	57,092	38,286

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

<u><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>
3,638	31,099	21,970	18,477	19,990	16,426	24,828	9,249	145,677

TABLE 4

St. Paul Teachers' Retirement Fund
Service Retirements as of June 30, 1996

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>TOTAL</u>
	<u><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	20	45	-	-	-	-	-	65
60-64	27	170	55	-	-	-	-	252
65-69	12	120	142	64	2	3	-	343
70-74	2	13	100	132	24	-	-	271
75-79	1	3	14	89	66	2	-	175
80-84	-	-	-	14	82	41	-	137
85+	-	-	-	-	5	80	67	152
ALL	62	351	311	299	179	126	67	1,395

AVERAGE ANNUAL BENEFIT

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>ALL</u>
	<u><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	24,452	22,375	-	-	-	-	-	23,322
60-64	31,782	22,660	15,172	-	-	-	-	22,003
65-69	27,433	26,731	18,583	14,657	16,296	34,090	-	21,133
70-74	18,409	26,234	19,538	16,083	10,449	-	-	17,363
75-79	30,819	28,479	19,534	13,716	13,345	12,645	-	14,380
80-84	-	-	-	13,975	9,993	10,089	-	10,428
85+	-	-	-	-	7,104	9,412	7,958	8,695
ALL	28,452	24,198	18,329	14,975	11,280	10,271	7,958	17,406

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS RETIRED

<u><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>
1,764	8,494	5,701	4,477	2,019	1,294	533	24,282

TABLE 5

St. Paul Teachers' Retirement Fund
Disability Retirements as of June 30, 1996

<u>AGE</u>	<u>YEARS DISABLED</u>							<u>TOTAL</u>
	<u><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	-	-	-	-	-	3
50-54	1	1	-	-	-	-	-	2
55-59	-	3	1	-	-	1	-	5
60-64	2	6	1	2	-	1	-	12
65+	-	-	-	-	-	-	-	0 *
ALL	3	13	2	2	0	2	0	22

<u>AGE</u>	<u>AVERAGE ANNUAL BENEFIT</u> <u>YEARS DISABLED</u>							<u>ALL</u>
	<u><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	-	23,231	-	-	-	-	-	23,231
50-54	38,024	13,861	-	-	-	-	-	25,942
55-59	-	18,143	29,723	-	-	10,057	-	18,842
60-64	8,741	24,680	1,761	23,007	-	15,335	-	19,994
65+	-	-	-	-	-	-	-	0 *
ALL	23,383	22,005	15,742	23,007	0	12,696	0	20,749

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS DISABLED

<u><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>
47	286	31	46	0	25	0	435

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

TABLE 6

St. Paul Teachers' Retirement Fund
Survivors as of June 30, 1996

<u>AGE</u>	<u>YEARS SINCE DEATH</u>							<u>TOTAL</u>
	<u><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	4	4	1	1	-	-	-	10
50-54	2	4	-	-	-	-	-	6
55-59	-	9	3	-	-	-	-	12
60-64	-	9	1	1	-	-	-	11
65-69	4	14	7	-	-	-	-	25
70-74	2	15	8	1	-	-	-	26
75-79	1	13	15	5	-	-	-	34
80-84	2	9	10	-	-	-	-	21
85+	1	13	12	6	-	-	1	33
ALL	16	90	57	14	0	0	1	178

AVERAGE ANNUAL BENEFIT
YEARS SINCE DEATH

<u>AGE</u>	<u><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	15,696	5,608	13,999	3,350	-	-	-	10,257
50-54	18,212	12,015	-	-	-	-	-	14,080
55-59	-	13,538	9,074	-	-	-	-	12,422
60-64	-	21,158	8,907	5,247	-	-	-	18,598
65-69	16,084	15,965	12,796	-	-	-	-	15,097
70-74	15,018	15,193	8,329	7,878	-	-	-	12,786
75-79	6,612	7,999	7,996	5,964	-	-	-	7,658
80-84	6,400	10,063	7,332	-	-	-	-	8,414
85+	4,788	9,385	6,982	6,046	-	-	11,284	7,822
ALL	13,611	12,785	8,481	5,898	0	0	11,284	10,931

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS SINCE DEATH

<u><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>
218	1,151	483	83	0	0	11	1,946

Table 7

St. Paul Teachers' Retirement Fund
Reconciliation of Members

	Actives*	Terminated	
		Deferred Retirement	Other Non-Vested
A. ON JUNE 30, 1995	3,852	107	1,066
B. ADDITIONS	483	41	204
C. DELETIONS			
1. Service Retirement	(69)	-	(16)
2. Disability	(5)	-	(1)
3. Death - Survivor	(4)	-	-
4. Death - Other	(1)	(1)	(2)
5. Terminated - Deferred	(40)	-	(1)
6. Terminated - Refund	(95)	(6)	(215)
7. Terminated - Other Non-Vested	(187)	(3)	-
8. Returned as Active	-	(2)	(24)
D. DATA ADJUSTMENTS	-	-	-
Vested	2,763		
Non-Vested	1,171		
E. TOTAL ON June 30, 1996	3,934	136	1,011

	Recipients		
	Retirement Annuitants	Disabled	Survivors
A. ON JUNE 30, 1995	1,334	35	170
B. ADDITIONS	91	9	19
C. DELETIONS			
1. Service Retirement	-	-	-
2. Death	(48)	(4)	(11)
3. Annuity Expired	-	-	-
4. Returned as Active	-	-	-
D. DATA ADJUSTMENTS**	18	(18)	-
E. TOTAL ON June 30, 1996	1,395	22	178

* Includes members on leave of absence.

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

TABLE 8

St. Paul Teachers' Retirement Fund
Actuarial Balance Sheet
(dollars in thousands)

July 1, 1996

A.	CURRENT ASSETS (TABLE 1, F6)			\$	494,931
B.	EXPECTED FUTURE ASSETS				
1.	Present Value of Expected Future Statutory Supplemental Contributions				140,550
2.	Present Value of Future Normal Costs				137,746
3.	Total Expected Future Assets				<u>278,296</u>
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS			\$	<u>773,227</u>
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested		Total
1.	Benefit Recipients				
a.	Retirement Annuities	\$	\$ 248,316	\$	248,316
b.	Disability Benefits		5,023		5,023
c.	Surviving Spouse and Child Benefits		16,257		16,257
2.	Deferred Retirements With Future Augmentation		4,340		4,340
3.	Former Members Without Vested Rights		1,408		1,408
4.	Active Members				
a.	Retirement Annuities*	5,807	295,575		301,382
b.	Disability Benefits	19,648	0		19,648
c.	Survivors' Benefits	4,818	0		4,818
d.	Deferred Retirements	1,624	26,167		27,791
e.	Refund Liability Due to Death or Withdrawal	0	2,410		2,410
5.	Total Current Benefit Obligations	\$ <u>31,897</u>	\$ <u>599,496</u>	\$	<u>631,393</u>
E.	EXPECTED FUTURE BENEFIT OBLIGATIONS			\$	<u>170,425</u>
F.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			\$	<u>801,818</u>
G.	CURRENT UNFUNDED ACTUARIAL LIABILITY: (D5-A)			\$	136,462
H.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY: (F-C)			\$	28,591

* Includes members on leave of absence.

TABLE 9

St. Paul 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)
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Annuities*	\$ 445,311	\$ 89,205	\$ 356,106
b. Disability Benefits	28,885	11,969	16,916
c. Survivors' Benefits	7,715	2,940	4,775
d. Deferred Retirements	40,027	24,880	15,147
e. Refunds Due to Death or Withdrawal	4,536	8,752	(4,216)
f. Total	<u>\$ 526,474</u>	<u>\$ 137,746</u>	<u>\$ 388,728</u>
2. Deferred Retirements With Future Augmentation	4,340		4,340
3. Former Members Without Vested Rights	1,408		1,408
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	269,596		269,596
6. Total	<u><u>\$ 801,818</u></u>	<u><u>\$ 137,746</u></u>	<u><u>\$ 664,072</u></u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL: (A6)		\$ 664,072	
2. Current Assets (Table 1, F6)		494,931	
3. UAAL: (B1-B2)		<u>\$ 169,141</u>	
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020		\$ 2,899,679	
2. Supplemental Contribution Rate: (B3/C1)			5.83%

* Includes members on leave of absence.

TABLE 10

St. Paul Teachers' Retirement Fund
Changes in Unfunded Actuarial Accrued Liability (UAAL)
(dollars in thousands)

Year Ending June 30, 1996

A.	UAAL AT BEGINNING OF YEAR	\$ 187,337
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1.	Normal Cost and Expenses	\$ 16,917
2.	Contribution	(24,194)
3.	Interest on A, B1 and B2	16,333
4.	Total: (B1+B2+B3)	\$ 9,056
C.	EXPECTED UAAL AT END OF YEAR: (A+B4)	\$ 196,393
D.	INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1.	Salary Increases	\$ (6,788)
2.	Investment Return	(17,657)
3.	MPRIF Mortality	0
4.	Mortality of Other Benefit Recipients	(57)
5.	Other Items	(2,750)
6.	Total	\$ (27,252)
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS: (C+D5)	\$ 169,141
F.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO PLAN AMENDMENTS	0
G.	CHANGE IN ACTUARIAL ACCRUED LIABILITY DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	0
H.	UAAL AT END OF YEAR: (E+F+G)	\$ 169,141

TABLE 11

St. Paul Teachers' Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 1996

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	5.79%	\$ 8,979
2. Employer Contributions	9.43%	14,625
3. State Contribution		
a. 1993 Legislation	0.32%	500
b. 1996 Legislation	0.30%	464
4. Additional School District Contribution	0.00%	0
5. Administrative Expense Assessment	0.07%	109
6. Total	<u>15.91%</u>	<u>\$ 24,677</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.91%	\$ 10,717
b. Disability Benefits	1.05%	1,636
c. Survivors' Benefits	0.22%	339
d. Deferred Retirement Benefits	1.97%	3,053
e. Refunds Due to Death or Withdrawal	0.76%	1,178
f. Total	<u>10.91%</u>	<u>\$ 16,923</u>
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	5.83%	\$ 9,045
3. Allowance for Expenses	0.23%	\$ 357
4. Total	<u>16.97%</u>	<u>\$ 26,325</u>
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY): (A6-B4)	<u>(1.06%)</u>	<u>\$ (1,648)</u>

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1996 is \$155,146.

TABLE 12
(cont)

St. Paul Teachers' Retirement Fund
Summary of Actuarial Assumptions and Methods

Interest:	Pre-Retirement: 8.50% per annum Post-Retirement: 8.50% per annum
Salary Increases:	Total reported pay for prior fiscal year increased 6.50% to current fiscal year and 6.50% annually for each future year.
Mortality:	<p>Pre-Retirement:</p> <p>Male - 1971 Group Annuity Mortality Table male rates set back 8 years.</p> <p>Female - 1971 Group Annuity Mortality Table male rates set back 8 years.</p> <p>Post-Retirement:</p> <p>Male - same as above.</p> <p>Female - same as above.</p> <p>Post Disability:</p> <p>Male - same as above.</p> <p>Female - same as above.</p>
Retirement Age:	Basic Members are assumed to retire at the greater of age 61 or age 60 and 25 years of service but not later than age 65. Coordinated Members are assumed to retire at age 62 and 30 years of service but not later than age 65. If over the assumed retirement age, members are assumed to retire one year from the valuation date. In addition, 45% of Basic Members and 30% of Coordinated Members are assumed to retire each year that they are eligible for the Rule of 90.
Withdrawal:	Graded rates shown in the rate table.
Disability:	Graded rates shown in the rate table.
State Contribution:	\$500,000 for the 1996-97 Fiscal Year increased at 3.00% per annum.

Chapter 438 Contribution: The following table summarizes the assumed contributions which will result from 1996 legislation:

<u>Year</u>	<u>State</u>	<u>School District</u>
1996	\$ 483,000	-
1997	\$ 525,000	-
1998	\$ 567,000	\$ 200,000
1999	\$ 630,000	\$ 400,000
2000	\$ 693,000	\$ 600,000
2001 and thereafter	\$ 756,000	\$ 800,000

TABLE 12
(cont)

<i>Administrative Expenses:</i>	<p>Prior year administrative expenses (excluding investment expenses) expressed as a percentage of prior year payroll.</p> <p>Members are assumed to make an additional contribution equal to the difference between prior year expenses as a percentage of payroll for the Teachers' Retirement Association ("TRA") and prior year administrative expenses as a percentage of payroll for this Fund.</p> <p>TRA expenses are assumed to be 0.16% of payroll for the 1996-97 fiscal year.</p>								
<i>Return of Contributions:</i>	<p>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.</p>								
<i>Family Composition:</i>	<p>85% of male Members and 60% of female Members are assumed to be married. Females are assumed to be four years younger than males. Married members are assumed to have two children.</p>								
<i>Social Security:</i>	<p>N/A</p>								
<i>Benefit Increases After Retirement:</i>	<p>N/A</p>								
<i>Special Consideration:</i>	<p>Annual bonus payments totaling 1.00% of the year end assets are accounted for by using a 7.50% pre and post-retirement interest rate.</p> <p>Married Coordinated Members are assumed to elect subsidized joint and survivor forms of annuity as follows:</p> <table><tr><td>Males -</td><td>15% elect 50% J&S option</td></tr><tr><td></td><td>50% elect 100% J&S option</td></tr><tr><td>Females -</td><td>10% elect 50% J&S option</td></tr><tr><td></td><td>10% elect 100% J&S option</td></tr></table>	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
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								
<i>Actuarial Cost Method:</i>	<p>The Entry Age Normal Actuarial Cost Method is used with normal costs expressed as a level percentage of earnings. Under this method Actuarial Gains (Losses) reduce (increase) the Unfunded Actuarial Accrued Liability.</p>								
<i>Asset Valuation Method:</i>	<p>Current Assets are equal to Cost Value plus one-third of Unrealized Gains or Losses.</p>								
<i>Payment on the Unfunded Actuarial Accrued Liability:</i>	<p>The Unfunded Actuarial Accrued Liability is amortized as a level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.50% per annum.</p>								

TABLE 12
(cont)

St. Paul 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	600	1,000	7	7	0	0
21	4	4	600	1,000	7	7	0	0
22	4	4	600	1,000	7	7	0	0
23	4	4	600	1,000	7	7	0	0
24	4	4	600	1,000	7	7	0	0
25	5	5	600	1,000	8	8	0	0
26	5	5	600	1,000	8	8	0	0
27	5	5	600	1,000	8	8	0	0
28	5	5	600	1,000	8	8	0	0
29	5	5	600	1,000	8	8	0	0
30	5	5	600	1,000	8	8	0	0
31	6	6	570	1,000	9	9	0	0
32	6	6	540	1,000	9	9	0	0
33	6	6	510	1,000	9	9	0	0
34	7	7	480	1,000	9	9	0	0
35	7	7	450	1,000	10	10	0	0
36	7	7	430	960	10	10	0	0
37	8	8	410	920	10	10	0	0
38	8	8	390	880	11	11	0	0
39	9	9	370	840	11	11	0	0
40	9	9	350	800	12	12	0	0
41	10	10	340	720	12	12	0	0
42	10	10	330	640	13	13	0	0
43	11	11	320	560	14	14	0	0
44	12	12	310	530	15	15	0	0
45	13	13	300	500	16	16	0	0
46	14	14	280	460	18	18	0	0
47	15	15	260	420	19	19	0	0
48	16	16	240	380	21	21	0	0
49	18	18	220	340	22	22	0	0
50	20	20	200	300	24	24	0	0
51	23	23	180	260	26	26	0	0
52	26	26	160	220	29	29	0	0
53	29	29	140	180	32	32	0	0
54	33	33	120	140	36	36	0	0

TABLE 12
(cont)

St. Paul 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	100	100	40	40	0	0
56	42	42	80	80	46	46	0	0
57	47	47	60	60	53	53	0	0
58	53	53	40	40	61	61	0	0
59	59	59	20	20	72	72	0	0
60	65	65	0	0	84	84	0	0
61	71	71	0	0	98	98	0	0
62	78	78	0	0	113	113	10,000	10,000
63	85	85	0	0	131	131	0	0
64	93	93	0	0	149	149	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

St. Paul Teachers' Retirement Fund
Active Members as of June 30, 1996

<u>AGE</u>	<u>YEARS OF SERVICE</u>								<u>TOTAL</u>
	<u><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	-	-	-	-	-	-	-	-	0
25-29	-	-	-	-	-	-	-	-	0
30-34	-	-	-	-	-	-	-	-	0
35-39	-	-	-	-	-	-	-	-	0
40-44	-	-	-	5	23	7	-	-	35
45-49	-	-	-	8	52	119	93	-	272
50-54	-	-	-	6	22	75	183	32	318
55-59	-	-	-	-	9	37	98	85	229
60-64	-	-	-	1	8	23	40	33	105
65+	-	-	-	-	1	-	5	5	11
ALL	0	0	0	20	115	261	419	155	970

AVERAGE ANNUAL EARNINGS

<u>AGE</u>	<u>YEARS OF SERVICE</u>								<u>ALL</u>
	<u><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	-	-	-	-	-	-	-	-	0
25-29	-	-	-	-	-	-	-	-	0
30-34	-	-	-	-	-	-	-	-	0
35-39	-	-	-	-	-	-	-	-	0
40-44	-	-	-	36,165	49,308	57,587	-	-	49,086
45-49	-	-	-	30,822	49,661	54,631	56,152	-	53,501
50-54	-	-	-	45,708	55,065	55,503	55,904	57,158	55,685
55-59	-	-	-	-	54,134	59,091	56,377	57,493	57,142
60-64	-	-	-	34,027	51,017	56,026	56,726	58,036	56,333
65+	-	-	-	-	56,037	-	54,541	51,187	53,152
ALL	0	0	0	36,784	51,124	55,716	56,132	57,336	55,220

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

<u><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	0	0	736	5,879	14,542	23,519	8,887	53,563

TABLE 4A

BASIC

St. Paul Teachers' Retirement Fund
Service Retirements as of June 30, 1996

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>TOTAL</u>
	<u><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	17	39	-	-	-	-	-	56
60-64	21	156	54	-	-	-	-	231
65-69	9	98	130	63	2	3	-	305
70-74	1	12	91	129	24	-	-	257
75-79	1	2	13	83	65	2	-	166
80-84	-	-	-	14	78	41	-	133
85+	-	-	-	-	5	80	67	152
ALL	49	307	288	289	174	126	67	1,300

AVERAGE ANNUAL BENEFIT

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>ALL</u>
	<u><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	29,289	24,209	-	-	-	-	-	25,751
60-64	37,271	23,949	15,394	-	-	-	-	23,160
65-69	33,777	30,750	20,010	14,815	16,296	34,090	-	22,908
70-74	1,795	28,154	20,936	16,401	10,449	-	-	17,943
75-79	30,819	42,148	20,929	14,501	13,365	12,645	-	14,969
80-84	-	-	-	13,975	10,456	10,089	-	10,713
85+	-	-	-	-	7,104	9,412	7,958	8,695
ALL	33,004	26,436	19,479	15,392	11,513	10,271	7,958	18,171

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS RETIRED

<u><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>
1,617	8,116	5,610	4,448	2,003	1,294	533	23,621

TABLE 5A

BASIC

St. Paul Teachers' Retirement Fund
Disability Retirements as of June 30, 1996

<u>AGE</u>	<u>YEARS DISABLED</u>							<u>TOTAL</u>
	<u><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	-	-	-	-	-	3
50-54	1	1	-	-	-	-	-	2
55-59	-	3	1	-	-	1	-	5
60-64	2	6	1	2	-	1	-	12
65+	-	-	-	-	-	-	-	0 *
ALL	3	13	2	2	0	2	0	22

<u>AGE</u>	<u>AVERAGE ANNUAL BENEFIT</u> <u>YEARS DISABLED</u>							<u>ALL</u>
	<u><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	-	23,231	-	-	-	-	-	23,231
50-54	38,024	13,861	-	-	-	-	-	25,942
55-59	-	18,143	29,723	-	-	10,057	-	18,842
60-64	8,742	24,680	1,761	23,007	-	15,335	-	19,994
65+	-	-	-	-	-	-	-	0 *
ALL	23,383	22,005	15,742	23,007	0	12,696	0	20,749

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS DISABLED

<u><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>
47	286	31	46	0	25	0	435

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

TABLE 6A

BASIC

St. Paul Teachers' Retirement Fund
Survivors as of June 30, 1996

<u>AGE</u>	<u>YEARS SINCE DEATH</u>							<u>TOTAL</u>
	<u><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	4	2	1	1	-	-	-	8
50-54	2	4	-	-	-	-	-	6
55-59	-	9	3	-	-	-	-	12
60-64	-	9	1	1	-	-	-	11
65-69	4	13	7	-	-	-	-	24
70-74	2	15	8	1	-	-	-	26
75-79	1	13	15	5	-	-	-	34
80-84	2	9	10	-	-	-	-	21
85+	1	13	12	6	-	-	1	33
ALL	16	87	57	14	0	0	1	175

AVERAGE ANNUAL BENEFIT

<u>AGE</u>	<u>YEARS SINCE DEATH</u>							<u>ALL</u>
	<u><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	15,696	9,674	13,999	3,350	-	-	-	12,435
50-54	18,212	12,015	-	-	-	-	-	14,080
55-59	-	13,538	9,074	-	-	-	-	12,422
60-64	-	21,158	8,907	5,247	-	-	-	18,598
65-69	16,084	17,070	12,796	-	-	-	-	15,659
70-74	15,018	15,193	8,329	7,878	-	-	-	12,786
75-79	6,612	7,999	7,996	5,964	-	-	-	7,658
80-84	6,400	10,063	7,332	-	-	-	-	8,414
85+	4,788	9,385	6,982	6,046	-	-	11,284	7,822
ALL	13,611	13,173	8,481	5,898	0	0	11,284	11,092

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS SINCE DEATH

<u><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>
218	1,146	483	83	0	0	11	1,941

TABLE 11A

BASIC

St. Paul Teachers' Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 1996

	Percent of Payroll		Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A			
1. Employee Contributions	8.00%	\$	4,564
2. Employer Contributions	11.64%		6,640
3. State Contribution			
a. 1993 Legislation	0.32%		183
b. 1996 Legislation	0.30%		171
4. Additional School District Contribution	0.00%		0
5. Administrative Expense Assessment	0.07%		40
6. Total	20.33%	\$	11,598
B. REQUIRED CONTRIBUTIONS - CHAPTER 356			
1. Normal Cost			
a. Retirement Benefits	8.24%	\$	4,702
b. Disability Benefits	1.85%		1,056
c. Survivors' Benefits	0.24%		136
d. Deferred Retirement Benefits	2.98%		1,699
e. Refunds Due to Death or Withdrawal	1.30%		742
f. Total	14.61%	\$	8,335

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1996 is \$57,045.

**St. Paul Teachers' Retirement Fund
Summary of Plan Provisions**

GENERAL

<i>Eligibility:</i>	A teacher who is employed in a public school district located in the corporate limits of the City of St. Paul and who is not covered by the Social Security Act. Also includes employees of the St. Paul Teachers Retirement Fund.
<i>Contributions:</i>	Member: 8.00% of Salary. Employer: 11.64% of Salary.
<i>Allowable Service:</i>	All periods of service for which salary deductions were made and service during sabbatical leave. After June 30, 1974, St. Paul service for part-time teachers is granted on a proportional basis using actual duty days vs. the agreed number of annual duty days. Years of service credited prior to May 31, 1976 are not recomputed.
<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 years of Salary during the last 10 years while making contributions or while disabled.

RETIREMENT

Normal Retirement Benefit:

<i>Eligibility:</i>	Age 65 and 5 years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and 1 year of Allowable Service.
<i>Amount:</i>	2.50% of Average Salary for each year of Allowable Service.

Early Retirement Benefit:

<i>Eligibility:</i>	An unreduced benefit is available upon the attainment of age 60 and 25 years of Allowable Service, or Rule of 90 (Age plus Allowable Service totals 90). A reduced benefit is available upon the attainment of age 55 and 5 years of Allowable Service.
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TABLE 13A**(cont)****BASIC*****Amount:***

The greater of:

2.00% of Average Salary for each year of Allowable Service not to exceed 40 years with reduction of 0.25% for each month the Member is under age 65 (age 60 if 25 years of Allowable Service). No reduction if age plus years of Allowable Service totals 90.

or

2.50% 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.

Form of Payment:

Life annuity.

Benefit Increases:

If the investment income of the fund was at least 6.00% of the asset value of the fund at the end of the fiscal year, the Board of Trustees may declare a bonus of up to 1.00% of the asset value of the fund at the end of the fiscal year. This bonus is allocated to those eligible on a prorated basis according to the combined number of years of service and years receiving a benefit. A retired Member is eligible if receiving an annuity for at least one year.

Members retired under laws in effect before July 1, 1978 receive an additional lump sum payment each year. In 1989, this lump sum payment was the greater of \$25.00 times each full year of Allowable Service or the difference between \$400.00 times each full year of Allowable Service and the sum of the benefits paid from any Minnesota public pension plan plus cash payments from the Social Security Administration for the year preceding the inception of this benefit. In each following year, the lump sum increases by the same increase that is applied to regular annuities.

DISABILITY***Disability Benefit:******Eligibility:***

Totally and permanently disabled before the age of 65 with 5 years of St. Paul service.

Amount:

An annuity of 75% of the annual contract salary for the last full year of service reduced by any Social Security and Workers' Compensation benefits.

TABLE 13A
(cont)
BASIC

Payments are recomputed as a retirement at age 65. Payments stop if disability ceases or death occurs.

Form of Payment: Life annuity.

Benefit Increases: Same as for retirement.

Retirement After Disability:

Eligibility: Age 65 with continued disability.

Amount: Normal Retirement Benefit based on Average Salary and Allowable Service as if Member had continued in his latest position during the period of his disability.

Form of Payment: Life annuity.

Benefit Increases: Same as for retirement.

DEATH

Family Benefits:

Eligibility: Active Member with 3 years of St. Paul service.

Amount: Benefit of 15% of B.A. salary to spouse plus 25% of B.A. salary to each eligible child (maximum of 2). B.A. salary is the maximum salary payable to a teacher holding a B.A. degree.

Spouse's benefits cease upon death or when the spouse elects to receive survivor's benefits. Such election does not affect benefits paid to children but total benefits may not exceed 90% of the Member's final salary. Children's benefits cease upon marriage or age 18 (22 if full time student).

Survivor's Benefits:

Eligibility: Active or retired Member with 5 years of St. Paul service. A surviving spouse must have been married to the Member for 3 years at the time of his death or retirement, whichever occurs first.

Amount: Survivor's payment of the 100% joint and survivor benefit earned by the Member to the date of his death or his retirement, whichever occurs first.

TABLE 13A
(cont)
BASIC

Benefit Increases: Same as for a retired person if payments have been made over one year. The allocation is based on the years of Allowable Service of the person on whose behalf the annuity is paid and the years receiving the payment.

Refund of Contributions:

Eligibility: Death of a Member or former Member when Family Benefits and Survivor's Benefits are not payable.

Amount: The excess of the Member's contributions with 6.00% interest (unless the Member was disabled) over total benefits paid.

TERMINATION

Deferred Annuity:

Eligibility: 5 years of Allowable Service.

Amount: Benefit computed under law in effect at termination and increased 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.

Amount: Member's contributions with 5.00% interest if termination occurred before May 16, 1989 and 6.00% interest if termination occurred after May 16, 1989. A deferred annuity may be elected in lieu of a refund.

TABLE 3B

COORDINATED

St. Paul Teachers' Retirement Fund
Active Members as of June 30, 1996

<u>AGE</u>	<u>YEARS OF SERVICE</u>								<u>TOTAL</u>
	<u><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	73	18	-	-	-	-	-	-	91
25-29	146	255	12	-	-	-	-	-	413
30-34	72	188	116	23	-	-	-	-	399
35-39	45	141	109	74	10	-	-	-	379
40-44	60	150	101	101	71	1	-	-	484
45-49	50	138	108	71	80	13	5	-	465
50-54	40	86	74	69	51	8	13	2	343
55-59	13	29	32	31	36	10	2	3	156
60-64	7	17	16	12	18	3	3	2	78
65+	5	6	5	4	6	-	1	-	27
ALL	511	1,028	573	385	272	35	24	7	2,835

AVERAGE ANNUAL EARNINGS

<u>AGE</u>	<u>YEARS OF SERVICE</u>								<u>ALL</u>
	<u><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	5,623	27,427	-	-	-	-	-	-	9,936
25-29	7,587	28,438	34,899	-	-	-	-	-	21,255
30-34	9,709	28,833	35,032	42,952	-	-	-	-	27,998
35-39	7,263	30,713	35,640	43,300	48,528	-	-	-	32,273
40-44	5,579	30,755	39,877	45,107	51,465	53,135	-	-	35,617
45-49	6,823	31,935	40,718	48,163	51,877	50,966	55,726	-	37,971
50-54	8,049	37,762	42,233	47,741	52,219	56,979	55,685	52,657	40,633
55-59	4,921	32,513	39,339	48,017	53,121	54,256	50,726	55,124	41,513
60-64	3,173	17,104	40,926	49,493	51,520	56,618	49,515	45,542	37,161
65+	2,027	16,824	27,778	49,339	53,128	-	55,765	-	30,439
ALL	7,120	30,252	38,342	46,081	51,879	53,827	54,512	51,681	32,492

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

<u><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>
3,638	31,099	21,970	17,741	14,111	1,884	1,309	362	92,114

TABLE 4B

COORDINATED

St. Paul Teachers' Retirement Fund
Service Retirements as of June 30, 1996

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>TOTAL</u>
	<u><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	3	6	-	-	-	-	-	9
60-64	6	14	1	-	-	-	-	21
65-69	3	22	12	1	-	-	-	38
70-74	1	1	9	3	-	-	-	14
75-79	-	1	1	6	1	-	-	9
80-84	-	-	-	-	4	-	-	4
85+	-	-	-	-	-	-	-	0
ALL	13	44	23	10	5	0	0	95

AVERAGE ANNUAL BENEFIT

<u>AGE</u>	<u>YEARS RETIRED</u>							<u>ALL</u>
	<u><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	3,712	10,456	-	-	-	-	-	8,208
60-64	12,571	8,304	3,174	-	-	-	-	9,279
65-69	8,403	8,831	3,115	4,727	-	-	-	6,884
70-74	35,024	3,188	5,401	2,394	-	-	-	6,715
75-79	-	1,141	1,400	2,858	12,053	-	-	3,527
80-84	-	-	-	-	959	-	-	959
85+	-	-	-	-	-	-	-	0
ALL	11,292	8,582	3,938	2,906	3,178	0	0	6,946

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS RETIRED

<u><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>
147	378	91	29	16	0	0	661

TABLE 6B

COORDINATED

St. Paul Teachers' Retirement Fund
Survivors as of June 30, 1996

<u>AGE</u>	<u>YEARS SINCE DEATH</u>							<u>TOTAL</u>
	<u><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	-	2	-	-	-	-	-	2
50-54	-	-	-	-	-	-	-	0
55-59	-	-	-	-	-	-	-	0
60-64	-	-	-	-	-	-	-	0
65-69	-	1	-	-	-	-	-	1
70-74	-	-	-	-	-	-	-	0
75-79	-	-	-	-	-	-	-	0
80-84	-	-	-	-	-	-	-	0
85+	-	-	-	-	-	-	-	0
ALL	0	3	0	0	0	0	0	3

AVERAGE ANNUAL BENEFIT

<u>AGE</u>	<u>YEARS SINCE DEATH</u>							<u>ALL</u>
	<u><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	-	1,542	-	-	-	-	-	1,542
50-54	-	-	-	-	-	-	-	0
55-59	-	-	-	-	-	-	-	0
60-64	-	-	-	-	-	-	-	0
65-69	-	1,596	-	-	-	-	-	1,596
70-74	-	-	-	-	-	-	-	0
75-79	-	-	-	-	-	-	-	0
80-84	-	-	-	-	-	-	-	0
85+	-	-	-	-	-	-	-	0
ALL	0	1,560	0	0	0	0	0	1,560

TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS SINCE DEATH

<u><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	5	0	0	0	0	0	5

TABLE 11B

COORDINATED

St. Paul Teachers' Retirement Fund
Determination of Contribution Sufficiency
(dollars in thousands)

July 1, 1996

	Percent of Payroll		Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A			
1. Employee Contributions	4.50%	\$	4,415
2. Employer Contributions	8.14%		7,985
3. State Contribution			
a. 1993 Legislation	0.32%		317
b. 1996 Legislation	0.30%		293
4. Additional School District Contribution	0.00%		0
5. Administrative Expense Assessment	0.07%		69
6. Total	13.33%	\$	13,079
B. REQUIRED CONTRIBUTIONS - CHAPTER 356			
1. Normal Cost			
a. Retirement Benefits	6.13%	\$	6,015
b. Disability Benefits	0.59%		580
c. Survivors' Benefits	0.21%		203
d. Deferred Retirement Benefits	1.38%		1,354
e. Refunds Due to Death or Withdrawal	0.44%		436
f. Total	8.75%	\$	8,588

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1996 is \$98,101

St. Paul Teachers' Retirement Fund
Summary of Plan Provisions

GENERAL

<i>Eligibility:</i>	A teacher who is employed in a public school district located in the corporate limits of the City of St. Paul and who is covered by the Social Security Act. Also includes employees of the St. Paul Teachers Retirement Fund.
<i>Contributions:</i>	Member: 4.50% of Salary. Employer: 8.14% of Salary.
<i>Allowable Service:</i>	All periods of service for which salary deductions were made and service during sabbatical leave. After June 30, 1974, St. Paul service for part-time teachers is granted on a proportional basis using actual duty days vs. the agreed number of annual duty days. Years of service credited prior to May 31, 1976 are not recomputed.
<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 successive years of Salary. Average Salary is based on all Allowable Service is less than 5 years

RETIREMENT

Normal Retirement Benefit:

<i>Eligibility:</i>	
First hired before July 1, 1989:	Age 65 and 3 years of Allowable Service. Proportionate Retirement Annuity is available at age 65 and 1 year of Allowable Service.
First hired after July 1, 1989:	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.

TABLE 13B
(cont)
COORDINATED

Amount: 1.50% of Average Salary for each year of Allowable Service.

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,
- 15 year certain and life, and
- 50% or 100% joint and survivor with bounce back feature without additional reduction.

Benefit Increases:

If the investment income of the fund was at least 6.00% of the asset value of the fund at the end of the fiscal year, the Board of Trustees may declare a bonus of up to 1.00% of the asset value of the fund at the end of the fiscal year. This bonus is allocated to those eligible on a prorated basis according to the combined number of years of service and years receiving a benefit. A

TABLE 13B
(cont)
COORDINATED

retired Member is eligible if receiving an annuity for at least one year.

DISABILITY

Disability Benefit:

Eligibility: Totally and permanently disabled before 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 normal retirement age. Benefit is reduced by Workers' Compensation.

Payments are recomputed as a retirement benefit 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. Any former Member who dies before retirement or disability benefits commence, if age 50 with 3 years of Allowable Service or any

TABLE 13B
(cont)
COORDINATED

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 a retired person if payments have been made over one year. The allocation is based on the years of Allowable Service of the person on whose behalf the annuity is paid and the years receiving the payment.

Refund of Contributions:

Eligibility: Member or former Member dies before receiving any disability or retirement benefits and Survivor's Benefits are not payable.

Amount: Member's contributions with 5.00% interest if death occurred before May 16, 1989 and 6.00% interest if death occurred after May 16, 1989.

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.

Amount: Member's contributions with 5.00% interest if termination occurred before May 16, 1989 and 6.00% interest if termination occurred after May 16, 1989. A deferred annuity may be elected in lieu of a refund.