

St. Paul Teachers' Retirement Fund
ACTUARIAL VALUATION REPORT

July 1, 1991

DEC - 5 1991 LOP&R



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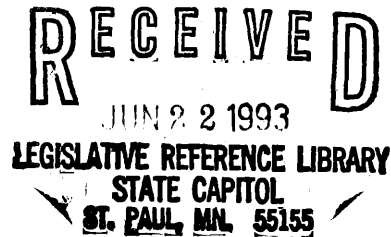
Actuaries and Consultants

Suite 1850
8500 Normandale Lake Boulevard
Minneapolis, Minnesota 55437
Telephone: 612/897-5300
Fax: 612/897-5301

December 2, 1991

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, 1991.

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 September 20, 1989.

Respectfully submitted,

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

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

Enclosure

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

	July 1, 1990 Valuation	July 1, 1991 Valuation
A. CONTRIBUTIONS (Table 11)		
1. Statutory Contributions - Chapter 354A % of Payroll	15.64%	15.44%
2. Required Contributions - Chapter 356 % of Payroll	18.86%	18.87%
3. Sufficiency (Deficiency): (A1-A2)	(3.22%)	(3.43)%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$ 296,819	\$ 326,357
b. Current Benefit Obligations (Table 8)	\$ 436,956	\$ 465,975
c. Funding Ratio: (a/b)	67.93%	70.04%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 296,819	\$ 326,357
b. Actuarial Accrued Liability (Table 9)	\$ 466,137	\$ 495,740
c. Funding Ratio: (a/b)	63.68%	65.83%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 501,700	\$ 528,548
b. Current and Expected Future Benefit Obligations	\$ 580,264	\$ 615,681
c. Funding Ratio: (a/b)	86.46%	85.85%

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

	<u>July 1, 1990 Valuation</u>	<u>July 1, 1991 Valuation</u>
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	3,343	3,299
b. Projected Annual Earnings	\$ 109,881	\$ 117,291
c. Average Annual Earnings (Actual \$)	\$ 32,869	\$ 35,554
d. Average Age	43.3	43.8
e. Average Service	11.3	11.5
f. Additional Members on Leave of Absence	129	130
2. Others		
a. Service Retirements (Table 4)	1,111	1,136
b. Disability Retirements (Table 5)	30	29
c. Survivors (Table 6)	129	144
d. Deferred Retirements (Table 7)	36	67
e. Terminated Other Non-Vested (Table 7)	888	935
f. Total	<u>2,194</u>	<u>2,311</u>

St. Paul Teachers' Retirement Fund *Commentary*

Purpose

The purpose of this valuation is to determine the financial status of the Plan. In order 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 70.04%. The corresponding ratio for the prior year was 67.93%.

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 1991 the ratio is 65.83%, which is an increase from the 1990 value of 63.68%.

The *Projected Benefit Funding Ratio* is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 85.85% shows that the current statutory contributions are inadequate.

Asset Information (Tables 1 and 2)

Minnesota Statutes require that the asset value used for actuarial purposes recognize only a 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 F1 to F6. 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, 1991 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	\$	166,270,000
Current Employees		
Accumulated employee contributions including allocated investment income	\$	108,903,000
Employer-financed vested		158,110,000
Employer-financed non-vested		32,692,000
Total Pension Benefit Obligation	\$	465,975,000
Net Assets Available for Benefits at Cost	\$	321,553,000
Total Benefit Obligation less Assets	\$	144,422,000
Funded Ratio		69.01%

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 15.44% compared to the Required Contribution Rate of 18.87%.

Changes in Actuarial Assumptions

The actuarial assumptions are the same as those used in the prior valuation.

Changes in Plan Provisions

This valuation reflects no changes in plan provisions since the prior valuation.

St. Paul Teachers' Retirement Fund
Change In Assets Available For Benefits
(dollars in thousands)

Year Ending June 30, 1991

	<u>Market Value</u>	<u>Cost Value</u>
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 310,072	\$ 290,193
B. OPERATING REVENUES		
1. Member Contributions	\$ 7,518	\$ 7,518
2. Employer Contributions	10,255	10,255
3. Investment Income	21,811	21,812
4. MPRIF Income	0	0
5. Net Realized Gain (Loss)	11,487	11,487
6. Other	0	0
7. Net Change in Unrealized Gain (Loss)	(5,466)	0
8. Total Revenue	<u>\$ 45,605</u>	<u>\$ 51,072</u>
C. OPERATING EXPENSES		
1. Service Retirements	\$ 17,259	\$ 17,259
2. Disability Benefits	560	560
3. Survivor Benefits	993	993
4. Refunds	235	235
5. Expenses	665	665
6. Other	0	0
7. Total Disbursements	<u>\$ 19,712</u>	<u>\$ 19,712</u>
D. OTHER CHANGES IN RESERVES	0	0
E. ASSETS AVAILABLE AT END OF PERIOD	<u>\$ 335,965</u>	<u>\$ 321,553</u>

St. Paul Teachers' Retirement Fund
Active Members as of June 30, 1991

<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	57	10							67
25-29	130	139	27						296
30-34	71	113	98	10					292
35-39	74	99	121	103	8				405
40-44	81	110	100	150	122	97			660
45-49	43	84	87	98	74	191	34		611
50-54	20	43	41	65	36	120	90	21	436
55-59	11	23	28	46	35	84	65	54	346
60-64	10	8	10	25	10	31	22	35	151
65+	8	4	3	4	2	7	4	3	35
ALL	505	633	515	501	287	530	215	113	3,299

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	3,168	23,674							6,229
25-29	4,059	23,529	29,950						15,564
30-34	5,233	23,138	29,736	34,200					21,378
35-39	6,962	26,898	31,081	35,692	45,128				27,102
40-44	4,484	25,060	33,624	40,414	44,305	46,958			34,098
45-49	5,740	27,324	36,703	44,747	45,972	47,637	47,240		39,652
50-54	2,880	26,469	36,741	42,293	49,502	47,893	50,292	46,233	42,380
55-59	1,289	19,307	34,489	43,026	48,161	48,094	49,629	51,631	43,765
60-64	2,994	12,661	35,559	40,335	48,561	47,648	49,583	52,527	42,299
65+	1,855	22,206	47,368	45,334	43,464	47,207	46,957	39,118	32,848
ALL	4,597	24,659	33,027	40,686	46,022	47,638	49,474	50,573	33,383

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>
2,322	15,609	17,009	20,384	13,208	25,248	10,637	5,715	110,131

TABLE 4

St. Paul Teachers' Retirement Fund
Service Retirements as of June 30, 1991

<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	19	43						62
60-64	18	120	72	1				211
65-69	15	86	142	30				273
70-74		14	86	66	4			170
75-79		1	10	99	47	2		159
80-84				3	85	16	2	106
85+					28	60	67	155
ALL	52	264	310	199	164	78	69	1,136

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	19,194	15,003						16,287
60-64	20,107	18,098	14,044	17,019				16,881
65-69	23,355	18,809	15,796	10,388				16,566
70-74		20,183	13,729	13,543	8,307			14,061
75-79		14,757	15,681	9,588	9,087	5,251		9,801
80-84				10,836	7,916	5,216	3,183	7,502
85+					8,554	5,381	3,955	5,338
ALL	20,710	17,923	14,812	11,076	8,370	5,344	3,932	12,910

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>
1,077	4,732	4,592	2,204	1,373	417	271	14,666

St. Paul Teachers' Retirement Fund
Survivors as of June 30, 1991

<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	1	3		1		1		6
50-54	2	4	1	2				9
55-59		3	1					4
60-64	1	6	4	2				13
65-69	3	5	6	5				19
70-74	3	7	9	4	4			27
75-79	3	1	6	5	1			16
80-84	3	5	9	4	1	3		25
85+	2	7	7	2	2	1	4	25
ALL	18	41	43	25	8	5	4	144

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	10,623	12,332		4,437		3,350		9,234
50-54	24,738	13,863	5,155	5,639				13,484
55-59		12,622	8,907					11,693
60-64	14,452	13,479	15,235	6,882				13,079
65-69	8,665	10,885	8,559	6,678				8,693
70-74	3,399	8,138	6,223	6,305	4,982			6,234
75-79	9,776	6,132	7,566	7,631	3,547			7,660
80-84	7,510	7,027	5,152	6,476	4,656	2,080		5,633
85+	4,550	5,950	3,482	7,864	3,406	4,734	2,385	4,477
ALL	9,539	9,890	6,942	6,715	4,368	2,865	2,385	7,655

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>
172	405	299	168	35	14	10	1,103

TABLE 6

St. Paul Teachers' Retirement Fund
Disability Retirements as of June 30, 1991

<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			1	1				2
50-54	1	2						3
55-59	1	1	2	1				5
60-64		2	1	2	2			7
65-69			2	1				3
70-74			1	3	1			5
75-79					1	1		2
80-84						1		1
85+							1	1
ALL	2	5	7	8	4	2	1	29

AVERAGE ANNUAL BENEFIT

<u>AGE</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			16,405	9,709				13,057
50-54	1,761	30,678						21,039
55-59	35,958	1,913	23,007	14,991				19,775
60-64		37,750	17,700	8,588	12,408			19,313
64-69			33,908	39,562				35,793
70-74			16,675	20,630	19,948			19,703
75-79					4,188	6,228		5,208
80-84						4,400		4,400
85+							2,732	2,732
ALL	18,860	27,754	23,516	17,916	12,238	5,314	2,732	18,853

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>
38	139	165	143	49	11	3	548

St. Paul Teachers' Retirement Fund
Reconciliation of Members

	Actives*	Terminated	
		Deferred Retirement	Other Non-Vested
A. ON JUNE 30, 1990	3,472	36	888
B. ADDITIONS	373	23	237
C. DELETIONS			
1. Service Retirement	(46)	(2)	(10)
2. Disability	(1)	0	0
3. Death - Survivor	(2)	0	0
4. Death - Other	0	0	0
5. Terminated - Deferred	(23)	0	0
6. Terminated - Refund	(137)	0	(134)
7. Terminated - Other Non-Vested	(206)	0	0
8. Returned as Active		(1)	(16)
D. DATA ADJUSTMENTS	(1)	11	(30)
Vested	2,572		
Non-Vested	857		
E. TOTAL ON JUNE 30, 1991	3,429	67	935

	Recipients		
	Retirement Annuitants	Disabled	Survivors
A. ON JUNE 30, 1990	1,111	30	129
B. ADDITIONS	61	3	18
C. DELETIONS			
1. Service Retirement		0	
2. Death	(36)	(4)	0
3. Annuity Expired	0	0	(3)
4. Returned as Active	0	0	0
D. DATA ADJUSTMENTS	0	0	0
E. TOTAL ON JUNE 30, 1991	1,136	29	144

* Includes members on leave of absence.

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

July 1, 1991

A.	CURRENT ASSETS (TABLE 1, F6)			\$	326,357
B.	EXPECTED FUTURE ASSETS				
1.	Present Value of Expected Future Statutory Supplemental Contributions				82,250
2.	Present Value of Future Normal Costs				119,941
3.	Total Expected Future Assets				<u>202,191</u>
C.	TOTAL CURRENT AND EXPECTED FUTURE ASSETS			\$	<u>528,548</u>
D.	CURRENT BENEFIT OBLIGATIONS	Non-Vested	Vested		Total
1.	Benefit Recipients				
a.	Retirement Annuities	\$	\$ 150,049	\$	150,049
b.	Disability Benefits		6,079		6,079
c.	Surviving Spouse and Child Benefits		10,142		10,142
2.	Deferred Retirements With Future Augmentation		2,867		2,867
3.	Former Members Without Vested Rights		508		508
4.	Active Members				
a.	Retirement Annuities	6,351	235,157		241,508
b.	Disability Benefits	19,880	0		19,880
c.	Survivors' Benefits	4,089	0		4,089
d.	Deferred Retirements	2,372	27,035		29,407
e.	Refund Liability Due to Death or Withdrawal	0	1,446		1,446
5.	Total Current Benefit Obligations	\$ <u>32,692</u>	\$ <u>433,283</u>	\$	<u>465,975</u>
E.	EXPECTED FUTURE BENEFIT OBLIGATIONS			\$	<u>149,706</u>
F.	TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			\$	<u>615,681</u>
G.	CURRENT UNFUNDED ACTUARIAL LIABILITY: (D5-A)			\$	139,618
H.	CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY: (F-C)			\$	87,133

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

July 1, 1991			
	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	\$ 367,794	\$ 75,765	\$ 292,029
b. Disability Benefits	28,409	12,207	16,202
c. Survivors' Benefits	6,226	2,150	4,076
d. Deferred Retirements	41,088	25,091	15,997
e. Refunds Due to Death or Withdrawal	2,519	4,728	(2,209)
f. Total	<u>\$ 446,036</u>	<u>\$ 119,941</u>	<u>\$ 326,095</u>
2. Deferred Retirements With Future Augmentation	2,867		2,867
3. Former Members Without Vested Rights	508		508
4. Annuitants in MPRIF	0		0
5. Recipients Not in MPRIF	166,270		166,270
6. Total	<u><u>\$ 615,681</u></u>	<u><u>\$ 119,941</u></u>	<u><u>\$ 495,740</u></u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. AAL: (A6)			\$ 495,740
2. Current Assets (Table 1, F6)			326,357
3. UAAL: (B1-B2)			<u><u>\$ 169,383</u></u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. Present Value of Future Payrolls Through the Amortization Date of July 1, 2020			\$ 2,538,567
2. Supplemental Contribution Rate: (B3/C1)			6.67%

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

Year Ending June 30, 1991

A.	UAAL AT BEGINNING OF YEAR	\$ 169,318
B.	CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1.	Normal Cost and Expenses	\$ 13,098
2.	Contribution	(17,773)
3.	Interest on A, B1 and B2	13,015
4.	Total: (B1+B2+B3)	<u>\$ 8,340</u>
C.	EXPECTED UAAL AT END OF YEAR: (A+B4)	\$ 177,658
D.	INCREASE (DECREASE) DUE TO ACTUARIAL LOSSES (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1.	Salary Increases	\$ 743
2.	Investment Return	(9,289)
3.	MPRIF Mortality	0
4.	Mortality of Other Benefit Recipients	919
5.	Other Items	(648)
6.	Total	<u>\$ (8,275)</u>
E.	UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS: (C+D5)	\$ 169,383
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)	<u><u>\$ 169,383</u></u>

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

July 1, 1991

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	6.44%	\$ 7,553
2. Employer Contributions	9.00%	10,562
3. Total	<u>15.44%</u>	<u>\$ 18,115</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	7.33%	\$ 8,600
b. Disability Benefits	1.28%	1,497
c. Survivors' Benefits	0.21%	248
d. Deferred Retirement Benefits	2.34%	2,739
e. Refunds Due to Death or Withdrawal	0.44%	523
f. Total	<u>11.60%</u>	<u>\$ 13,607</u>
2. Supplemental Contribution Amortization by July 1, 2020 of UAAL	6.67%	\$ 7,823
3. Allowance for Expenses	0.60%	\$ 704
4. Total	<u>18.87%</u>	<u>\$ 22,134</u>
C. CONTRIBUTION SUFFICIENCY (DEFICIENCY): (A3-B4)	<u>(3.43)%</u>	<u>\$ (4,019)</u>

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1991 is \$117,291.

St. Paul 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>	<p>Pre-Retirement:</p> <p style="padding-left: 40px;">Male - 1971 Group Annuity Mortality Table male rates set back 8 years.</p> <p style="padding-left: 40px;">Female - 1971 Group Annuity Mortality Table male rates set back 8 years.</p> <p>Post-Retirement:</p> <p style="padding-left: 40px;">Male - same as above.</p> <p style="padding-left: 40px;">Female - same as above.</p> <p>Post Disability:</p> <p style="padding-left: 40px;">Male - same as above.</p> <p style="padding-left: 40px;">Female - same as above.</p>
<i>Retirement Age:</i>	<p>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.</p> <p>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, one year from 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.</p>
<i>Separation:</i>	Graded rates shown in the rate table.
<i>Disability:</i>	Graded rates shown in the rate table.
<i>Administrative and Investment Expenses:</i>	Prior year 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>	85% of male Members and 60% of female Members are assumed to be married. Female is four years younger than male. Assume Members have two children.

TABLE 12
(cont)

<i>Social Security:</i>	N/A				
<i>Benefit Increases After Retirement:</i>	N/A				
<i>Special Consideration:</i>	<p>Annual bonus payment totaling 1.00% of the year end assets is accounted for by using a 7.50% post and pre-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 50% elect 100% J&S option</td></tr> <tr> <td>Females -</td><td>10% elect 50% J&S option 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>	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.				
<i>Asset Valuation Method:</i>	Cost Value plus one-third of Unrealized Gains or Losses.				
<i>Payment on the Unfunded Actuarial Accrued Liability:</i>	A level percentage of payroll each year to the statutory amortization date assuming payroll increases of 6.50% per annum.				

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, 1991

<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			3	25	8				36
40-44			3	58	121	97			279
45-49			5	30	74	191	34		334
50-54				15	36	120	90	21	282
55-59			1	11	35	84	65	54	250
60-64				6	10	31	22	35	104
65+				2	2	7	4	3	18
ALL	0	0	12	147	286	530	215	113	1,303

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			25,228	34,724	45,128				36,245
40-44			25,999	37,797	44,360	46,958			43,702
45-49			35,373	45,888	45,972	47,637	47,240		46,887
50-54				42,858	49,502	47,893	50,292	46,233	48,473
55-59			45,905	44,392	48,161	48,094	49,629	51,631	49,095
60-64				36,762	48,561	47,648	49,583	52,527	49,159
65+				47,706	43,464	47,207	46,957	39,118	45,443
ALL	0	0	31,371	40,028	46,051	47,638	49,474	50,573	46,839

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	376	5,884	13,171	25,248	10,637	5,715	61,031

St. Paul Teachers' Retirement Fund
Service Retirements as of June 30, 1991

<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	18	43						61
60-64	16	112	71	1				200
65-69	13	79	137	30				259
70-74		12	83	66	4			165
75-79		1	9	95	47	2		154
80-84				3	85	16	2	106
85+					28	60	67	155
ALL	47	247	300	195	164	78	69	1,100

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	20,018	15,003						16,482
60-64	21,692	19,166	14,175	17,019				17,586
65-69	25,782	20,028	16,263	10,388				17,209
70-74		23,350	14,016	13,543	8,307			14,367
75-79		14,757	16,203	9,952	9,087	5,251		10,023
80-84				10,836	7,916	5,216	3,183	7,502
85+					8,554	5,381	3,955	5,338
ALL	22,182	18,903	15,145	11,284	8,370	5,344	3,932	13,197

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>
1,043	4,669	4,544	2,200	1,373	417	271	14,516

TABLE 5A

BASIC

St. Paul Teachers' Retirement Fund
Survivors as of June 30, 1991

<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	1	3		1		1		6
50-54	2	4	1	2				9
55-59		3	1					4
60-64	1	6	4	2				13
65-69	3	5	6	5				19
70-74	3	7	9	4	4			27
75-79	3	1	6	5	1			16
80-84	3	5	9	4	1	3		25
85+	2	7	7	2	2	1	4	25
ALL	18	41	43	25	8	5	4	144

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	10,623	12,332		4,437		3,350		9,234
50-54	24,738	13,863	5,155	5,639				13,484
55-59		12,622	8,907					11,693
60-64	14,452	13,479	15,235	6,882				13,079
65-69	8,665	10,885	8,559	6,678				8,693
70-74	3,399	8,138	6,223	6,305	4,982			6,234
75-79	9,776	6,132	7,566	7,631	3,547			7,660
80-84	7,510	7,027	5,152	6,476	4,656	2,080		5,633
85+	4,550	5,950	3,482	7,864	3,406	4,734	2,385	4,477
ALL	9,539	9,890	6,942	6,715	4,368	2,865	2,385	7,655

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>
172	405	299	168	35	14	10	1,103

TABLE 6A

BASIC

St. Paul Teachers' Retirement Fund
Disability Retirements as of June 30, 1991

<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			1	1				2
50-54	1	2						3
55-59	1	1	2	1				5
60-64		2	1	2	2			7
65-69			2	1				3
70-74			1	3	1			5
75-79					1	1		2
80-84						1		1
85+							1	1
ALL	2	5	7	8	4	2	1	29

AVERAGE ANNUAL BENEFIT

<u>AGE</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			16,405	9,709				13,057
50-54	1,761	30,678						21,039
55-59	35,958	1,913	23,007	14,991				19,775
60-64		37,750	17,700	8,588	12,408			19,313
64-69			33,908	39,562				35,793
70-74			16,675	20,630	19,948			19,703
75-79					4,188	6,228		5,208
80-84						4,400		4,400
85+							2,732	2,732
ALL	18,860	27,754	23,516	17,916	12,238	5,314	2,732	18,853

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>
38	139	165	143	49	11	3	548

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

July 1, 1991

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	8.00%	\$ 5,200
2. Employer Contributions	12.63%	8,209
3. Total	<u>20.63%</u>	<u>\$ 13,409</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	8.40%	\$ 5,458
b. Disability Benefits	1.85%	1,203
c. Survivors' Benefits	0.25%	162
d. Deferred Retirement Benefits	3.09%	2,010
e. Refunds Due to Death or Withdrawal	0.55%	358
f. Total	<u>14.14%</u>	<u>\$ 9,191</u>

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1991 is \$64,998.

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: 12.63% 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 of actual duty days to the agreed number of annual duty days. Years of service credited prior to May 31, 1976 shall not be 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>	Age 55 and 5 years of Allowable Service. Age 60 and 25 years of Allowable Service. Rule of 90: Age plus Allowable Service totals 90.
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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 3 years.

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 will increase 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.

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 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.

Benefit Increases: Same as for a retired person if payments have been made over three years. 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 5.00% interest if death occurred before May 16, 1989 and 6.00% interest if death occurred after May 16, 1989 (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 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.

COORDINATED

St. Paul Teachers' Retirement Fund
Active Members as of June 30, 1991

<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	57	10							67
25-29	130	139	27						296
30-34	71	113	98	10					292
35-39	74	99	118	78					369
40-44	81	110	97	92	1				381
45-49	43	84	82	68					277
50-54	20	43	41	50					154
55-59	11	23	27	35					96
60-64	10	8	10	19					47
65+	8	4	3	2					17
ALL	505	633	503	354	1	0	0	0	1,996

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	3,168	23,674							6,229
25-29	4,059	23,529	29,950						15,564
30-34	5,233	23,138	29,736	34,200					21,378
35-39	6,962	26,898	31,230	36,002					26,210
40-44	4,484	25,060	33,860	42,064	37,714				27,065
45-49	5,740	27,324	36,784	44,243					30,927
50-54	2,880	26,469	36,741	42,124					31,223
55-59	1,289	19,307	34,066	42,596					29,884
60-64	2,994	12,661	35,559	41,463					27,119
65+	1,855	22,206	47,368	42,962					19,511
ALL	4,597	24,659	33,066	40,959	37,714	0	0	0	24,599

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>
2,322	15,609	16,632	14,499	38	0	0	0	49,100

COORDINATED

St. Paul Teachers' Retirement Fund
Service Retirements as of June 30, 1991

<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	1							1
60-64	2	8	1					11
65-69	2	7	5					14
70-74		2	3					5
75-79			1	4				5
80-84								0
85+								0
ALL	5	17	10	4	0	0	0	36

<u>AGE</u>	<u>AVERAGE ANNUAL BENEFIT</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	4,369							4,369
60-64	7,424	3,146	4,727					4,067
65-69	7,579	5,046	3,010					4,681
70-74		1,180	5,780					3,940
75-79			10,980	947				2,953
80-84								0
85+								0
ALL	6,875	3,697	4,810	947	0	0	0	4,142

<u>TOTAL ANNUAL ANNUITY (IN THOUSANDS) BY YEARS RETIRED</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>TOTAL</u>
34	63	48	4	0	0	0	149

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

July 1, 1991

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354A		
1. Employee Contributions	4.50%	\$ 2,353
2. Employer Contributions	4.50%	2,353
3. Total	<u>9.00%</u>	<u>\$ 4,706</u>
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	6.01%	\$ 3,142
b. Disability Benefits	0.56%	294
c. Survivors' Benefits	0.16%	86
d. Deferred Retirement Benefits	1.39%	729
e. Refunds Due to Death or Withdrawal	0.32%	165
f. Total	<u>8.44%</u>	<u>\$ 4,416</u>

Note: Projected Annual Payroll for Fiscal Year Beginning on July 1, 1991 is \$52,293.

COORDINATED

**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: 4.50% 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 of actual duty days to the agreed number of annual duty days. Years of service credited prior to May 31, 1976 shall not be 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
50% or 100% joint and survivor with bounce back feature without additional reduction (option is canceled if Member is pre-deceased by beneficiary).

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 3 years.

DISABILITY

Disability Benefit:

Eligibility:

Totally and permanently disabled 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:

Member or 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 Member dies before age 55, benefits commence when the Member would have been age 55.

Amount: Survivor's payment of the 100% joint and survivor benefit the Member could have elected if terminated.

Benefit Increases: Same as for a retired person if payments have been made over three years. 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.