

821091

St. Paul Teachers' Retirement Fund Association

ACTUARIAL VALUATION REPORT
as of
December 31, 1981

Pursuant to Mn Stat 356.20

St. Paul Teachers' Retirement Fund Association

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May 28, 1982

Board of Trustees
St. Paul Teachers' Retirement
Fund Association
555 Wabasha Street, Room 303
St. Paul, Minnesota 55102

Gentlemen:

In accordance with your request, we have made an actuarial valuation of the St. Paul Teachers' Retirement Fund Association for the year ended December 31, 1981, in order to determine the adequacy of the contributions being made to that system and to prepare the financial and actuarial reports as required by the laws of the State of Minnesota.

The results of our analysis are set forth in the following report. The basic financial and employee data are those submitted to us by the association office; the summaries and actuarial figures are those prepared by us from such data.

On the basis of the foregoing, and the assumptions indicated herein, we hereby certify that, to the best of our knowledge and belief, the attached statements are true and correct.

Respectfully submitted,

Davis H. Roenisch

Fellow, Society of Actuaries
Enrolled Actuary No. 174

DHR:kc

St. Paul Teachers' Retirement Fund Association

COMMENTS

This report sets forth the information of the Teachers' Retirement Fund Association of the City of St. Paul, Minnesota required by law for the legislature based on the annual actuarial valuation.

These figures have been prepared in accordance with the requirements of the law under the supervision of an approved actuary. Included in these requirements are the use of the Entry Age Normal Cost Method, anticipated salary increases of 3-1/2% per year, and an assumed interest of 5% per year.

The actuarial valuation measures all aspects of the St. Paul Teachers' Fund in accordance with the plan described in the section of the report titled "Summary of the Plan".

Exhibits 5, 9 and 13 show the present value of benefits for past and future service of active members, and current benefits being received by retirees (and beneficiaries).

Exhibits 6, 10 and 14 also indicate an amount of Unfunded Accumulated Contribution Requirement of \$127,317,600. This amount represents an increase of \$5,175,333. The primary reasons for the increase are estimated in Exhibits 8, 12 and 16.

Exhibits 6, 10 and 14 restate the dollar amount of obligation in Exhibits 5, 9 and 13, respectively, as percentages based on current payroll of active members. The resulting percentage total rate requirement may then be compared with the statutory contribution rate to ascertain the actuarial balance of the Fund.

The state appropriation levy of 11.1881% is well short of the actuarial requirement of 18.6953% (Exhibit 6). This short fall of roughly \$4.5 million in the current year continues to erode the financial strength of the Plan. Although the Coordinated program shows a small excess, the expectancy is that the shift between the Basic and Coordinated systems, as time goes on, will not cure the shortfall. The principal effect of the substitution of the Coordinated for the Basic program will be to highlight the financial strain on the Association to meet the peaking benefit payments over the next two decades and to emphasize the need for more adequate financing.

FINANCIAL EXHIBITS

St. Paul Teachers' Retirement Fund AssociationFINANCIAL BALANCE SHEET
(December 31, 1981)A S S E T S

Cash		\$	33,181.28
Receivables			
Interest	\$1,224,282.71		
Dividends	183,050.00		
Employer Contribution	670,594.33		
Prepaid Principal	<u>18,991.99</u>		2,096,919.03
Short-Term Notes, at Discounted Value			15,801,188.13
Bonds, at Amortized Cost			43,463,090.82
Mortgages at Amortized Cost			3,327,764.01
Stocks, at Cost			35,630,405.32
Deferred Yield Adjustment Account			4,711,887.92
Equipment Less Depreciation			9,968.69
Administrative Expenses Payable			<u>(2,535.69)</u>
TOTAL ASSETS			<u>\$105,071,869.51</u>
Members Accumulated Contributions (without interest)		\$	36,582,086.91
Administration Expenses 1981 -	\$194,301.35		

St. Paul Teachers' Retirement Fund AssociationSOURCES AND USES OF FUNDSS O U R C E S

Cash Balance January 1, 1981		\$ 7,496.83
Income from Employer Contribution:		
State of Minnesota-Basic	\$5,908,213.35	
-Coordinated	456,384.61	
Federal Programs -Basic	326,397.57	
-Coordinated	45,772.79	6,736,768.32
Income from Members:		
Payroll Deductions-Basic	\$3,965,262.16	
-Coordinated	512,932.05	
Prior Service	3,135.40	
Return of Refunds	22,361.71	4,503,691.32
Income from Investments:		
Interest	\$7,257,358.74	
Dividends	1,776,726.65	
Miscellaneous	3,184.99	9,037,270.38
Investments Sold		179,156,013.81
Total		<u>\$199,441,240.66</u>

U S E S

Pension Paid:		
Retirements	\$6,405,942.09	
Survivor	294,384.61	
Family	102,697.29	
Disability	336,013.17	\$ 7,139,037.16
Refunds of Dues		524,933.19
Administrative Expenses:		
Actuarial, Auditing, Legal	\$ 19,425.00	
Data Processing	998.37	
Delegate Expense	5,268.00	
Investment Services	54,673.65	
Office Equipment	5,404.07	
Office Expense	15,435.64	
Salaries	88,037.28	
Taxes, Insurance, Affiliate Dues	16,834.63	
Accounts Payable - Withheld Taxes	(2,535.69)	203,540.95
Refund - Dividend Received Not Due		49,837.60
Investments Purchased		191,490,710.49
Cash Balance - December 31, 1981		<u>\$ 33,181.27</u>
TOTAL		<u>\$199,441,240.66</u>

St. Paul Teachers' Retirement Fund AssociationRECONCILIATION OF ASSET BALANCES
(December 31, 1981)

Asset Balance - December 31, 1980 \$ 91,317,182.76

Additions:

Employer Contributions	\$6,763,209.76	
Member Contributions	4,503,691.32	
Investment Income	8,939,097.08	
Net Gain on Sale of Stock	<u>1,404,110.30</u>	<u>21,610,108.46</u>

Sub-Total \$112,927,291.22

Deductions:

Benefit Payments	\$7,136,187.17	
Refunds	524,933.19	
Administrative Expenses	<u>194,301.35</u>	<u>7,855,421.71</u>

Asset Balance, December 31, 1981 \$105,071,869.51

St. Paul Teachers' Retirement Fund AssociationAsset Allocation
(December 31, 1981)

	<u>Basic Division</u>	<u>Coordinated Division</u>	<u>Total</u>
Asset Balance, 12/31/80	\$ 89,713,299.19	\$1,603,883.57	\$ 91,317,182.76
1. Employer Contributions	\$ 6,259,081.42	\$ 504,128.34	\$ 6,763,209.76
2. Employee Contributions	3,988,199.75	515,491.57	4,503,691.32
3. Benefits Paid	(7,127,981.88)	(8,205.29)	(7,136,187.17)
4. Refunds	<u>(307,519.93)</u>	<u>(217,413.26)</u>	<u>(524,933.19)</u>
5. Net (Items 1 to 4)	\$ 2,811,779.36	\$ 794,001.36	\$ 3,605,780.72
6. Investment Income	\$ 10,120,961.41	\$ 222,245.97	\$ 10,343,207.38
7. Administrative Expenses	<u>(161,055.39)</u>	<u>(33,245.96)</u>	<u>(194,301.35)</u>
8. Net (Items 6 to 7)	\$ 9,959,906.02	\$ 189,001.01	\$ 10,148,906.03
9. Increase for Year	\$ 12,771,685.38	\$ 983,001.37	\$ 13,754,686.75
Asset Balance 12/31/81	<u>\$102,484,984.57</u>	<u>\$2,586,884.94</u>	<u>\$105,071,869.51</u>

ACTUARIAL REQUIREMENTS - 58

St. Paul Teachers' Retirement Fund AssociationFINANCIAL BALANCE SHEET
(December 31, 1981)

Present Value of Benefits Expected to be Paid by Retirement Fund

To Active Teachers for

Retirement	\$210,254,815
Disability	19,116,053
Survivorship	12,575,165
Refund	<u>1,726,122</u>

Total	\$243,672,155
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To Vested Teachers	1,346,718
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To Teachers on Leave	3,183,171
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To Former Teachers without Vested Rights	308,294
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To Teachers and Beneficiaries
Now Receiving Benefits for

Retirement	\$ 57,769,509
Disability	2,563,741
Survivorship	<u>3,685,856</u>

Total	\$ 64,019,106
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Total Value of Benefits	\$312,529,444
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Less Value of Expected Future Contributions*	<u>80,139,974</u>
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Accumulated Contribution Requirement Assuming Full Funding During Prior Service Period	\$232,389,470
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Assets on Hand	<u>105,071,870</u>
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Accumulated Contribution Requirement to be Amortized by 2009	<u>\$127,317,600</u>
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* As Determined by the Entry Age Normal Cost Method.

St. Paul Teachers' Retirement Fund AssociationACTUARIAL REQUIREMENTS
(December 31, 1981)TOTAL REQUIREMENTS

Expected Future Contributions on Behalf of Active Teachers	\$ 80,139,974
Accumulated Contribution Assuming Full Funding During Prior Service Period	<u>232,389,470</u>
Total - Value of All Benefits Payable to Present Members	\$312,529,444

AMORTIZATION RATE REQUIREMENT

Accumulated Contribution Requirement	\$232,389,470	
Assets on Hand	<u>105,071,870</u>	
Amount to be Amortized	\$127,317,600	
Contribution Requirement for Amortization Period of 28 Years	\$ 8,545,880	
Current Payroll	\$ 60,342,802	
Amortization Rate Requirement		14.1622%

LEVEL CONTRIBUTION (ENTRY AGE NORMAL) RATE REQUIREMENT

Expected Future Contributions on Behalf of Active Teachers	\$ 80,139,974	
Expected Future Payroll	\$691,442,100	
Total Entry Age Normal Rate Requirement	11.5903%	
Teacher Contribution Rate*	<u>7.3792</u>	
Employer Entry Age Normal Rate Requirement		4.2111%

ACTUARIAL BALANCE

Employer Statutory Contribution Rate**		11.1881%
Rate Requirements		
Amortization Rate Requirement	14.1622%	
Entry Age Normal Rate Requirement	4.2111	
Expenses Rate Requirement	<u>0.3220</u>	
Total Rate Requirement		18.6953%
Deficit of Statutory Rate over Rate Requirement		(7.5072%)

* Weighted by Current Payroll 82.26% Basic and 17.74% Coordinated.

** Rate established by Minnesota Statute, 12.63% Basic and 4.5% Coordinated weighted by Current Payroll.

St. Paul Teachers' Retirement Fund AssociationSTATEMENT OF REVENUE, EXPENDITURES, CHANGES IN
UNFUNDED ACCUMULATED CONTRIBUTION REQUIREMENT
(Year Ended December 31, 1981)Revenue:

Employer Contributions	\$ 6,763,209.76	
Employee Contributions	4,503,691.32	
Net Investment Income	<u>10,343,207.38</u>	
Total Revenue		\$21,610,108.46

Expenditure:

Benefits	7,136,187.17	
Refund of Dues	524,933.19	
Administrative Expense	<u>194,301.35</u>	
Total Expenditures		<u>7,855,421.71</u>
Increase in Assets (1981)		\$13,754,686.75
Increase in Accumulated Contribution Requirement		<u>18,930,020.00</u>
Increase (Decrease) in Unfunded Accumulated Contribution Requirement		<u>\$ 5,175,333.25</u>

St. Paul Teachers' Retirement Fund AssociationINCREASE (DECREASE) IN UNFUNDED REQUIREMENTS

Unfunded	December 31, 1980	\$122,142,267
Unfunded	December 31, 1981	<u>127,317,600</u>
Increase (Decrease)		<u>\$ 5,175,333</u>

ALLOCATION OF INCREASE (DECREASE) IN UNFUNDED REQUIREMENT

Change in Average Earnings		\$ 9,491,306
Principal of Unfunded Anticipated in Total Rate Requirement	\$(1,959,836)	
Deficiency in Total Rate Require- ment over Statutory Rate	<u>4,225,932</u>	
Increase Due to Amortization		2,266,096
Investment Income in excess of 5%: Loss (Gain)		(5,788,062)
Experience Variation: Loss (Gain)		<u>(794,007)</u>
<u>Total Increase (Decrease)</u>		<u>\$ 5,175,333</u>

St. Paul Teachers' Retirement Fund AssociationBASIC DIVISIONFINANCIAL BALANCE SHEET

(December 31, 1981)

Present Value of Benefits Expected to be Paid by Retirement Fund

To Active Teachers for

Retirement	\$198,241,624
Disability	18,270,536
Survivorship	12,575,165
Refund	<u>1,175,204</u>

Total \$230,262,529

To Vested Teachers 1,245,151

To Teachers on Leave 3,080,267

To Former Teachers without
Vested Rights 215,815

To Teachers and Beneficiaries
Now Receiving Benefits for

Retirement	\$ 57,609,029
Disability	2,563,741
Survivorship	<u>3,685,856</u>

Total \$ 63,858,626

Total Value of Benefits \$298,662,388

Less Value of Expected Future Contributions* 70,190,318

Accumulated Contribution Requirement
Assuming Full Funding During
Prior Service Period \$228,472,070

Assets on Hand 102,484,985

Accumulated Contribution Requirement
to be Amortized by 2009 \$125,987,085

* As Determined by the Entry Age Normal Cost Method.

St. Paul Teachers' Retirement Fund AssociationBASIC DIVISIONACTUARIAL REQUIREMENTS
(December 31, 1981)TOTAL REQUIREMENTS

Expected Future Contributions on Behalf of Active Teachers	\$ 70,190,318
Accumulated Contribution Assuming Full Funding During Prior Service Period	<u>228,472,070</u>
Total - Value of All Benefits Payable to Present Members	\$298,662,388

AMORTIZATION RATE REQUIREMENT

Accumulated Contribution Requirement	\$228,472,070
Assets on Hand	<u>102,484,985</u>
Amount to be Amortized	\$125,987,085
Contribution Requirement for Amortization Period of 28 Years	\$ 8,456,572
Current Payroll	\$ 49,640,477
Amortization Rate Requirement	17.0356%

LEVEL CONTRIBUTION (ENTRY AGE NORMAL) RATE REQUIREMENT

Expected Future Contributions on Behalf of Active Teachers	\$ 70,190,318
Expected Future Payroll	\$563,747,000
Total Entry Age Normal Rate Requirement	12.4507%
Teacher Contribution Rate	<u>8.0000</u>
Employer Entry Age Normal Rate Requirement	4.4507%

ACTUARIAL BALANCE

Employer Statutory Contribution Rate*	12.6300%
Rate Requirements	
Amortization Rate Requirement	17.0356%
Entry Age Normal Rate Requirement	4.4507
Expenses Rate Requirement	<u>0.3220</u>
Total Rate Requirement	21.8083%
Deficit of Statutory Rate over Rate Requirement	(9.1783%)

* Rate established by Minnesota Statute.

St. Paul Teachers' Retirement Fund AssociationBASIC DIVISIONSTATEMENT OF REVENUE, EXPENDITURES, CHANGES IN
UNFUNDED ACCUMULATED CONTRIBUTION REQUIREMENT
(Year Ended December 31, 1981)Revenue:

Employer Contributions	\$ 6,259,081.42	
Employee Contributions	3,988,199.75	
Net Investment Income	<u>10,120,961.41</u>	
Total Revenue		\$20,368,242.58

Expenditure:

Benefits	7,127,981.88	
Refund of Dues	307,519.93	
Administrative Expense	<u>161,055.39</u>	
Total Expenditures		<u>7,596,557.20</u>

Increase in Assets (1981)		\$12,771,685.38
Increase in Accumulated Contribution Requirement		<u>18,045,310.00</u>
Increase (Decrease) in Unfunded Accumulated Contribution Requirement		<u>\$ 5,273,624.62</u>

St. Paul Teachers' Retirement Fund AssociationBASIC DIVISIONINCREASE (DECREASE) IN UNFUNDED REQUIREMENTS

Unfunded	December 31, 1980	\$120,713,461
Unfunded	December 31, 1981	<u>125,987,085</u>
Increase (Decrease)		<u>\$ 5,273,624</u>

ALLOCATION OF INCREASE (DECREASE) IN UNFUNDED REQUIREMENT

Change in Average Earnings		\$ 9,375,686
Principal of Unfunded Anticipated in Total Rate Requirement	\$(1,936,910)	
Deficiency in Total Rate Require- ment over Statutory Rate	<u>4,210,547</u>	
Increase Due to Amortization		2,273,637
Investment Income in excess of 5%: Loss (Gain)		(5,663,693)
Experience Variation: Loss (Gain)		<u>(712,006)</u>
<u>Total Increase (Decrease)</u>		<u>\$ 5,273,624</u>

St. Paul Teachers' Retirement Fund AssociationCOORDINATED DIVISIONFINANCIAL BALANCE SHEET
(December 31, 1981)

Present Value of Benefits Expected to be Paid by Retirement Fund

To Active Teachers for

Retirement	\$12,013,191
Disability	845,517
Survivorship	-
Refund	<u>550,918</u>

Total \$13,409,626

To Vested Teachers 101,567

To Teachers on Leave 102,904

To Former Teachers without
Vested Rights 92,479

To Teachers and Beneficiaries
Now Receiving Benefits for

Retirement	\$ 160,480
Disability	-
Survivorship	<u>-</u>

Total \$ 160,480

Total Value of Benefits \$13,867,056

Less Value of Expected Future Contributions* 9,949,656

Accumulated Contribution Requirement
Assuming Full Funding During
Prior Service Period \$ 3,917,400

Assets on Hand 2,586,885

Accumulated Contribution Requirement
to be Amortized by 2009 \$ 1,330,515

* As Determined by the Entry Age Normal Cost Method.

St. Paul Teachers' Retirement Fund AssociationCOORDINATED DIVISIONACTUARIAL REQUIREMENTS
(December 31, 1981)TOTAL REQUIREMENTS

Expected Future Contributions on Behalf of Active Teachers	\$ 9,949,656
Accumulated Contribution Assuming Full Funding During Prior Service Period	<u>3,917,400</u>
Total - Value of All Benefits Payable to Present Members	\$ 13,867,056

AMORTIZATION RATE REQUIREMENT

Accumulated Contribution Requirement	\$ 3,917,400	
Assets on Hand	<u>2,586,885</u>	
Amount to be Amortized	\$ 1,330,515	
Contribution Requirement for Amortization Period of 28 Years	\$ 89,308	
Current Payroll	\$ 10,702,325	
Amortization Rate Requirement		0.8345%

LEVEL CONTRIBUTION (ENTRY AGE NORMAL) RATE REQUIREMENT

Expected Future Contributions on Behalf of Active Teachers	\$ 9,949,656	
Expected Future Payroll	\$127,695,100	
Total Entry Age Normal Rate Requirement	7.7917%	
Teacher Contribution Rate	<u>4.5000</u>	
Employer Entry Age Normal Rate Requirement		3.2917%

ACTUARIAL BALANCE

Employer Statutory Contribution Rate*		4.5000%
Rate Requirements		
Amortization Rate Requirement	0.8345%	
Entry Age Normal Rate Requirement	3.2917	
Expenses Rate Requirement	<u>0.3220</u>	
Total Rate Requirement		4.4482%
Deficit of Statutory Rate over Rate Requirement		(0.0518%)

* Rate established by Minnesota Statute.

St. Paul Teachers' Retirement Fund AssociationCOORDINATED DIVISIONSTATEMENT OF REVENUE, EXPENDITURES, CHANGES IN
UNFUNDED ACCUMULATED CONTRIBUTION REQUIREMENT
(Year Ended December 31, 1981)Revenue:

Employer Contributions	\$504,128.34	
Employee Contributions	515,491.57	
Net Investment Income	<u>222,245.97</u>	
Total Revenue		\$1,241,865.88

Expenditure:

Benefits	8,205.29	
Refund of Dues	217,413.26	
Administrative Expense	<u>33,245.96</u>	
Total Expenditures		<u>258,864.51</u>

Increase in Assets (1981)	\$ 983,001.37
Increase in Accumulated Contribution Requirement	<u>884,710</u>
Increase (Decrease) in Unfunded Accumulated Contribution Requirement	<u>\$ (98,291.37)</u>

St. Paul Teachers' Retirement Fund AssociationCOORDINATED DIVISIONINCREASE (DECREASE) IN UNFUNDED REQUIREMENTS

Unfunded	December 31, 1980	\$1,428,806
Unfunded	December 31, 1981	<u>1,330,515</u>
Increase (Decrease)		<u>\$ (98,291)</u>

ALLOCATION OF INCREASE (DECREASE) IN UNFUNDED REQUIREMENT

Change in Average Earnings		\$ 115,620
Principal of Unfunded Anticipated in Total Rate Requirement	\$(22,926)	
Deficiency in Total Rate Require- ment over Statutory Rate	<u>15,385</u>	
Increase Due to Amortization		(7,541)
Investment Income in excess of 5%: Loss (Gain)		(124,369)
Experience Variation: Loss (Gain)		<u>(82,001)</u>
<u>Total Increase (Decrease)</u>		<u>\$ (98,291)</u>

EMPLOYEE STATISTICS

St. Paul Teachers' Retirement Fund AssociationRECONCILIATION OF MEMBERSACTIVE

Active (Including 168 on Leave) December 31, 1980		2,842
Additions:		
New Apointments 1981	137	
Reappointments	<u>17</u>	<u>154</u>
Total		2,996
Separations:		
Retirements	47	
Deaths	5	
Terminations	<u>144</u>	<u>196</u>
Active (Including 164 On Leave) December 31, 1981		<u>2,800</u>
Substitutes and Part-Time currently working		<u>382</u>
Inactive Members		<u>45</u>

RETIRED

Retired Members December 31, 1980		<u>880</u>
Additions During 1981:		
Retirement	45	
Disability	<u>2</u>	<u>47</u>
Total		927
Separations - Deaths		<u>37</u>
Retired Members December 31, 1981		<u>890</u>
Beneficiaries:		
Reversionary	12	
Survivor	55	
Children	<u>24</u>	
Total	<u>91</u>	

St. Paul Teachers' Retirement Fund AssociationBASIC DIVISIONRETIRED ON SERVICE PENSION

<u>AGE</u>	<u>MALE</u>		<u>FEMALE</u>	
	<u>NUMBER</u>	<u>ANNUAL PENSION</u>	<u>NUMBER</u>	<u>ANNUAL PENSION</u>
55	3	\$ 34,236	1	\$ 7,683
56	2	24,411	2	17,898
57	-	-	2	23,282
58	4	33,674	2	15,241
59	4	58,733	3	26,328
60	3	59,418	5	49,965
61	14	200,634	8	96,874
62	9	112,238	12	160,072
63	7	112,224	7	96,139
64	7	110,124	6	53,778
65	12	157,239	17	156,603
66	10	132,129	19	143,361
67	7	93,105	20	176,707
68	9	131,738	17	143,944
69	13	154,586	21	141,051
70	8	105,567	14	126,993
71	5	45,417	23	168,193
72	8	83,761	18	143,894
73	3	25,416	21	141,531
74	5	53,153	21	149,925
75	3	27,384	30	201,808
76	5	46,687	25	146,328
77	5	44,589	29	170,632
78	1	6,072	35	182,618
79	6	39,603	36	172,663
80	1	6,274	16	74,538
81	3	14,651	24	95,920
82	4	18,598	20	83,932
83	2	7,917	23	97,393
84	2	9,875	17	68,041
85	-	-	18	66,323
86	1	4,479	18	65,119
87	4	17,260	17	67,390
88	1	4,238	15	59,660
89	1	4,221	15	52,228
90	-	-	9	35,280
91	-	-	6	22,674
92	-	-	8	30,065
93	1	3,362	8	29,910
94	-	-	4	12,527
95	-	-	1	3,605
96	-	-	1	3,525
98	-	-	3	8,844
TOTALS	<u>173</u>	<u>\$1,983,013</u>	<u>617</u>	<u>\$3,790,485</u>

St. Paul Teachers' Retirement Fund AssociationRETIRED ON LIMITED PENSION

AGE	MALE		FEMALE	
	NUMBER	ANNUAL PENSION	NUMBER	ANNUAL PENSION
55	-	\$ -	1	\$ 3,850
57	-	-	2	8,535
59	-	-	2	7,741
60	-	-	1	4,324
62	-	-	2	14,343
68	2	16,253	5	33,426
69	2	7,122	5	21,219
70	1	3,538	8	22,346
71	1	470	3	8,263
72	-	-	4	16,661
73	-	-	1	2,925
75	-	-	3	14,328
76	1	3,132	-	-
77	-	-	1	2,256
78	1	3,180	3	11,016
79	-	-	1	2,460
81	-	-	1	2,700
82	-	-	-	-
84	-	-	2	5,489
85	1	2,312	-	-
86	-	-	2	5,056
88	-	-	1	2,546
90	-	-	1	2,294
94	-	-	2	4,110
TOTALS	<u>9</u>	<u>\$36,007</u>	<u>51</u>	<u>\$195,888</u>

St. Paul Teachers' Retirement Fund AssociationRETIRED WITH REVERSIONARY PENSIONS

<u>AGE</u>	<u>MALE</u>		<u>FEMALE</u>	
	<u>NUMBER</u>	<u>ANNUAL PENSION</u>	<u>NUMBER</u>	<u>ANNUAL PENSION</u>
82	1	\$ 4,403	1	\$ 3,758
85	<u>-</u>	<u>-</u>	<u>1</u>	<u>4,129</u>
TOTAL	<u>1</u>	<u>\$ 4,403</u>	<u>2</u>	<u>\$ 7,887</u>

St. Paul Teachers' Retirement Fund AssociationRETIRED ON DISABILITY PENSION

<u>AGE</u>	<u>MALE</u>		<u>FEMALE</u>	
	<u>NUMBER</u>	<u>ANNUAL PENSION</u>	<u>NUMBER</u>	<u>ANNUAL PENSION</u>
40	-	\$ -	1	\$ 9,709
46	-	-	1	9,870
48	-	-	2	27,710
49	1	15,216	-	-
51	-	-	1	5,375
52	1	13,548	-	-
53	1	11,268	-	-
54	-	-	4	40,502
57	1	17,030	-	-
59	2	17,952	1	13,809
60	1	4,164	1	10,286
61	2	33,000	1	14,748
62	1	14,739	3	44,187
64	-	-	1	4,716
65	1	10,816	1	10,590
67	-	-	1	12,951
68	1	6,228	-	-
69	1	4,188	1	-
72	-	-	1	4,400
75	-	-	1	3,239
78	-	-	1	3,099
80	-	-	-	3,482
TOTAL	<u>13</u>	<u>\$148,149</u>	<u>22</u>	<u>\$218,673</u>

St. Paul Teachers' Retirement Fund AssociationSURVIVOR ANNUITIESC H I L D R E N

<u>Number</u>	<u>Annual</u>
24	Pension
	\$98,140

<u>Age</u>	<u>Reversionary Survivors</u>		<u>Regular Survivors</u>	
	<u>Number</u>	<u>Annual Pension</u>	<u>Number</u>	<u>Annual Pension</u>
		<u>M A L E</u>		
53	-	\$ -	1	\$ 3,477
57	-	-	1	3,900
64	-	-	1	6,431
65	-	-	2	16,509
68	-	-	1	6,395
70	-	-	1	8,641
73	-	-	1	1,839
76	-	-	1	7,404
77	-	-	1	3,407
81	-	-	1	6,228
Totals	-	\$ -	11	\$ 64,231
		<u>F E M A L E</u>		
44	-	\$ -	1	\$ 6,985
45	-	-	1	4,291
51	-	-	1	10,285
55	-	-	2	9,595
56	-	-	1	10,201
57	-	-	2	10,796
58	-	-	1	2,520
59	-	-	2	16,718
60	-	-	1	2,760
62	-	-	4	30,415
64	-	-	2	5,541
65	-	-	1	10,659
66	-	-	3	38,686
68	-	-	2	9,546
69	-	-	2	10,174
70	-	-	2	8,203
71	1	1,371	2	9,888
72	-	-	2	11,979
74	-	-	2	5,069
75	1	1,441	2	9,744
76	-	-	2	7,641
77	1	1,045	2	15,280
79	2	4,176	-	-
81	5	12,298	-	-
82	-	-	1	4,734
85	1	1,814	-	-
86	1	1,479	-	-
Total	12	\$23,624	41	\$251,710

St. Paul Teachers' Retirement Fund Association

CONSIDERED EARNINGS
(Year Ended December 31, 1981)

Basic Division - Active Male Employees
(Age and Credited Service as of December 31, 1981)

YEARS OF SERVICE

AGE	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	5	72,452	1	18,464
30 to 34	-	-	-	-	8	153,881	41	815,262
35 to 39	-	-	-	-	3	66,650	35	818,660
40 to 44	-	-	-	-	1	32,029	9	253,300
45 to 49	-	-	-	-	1	15,083	11	289,094
50 to 54	-	-	-	-	-	-	3	88,670
55 to 59	-	-	-	-	1	22,810	1	29,300
60 to 64	-	-	-	-	-	-	-	-
65 & Up	-	-	-	-	-	-	1	26,850
Total	-	\$ -	-	\$ -	19	\$ 362,905	102	\$ 2,339,600

YEARS OF SERVICE

AGE	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	48	1,032,391	-	-	-	-	-	-
35 to 39	97	2,365,337	36	1,030,085	-	-	-	-
40 to 44	53	1,488,708	61	1,750,040	17	483,685	-	-
45 to 49	37	1,077,709	47	1,402,514	57	1,703,081	18	558,348
50 to 54	19	560,720	20	594,396	45	1,266,089	61	1,890,035
55 to 59	9	278,532	14	390,980	15	428,080	28	810,804
60 to 64	2	54,669	9	272,315	4	114,042	8	251,101
65 & Up	-	-	1	30,200	-	-	-	-
Total	265	\$6,858,066	188	\$5,470,530	138	\$3,994,977	115	\$ 3,510,288

YEARS OF SERVICE

AGE	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	6	90,916
30 to 34	-	-	-	-	-	-	97	2,001,534
35 to 39	-	-	-	-	-	-	171	4,280,732
40 to 44	-	-	-	-	-	-	141	4,007,762
45 to 49	-	-	-	-	-	-	171	5,045,829
50 to 54	20	635,460	-	-	-	-	168	5,035,370
55 to 59	54	1,675,257	16	569,857	-	-	138	4,205,620
60 to 64	12	360,355	8	291,703	1	28,200	44	1,372,385
65 & Up	-	-	1	35,747	1	36,395	4	129,192
Total	86	\$2,671,072	25	\$ 897,307	2	\$ 64,595	940	\$26,169,340

St. Paul Teachers' Retirement Fund Association

CONSIDERED EARNINGS
(Year Ended December 31, 1981)

Basic Division - Active Female Employees
(Age and Credited Service as of December 31, 1981)

AGE	YEARS OF SERVICE							
	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	1	\$ 15,000	-	\$ -
25 to 29	-	-	-	-	25	340,421	27	393,678
30 to 34	-	-	1	13,558	35	533,995	103	1,730,549
35 to 39	-	-	-	-	12	192,616	50	972,728
40 to 44	-	-	-	-	5	78,716	35	768,176
45 to 49	-	-	-	-	6	105,425	33	683,460
50 to 54	-	-	-	-	6	109,900	12	269,146
55 to 59	-	-	-	-	1	20,850	9	168,229
60 to 64	-	-	-	-	-	-	1	21,453
65 & Up	-	-	-	-	-	-	1	27,012
Total	-	\$ -	1	\$ 13,558	91	\$1,396,923	271	\$ 5,034,431

AGE	YEARS OF SERVICE							
	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	89	1,708,946	-	-	-	-	-	-
35 to 39	119	2,696,898	25	662,081	-	-	-	-
40 to 44	65	1,635,171	30	811,762	23	609,787	-	-
45 to 49	46	1,105,971	21	551,030	25	665,298	9	236,491
50 to 54	31	756,369	24	634,467	13	367,345	17	490,704
55 to 59	22	542,739	16	411,221	16	422,042	13	369,258
60 to 64	6	143,153	13	331,308	19	509,384	5	139,274
65 & Up	1	23,500	1	28,067	5	133,130	-	-
Total	379	\$8,612,747	130	\$3,429,936	101	\$2,706,986	44	\$ 1,235,727

AGE	YEARS OF SERVICE							
	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	1	\$ 15,000
25 to 29	-	-	-	-	-	-	52	734,099
30 to 34	-	-	-	-	-	-	228	3,987,048
35 to 39	-	-	-	-	-	-	206	4,524,323
40 to 44	-	-	-	-	-	-	158	3,903,612
45 to 49	-	-	-	-	-	-	140	3,347,675
50 to 54	8	210,533	1	22,700	-	-	112	2,861,164
55 to 59	8	224,410	5	121,000	-	-	90	2,279,749
60 to 64	4	110,320	6	177,389	3	99,635	57	1,531,916
65 & Up	-	-	2	52,742	1	22,100	11	286,551
Total	20	\$ 545,263	14	\$ 373,831	4	\$ 121,735	1,055	\$23,471,137

St. Paul Teachers' Retirement Fund AssociationCOORDINATED DIVISIONRETIRED ON SERVICE PENSION

<u>AGE</u>	<u>MALE</u>		<u>FEMALE</u>	
	<u>NUMBER</u>	<u>ANNUAL PENSION</u>	<u>NUMBER</u>	<u>ANNUAL PENSION</u>
65	-	\$ -	1	\$ 932
66	-	-	2	11,938
67	-	-	1	574
68	-	-	<u>1</u>	<u>1,322</u>
Total	<u>-</u>	<u>\$ -</u>	<u>5</u>	<u>\$14,766</u>

St. Paul Teachers' Retirement Fund Association

CONSIDERED EARNINGS
(Year Ended December 31, 1981)

Coordinated Division - Active Male Employees
(Age and Credited Service as of December 31, 1981)

AGE	YEARS OF SERVICE							
	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	21	\$ 22,024	2	\$ 15,127	1	\$ 13,456	-	\$ -
25 to 29	27	21,705	17	134,130	29	404,202	-	-
30 to 34	24	43,005	8	114,954	33	552,795	8	138,316
35 to 39	12	12,480	6	83,641	13	256,333	3	49,579
40 to 44	8	10,905	2	10,603	11	229,812	1	20,700
45 to 49	3	2,178	-	-	7	137,975	-	-
50 to 54	3	2,717	1	1,728	2	26,582	-	-
55 to 59	4	2,665	1	10,293	1	19,857	-	-
60 to 64	-	-	-	-	1	19,600	-	-
65 & Up	3	4,801	-	-	-	-	-	-
Total	<u>105</u>	<u>\$122,480</u>	<u>37</u>	<u>\$370,476</u>	<u>98</u>	<u>\$1,660,612</u>	<u>12</u>	<u>\$ 208,595</u>

AGE	YEARS OF SERVICE							
	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	1	20,080	-	-	-	-	-	-
35 to 39	3	83,360	-	-	-	-	-	-
40 to 44	2	52,200	1	22,198	-	-	-	-
45 to 49	1	20,600	1	27,800	-	-	-	-
50 to 54	1	28,200	-	-	-	-	-	-
55 to 59	1	29,187	-	-	-	-	-	-
60 to 64	-	-	1	27,000	-	-	-	-
65 & Up	-	-	-	-	-	-	-	-
Total	<u>9</u>	<u>\$233,627</u>	<u>3</u>	<u>\$ 76,998</u>	<u>-</u>	<u>\$ -</u>	<u>-</u>	<u>\$ -</u>

AGE	YEARS OF SERVICE							
	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	24	\$ 50,607
25 to 29	-	-	-	-	-	-	73	560,037
30 to 34	-	-	-	-	-	-	74	869,150
35 to 39	-	-	-	-	-	-	37	485,393
40 to 44	-	-	-	-	-	-	25	346,418
45 to 49	-	-	-	-	-	-	12	188,553
50 to 54	-	-	-	-	-	-	7	59,227
55 to 59	-	-	-	-	-	-	7	62,002
60 to 64	-	-	-	-	-	-	2	46,636
65 & Up	-	-	-	-	-	-	3	4,801
Total	<u>-</u>	<u>\$ -</u>	<u>-</u>	<u>\$ -</u>	<u>-</u>	<u>\$ -</u>	<u>264</u>	<u>\$2,672,788</u>

St. Paul Teachers' Retirement Fund Association

CONSIDERED EARNINGS
(Year Ended December 31, 1981)

Coordinated Division - Active Female Employees
(Age and Credited Service as of December 31, 1981)

AGE	YEARS OF SERVICE							
	Under 1		1		2 to 4		5 to 9	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	49	\$ 55,246	14	\$ 155,674	12	\$ 156,720	-	\$ -
25 to 29	66	65,962	38	392,402	106	1,464,359	5	71,756
30 to 34	37	67,562	29	384,966	67	1,055,614	10	163,046
35 to 39	20	15,867	26	265,663	42	642,113	4	73,955
40 to 44	20	27,274	18	168,766	34	563,971	6	124,600
45 to 49	9	5,076	18	140,735	26	391,813	3	68,228
50 to 54	4	13,472	8	79,159	12	193,054	10	149,924
55 to 59	3	6,894	2	5,744	7	92,285	4	40,015
60 to 64	3	662	1	835	9	73,702	1	7,315
65 & Up	1	954	-	-	-	-	-	-
Total	<u>212</u>	<u>\$ 258,969</u>	<u>154</u>	<u>\$1,593,944</u>	<u>315</u>	<u>\$4,633,631</u>	<u>43</u>	<u>\$ 698,839</u>

AGE	YEARS OF SERVICE							
	10 to 14		15 to 19		20 to 24		25 to 29	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	-	\$ -
25 to 29	-	-	-	-	-	-	-	-
30 to 34	6	116,614	-	-	-	-	-	-
35 to 39	13	316,926	2	50,057	-	-	-	-
40 to 44	1	21,900	1	28,028	1	27,000	-	-
45 to 49	4	94,912	1	22,339	1	27,000	-	-
50 to 54	3	71,042	-	-	-	-	-	-
55 to 59	1	28,481	-	-	-	-	-	-
60 to 64	-	-	-	-	1	39,855	-	-
65 & Up	-	-	-	-	-	-	-	-
Total	<u>28</u>	<u>\$ 649,875</u>	<u>4</u>	<u>\$ 100,424</u>	<u>3</u>	<u>\$ 93,855</u>	<u>-</u>	<u>\$ -</u>

AGE	YEARS OF SERVICE							
	30 to 34		35 to 39		40 & Up		All	
	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS	NO.	EARNINGS
Under 25	-	\$ -	-	\$ -	-	\$ -	75	\$ 367,640
25 to 29	-	-	-	-	-	-	215	1,994,479
30 to 34	-	-	-	-	-	-	149	1,787,802
35 to 39	-	-	-	-	-	-	107	1,364,581
40 to 44	-	-	-	-	-	-	81	961,539
45 to 49	-	-	-	-	-	-	62	750,103
50 to 54	-	-	-	-	-	-	37	506,651
55 to 59	-	-	-	-	-	-	17	173,419
60 to 64	-	-	-	-	-	-	15	122,369
65 & Up	-	-	-	-	-	-	1	954
Total	<u>-</u>	<u>\$ -</u>	<u>-</u>	<u>\$ -</u>	<u>-</u>	<u>\$ -</u>	<u>759</u>	<u>\$8,029,537</u>

SUMMARY OF PLAN

St. Paul Teachers' Retirement Fund Association

BASIC DIVISION

SUMMARY OF PLAN

(As Amended Effective July 1, 1978)

1. Name

St. Paul Teachers' Retirement Fund Association.

2. Type of Plan

Self-insured, managed by a Board of Trustees consisting of the Chairman of the Board of Independent School District Number 625 and nine others elected by and from members of the Teachers' Association.

3. Employers Included

Board of Education - City of St. Paul.

4. Employees Included

All employees in the St. Paul Public Schools in a position covered by a certificate issued by the Minnesota State Department of Education and not covered under Section 218 of the Social Security Act.

5. Service Considered for Benefits

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. Year of service credited prior to May 31, 1976 shall not be recomputed.

6. Earnings Considered

Annual total salary. Average salary based on the five years during the last 10 years of St. Paul Service which produced the highest average. For any member employed on a part-time basis during any of the 10 years, the average is computed on the basis of the amount earned in the time required to complete one full year of service.

7. Employer Contributions

12.63% of payroll.

8. Employee Contributions

8% of annual total salary including salary otherwise payable to a member on sabbatical leave.

If an employee elects to purchase eligible outside service, he may do so pursuant to Article IV, Section 2, Paragraph 2(d) of the Articles of Incorporation and By-Laws as amended effective June 1, 1978.

9. Normal Retirement Benefit

On or after attainment of age 60 and completion of 25 years of service.

Pension equal to 2% of average salary multiplied by the number of years of accredited service; such accredited service limited to a maximum of 40 years.

10. Limited Service Benefit

Upon attainment of age 55 and completion of 10 years of service but less than 25 years of service. Annuity determined as for Normal Retirement considering service and earnings to actual retirement and reduced (i) by 1/2 of 1% for each of the first 60 months and (ii) by 1/4 of 1% for each additional month or major fraction thereof between date upon which payment begins and attainment of age 65.

11. Early Retirement Benefit

After attainment of age 55 and completion of 25 years of service. Annuity determined as for Normal Retirement considering service and earnings to actual retirement and reduced by 1/2 of 1% for each month or major fraction thereof between date upon which payment begins and attainment of age 60.

12. Disability Benefit

In the event of total and permanent disability after completion of five years of accredited St. Paul service.

Until age 65 the pension is equal to 75% of annual total salary for last full year of service minus any Social Security and/or Workmen's Compensation benefits being received.

At age 65 the benefit is recomputed as for Normal Retirement considering average salary and accredited service the disabled member would have had if he had continued to teach in his latest position during his period of disability.

13. Deferred Vested Benefit

In the event of termination after completion of ten years of service. Annuity determined as for Limited Service Benefit above, augmented by interest compounded annually at the rate of 5% until January 1, 1981 and thereafter at the rate of 3%.

14. Death Benefit

Active

- (a) In the event of death prior to retirement and after completion of three years of service, a benefit is payable:
 - (i) For each dependent child, subject to a maximum of two at one time, equal to 25% of the maximum salary payable to a teacher holding a B.A. degree for the year in which the member died, and
 - (ii) To the surviving spouse, maintaining a home and having legal custody of the dependent child or children equal to 15% of the maximum salary in (i) above.

If the surviving spouse is also eligible for the benefits in (b) next following, such spouse may elect either benefits under (b) or the 15% benefit in (ii) above. All benefits attributable to one deceased member are limited to 90% of such member's final pay.

- (b) In the event of death after completion of 10 years of accredited service, the survivor, as defined in the plan, becomes entitled to a benefit based on the annuity earned to the date of the member's death and payable for life, equal to a joint-and-last survivorship annuity under which 100% of the reduced benefit is payable to the survivor.

Retired

In the event of death after retirement, the survivor receives a life annuity equal to the amount earned by the member to the date of his retirement after reduction to a 100% joint-and-last survivorship form of annuity.

15. Cash Refund of Dues

- (a) Upon termination or death of an active member prior to eligibility for any other pension, the full amount of his dues, without interest, paid since January 1, 1940, will be returned to him or to his beneficiary.

- (b) Upon the death of an active member eligible for a dependent children's benefit, but no other benefit under the Plan, the amount of the dues paid since January 1, 1940 which is in excess of the amount payable to the dependent children, without interest, shall be returned to his beneficiary.
- (c) Upon the death of a retired member, who was not survived by a survivor entitled to any other pension under the Plan, the amount of dues paid since January 1, 1940, without interest, in excess of that amount already paid in pension, will be returned to his beneficiary.

In (a) above, if the member terminates and has completed the probationary employment period under the applicable teacher tenure law, all amounts payable after the probationary period are credited with interest in a manner to be determined by the Board of Trustees.

16. Savings Provision

Any member who retires after December 31, 1954 on a Normal Limited, Early, or Disability Pension, shall receive a pension not less than the maximum amount payable to any member who retired before January 1, 1955 for an equal period of service, including all increases of the pension of such previously retired member becoming effective after December 31, 1954.

17. Proportionate Annuity

At age 65 or under a mandatory retirement statute. Annuity determined as for Normal Retirement based on service prior to termination.

18. Combined Service

Service totaling 10 or more years in any Minnesota funds with the same provision shall be entitled to an annuity from each fund based on their respective service in each fund.

19. State Funded Retiree Increases

Minnesota Statutes Law 1976, Chapter 326 provided increases to certain retirees based on service at retirement and years of retirement. The cost of these increases was provided by an appropriation from the general fund in the State Treasury.

20. Bonus Payment

For each year during which investment income of the fund exceeds 5 1/2% of the asset value at the end of the year, a lump sum payment to each retired member and survivor who has received an annuity for at least three years. Amount determined by prorating 1/2% of the asset value by total years of service of eligible annuitants.

St. Paul Teachers' Retirement Fund Association

COORDINATED DIVISION

SUMMARY OF PLAN

(As Amended Effective July 1, 1978)

1. Name

St. Paul Teachers' Retirement Fund Association.

2. Type of Plan

Self-insured, managed by a Board of Trustees consisting of the Chairman of the Board of Independent School District Number 625 and nine others elected by and from members of the Teachers' Association.

3. Employers Included

Board of Education - City of St. Paul.

4. Employees Included

All employees in the St. Paul Public Schools in a position covered by a certificate issued by the Minnesota State Department of Education who either elected coverage under Section 218 of the Social Security Act, or were automatically so covered.

5. Service Considered for Benefits

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.

6. Earnings Considered

Annual total salary. Average salary based on the five successive years of St. Paul Service which produces the highest average. For any member employed on a part-time basis during any of the five years, the average is computed on the basis of the amount earned in the time required to complete one full year of service.

7. Employer Contributions

4-1/2% of pay excluding Social Security taxes.

8. Employee Contributions

Four and one half percent of annual total salary including salary otherwise payable to a member on sabbatical leave.

9. Normal Retirement Benefit

Age 65 and completion of 10 years of service or after attainment of age 62 and completion of 30 years of service.

Pension equal to 1% of average salary for each of the first 10 years of accredited service, plus 1 1/2% of average salary for each year of accredited service in excess of 10 years; such accredited service limited to a maximum of 40 years.

10. Early Retirement Benefit

After completion of 30 years of service or attainment of age 55 and completion of 10 years of service. Annuity determined as for Normal Retirement considering service and earnings to actual retirement. For member with less than 30 years of service, annuities are reduced by 1/2% per month for each month under age 65 and by 1/4% per month for each month under age 60. For member with 30 years of service, annuities are reduced by 1/2% per month for each month under age 62 and by 1/4% per month for each month under age 60.

11. Disability Benefit

In the event of total and permanent disability after completion of 10 years of service or attainment of age 50 and completion of five years of service, with average salary of at least \$75 per month.

The benefit is computed as for Normal Retirement considering average salary and accredited service at time of disability. Disability recipients automatically assume retirement status to age 65 with the right to choose a life annuity equal to their disability benefit or to choose an optional annuity plan with provisions for payment to beneficiaries.

12. Deferred Vested Benefit

In the event of termination after completion of 10 years of service. Annuity determined as for Normal Retirement payable at minimum retirement age, augmented by interest compounded annually at the rate of 5% until January 1, 1981 and thereafter at the rate of 3%.

13. Death Benefit

Active

After completion of 30 years of service or attainment of age 55 and completion of 20 years of service a member may elect a joint and survivor annuity payable to the beneficiary in the event of death prior to retirement.

Retired

Upon retirement a member may elect an optional annuity to provide a reduced pension payable for life and survivor benefit to a contingent annuitant.

14. Cash Refund of Dues

Upon termination or death of an active member prior to eligibility for any other pension, the full amount of his dues will be returned to him or to his beneficiary.

15. Proportionate Annuity

At age 65 or under a mandatory retirement statute. Annuity determined as for Normal Retirement based on service prior to termination.

16. Combined Service

Service totaling 10 or more years in any Minnesota funds with the same provision shall be entitled to an annuity from each fund based on their respective service in each fund.

17. Optional Annuity Plans

In lieu of lifetime monthly annuity, a member may elect to convert his pension into an actuarially equivalent optional pension in the form of a 100% joint and survivor benefit, 50% joint and survivor benefit, 15 years' certain and life benefit or a guaranteed refund benefit.

18. Bonus Payment

For each year during which investment income of the fund exceeds 5 1/2% of the asset value at the end of the year, a lump sum payment to each retired member and survivor who has received an annuity for at least three years. Amount determined by prorating 1/2% of the asset value by total years of service of eligible annuitants.

ACTUARIAL ASSUMPTIONS

St. Paul Teachers' Retirement Fund Association

STATEMENT OF ACTUARIAL ASSUMPTIONS

Based on the experience analysis through December 31, 1975, the following assumptions have been used in determining the actuarial liabilities of the Fund:

Interest:	5% per annum, compounded annually.
Mortality:	Group Annuity Table for 1951 projected through 1965. See following tables.
Retirement Age:	Age 65.
Disability:	See following tables.
Separation:	See following tables.
Salary Scale:	3-1/2% per annum, compounded annually. See following tables.

A detailed statement of the mortality rates, disability rates, turnover rates and salary progression is set forth on the following pages.

St. Paul Teachers' Retirement Fund Association

MORTALITY RATES

(Per 1,000 Employees)

Male Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.517	45	3.002
21	.537	46	3.409
22	.558	47	3.856
23	.581	48	4.344
24	.607	49	4.869
25	.636	50	5.429
26	.667	51	6.027
27	.703	52	6.656
28	.742	53	7.321
29	.784	54	8.019
30	.831	55	8.751
31	.884	56	9.514
32	.941	57	10.312
33	1.005	58	11.154
34	1.074	59	12.057
35	1.152	60	13.043
36	1.237	61	14.143
37	1.331	62	15.390
38	1.435	63	16.828
39	1.550	64	18.504
40	1.677	65	20.475
41	1.838		
42	2.054		
43	2.322		
44	2.639		

St. Paul Teachers' Retirement Fund Association

MORTALITY RATES

(Per 1,000 Employees)

Female Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.311	45	1.672
21	.330	46	1.819
22	.349	47	1.980
23	.369	48	2.158
24	.392	49	2.355
25	.415	50	2.574
26	.439	51	2.783
27	.466	52	3.016
28	.496	53	3.277
29	.527	54	3.570
30	.561	55	3.898
31	.597	56	4.278
32	.637	57	4.727
33	.681	58	5.253
34	.728	59	5.867
35	.780	60	6.572
36	.836	61	7.369
37	.898	62	8.258
38	.966	63	9.232
39	1.040	64	10.284
40	1.122	65	11.402
41	1.213		
42	1.311		
43	1.420		
44	1.540		

St. Paul Teachers' Retirement Fund Association

DISABILITY RATES

(Per 1,000 Employees)

All Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.70	45	1.62
21	.71	46	1.76
22	.72	47	1.91
23	.73	48	2.07
24	.74	49	2.23
25	.75	50	2.40
26	.76	51	2.60
27	.78	52	2.86
28	.80	53	3.18
29	.82	54	3.56
30	.84	55	4.00
31	.86	56	4.59
32	.88	57	5.34
33	.90	58	6.10
34	.93	59	7.20
35	.96	60	8.43
36	.99	61	9.75
37	1.03	62	11.30
38	1.07	63	13.05
39	1.11	64	14.90
40	1.15		
41	1.20		
42	1.27		
43	1.36		
44	1.48		

St. Paul Teachers' Retirement Fund Association

SEPARATION RATES

(Per 1,000 Employees)

Male Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	191	40	25
21	177	41	23
22	163	42	21
23	149	43	19
24	135	44	17
25	122	45	16
26	112	46	16
27	102	47	15
28	92	48	14
29	83	49	13
30	74	50	12
31	67	51	12
32	61	52	11
33	55	53	11
34	49	54	10
35	43	55	9
36	39	56	7
37	35	57	5
38	31	58	3
39	28	59	1

St. Paul Teachers' Retirement Fund Association

SEPARATION RATES

(Per 1,000 Employees)

Female Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	275	40	80
21	271	41	72
22	267	42	64
23	263	43	56
24	259	44	49
25	255	45	42
26	247	46	37
27	239	47	32
28	231	48	27
29	222	49	23
30	213	50	19
31	199	51	16
32	185	52	14
33	171	53	12
34	157	54	10
35	142	55	8
36	129	56	6
37	116	57	4
38	104	58	2
39	92	59	1

St. Paul Teachers' Retirement Fund Association

EARNINGS PROGRESSION

(Per 1,000 Employees)

All Employees

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	.2127	45	.5026
21	.2201	46	.5202
22	.2278	47	.5384
23	.2358	48	.5572
24	.2440	49	.5767
25	.2526	50	.5969
26	.2614	51	.6178
27	.2706	52	.6394
28	.2800	53	.6618
29	.2898	54	.6849
30	.3000	55	.7089
31	.3105	56	.7337
32	.3213	57	.7594
33	.3326	58	.7860
34	.3442	59	.8135
35	.3563	60	.8420
36	.3687	61	.8714
37	.3817	62	.9019
38	.3950	63	.9335
39	.4088	64	.9662
40	.4231	65	1.000
41	.4380		
42	.4533		
43	.4692		
44	.4856		