

# ***Minneapolis Teachers Retirement Fund Association***

## **Basic Retirement Program**

**Actuarial Valuation  
December 31, 1979**

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222 South Riverside Plaza  
Chicago, Illinois 60606

March 17, 1980

Board of Trustees  
Minneapolis Teachers Retirement  
Fund Association  
Northwestern Bank Building  
Minneapolis, Minnesota 55402

Gentlemen:

We are pleased to submit the final results of our actuarial valuation of the Minneapolis Teachers Retirement Fund as of December 31, 1979. The valuation of basic members was performed on the basis of employee data which was not audited by us and of data and financial information provided by the Executive Secretary of the Fund.

#### Objectives

The principal objectives of the valuation may be summarized as follows:

1. Prepare information in accordance with Minnesota Statutes, Sections 356.20 to 356.23 (refer to page No. 1 of this Report for additional detail of methods used).
2. Summarize the actuarial status of the Fund.
3. Analyze the experience of the Fund.

#### Summary of Findings

The results of our valuation, which were determined under 5% interest and 3½% salary increase assumptions as required by statute, may be summarized as follows:

1. The employer's normal cost for the year is 6.07% of payroll.
2. The necessary contribution to meet normal cost, and prevent the unfunded accrued liability (deficit) from increasing is 23.24% of payroll, compared to 20.09% shown in the December 31, 1978 valuation.
3. Assets of the Fund are in excess of the present value of benefits for current retirees.




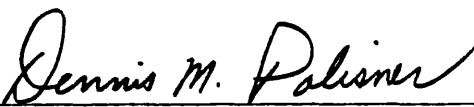
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Minneapolis Teachers Retirement  
Fund Association  
March 17, 1980  
Page Two

Based on the above mentioned data and information, our interpretation of plan provisions and the valuation method and assumptions set forth in this report, we hereby certify that the summaries on the following pages represent the results of the valuation.

PEAT, MARWICK, MITCHELL & CO.

  
\_\_\_\_\_  
Donald G. Brackey, F.S.A.  
Enrolled Actuary Number 2765

  
\_\_\_\_\_  
Dennis M. Polisner, F.S.A., M.A.A.A.  
Enrolled Actuary Number 986

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PART I.

VALUATION METHODS AND ASSUMPTIONS

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

METHODS USED IN VALUATION

GENERAL

Actuarial liabilities for retirement and other benefits are shown in Exhibit I. Employer contribution levels are presented in Exhibit II.

ANNUITIES IN FORCE

Annuities in force as of December 31, 1979 were summarized by the Association, showing for each type of annuity, the option chosen, attained age of annuitant or beneficiary, and the annual amount of annuity payable. The present value of these annuities was determined using a 5% interest rate and the 1971 Group Annuity Mortality Table with projection to 1975. For males, the male mortality rates with an age setback of one year were used. For females, the male rates with an age setback of seven years were used.

DEFERRED ANNUITANTS

Summaries of all deferred annuitants were prepared by the Association showing, by attained age, the years of service and accumulated deposits for each such annuitant. It was assumed that future benefits would be the amount purchased by 200% of member's deposits plus a life annuity starting at age 63 equal to the greater of:

1. \$4 per month per year of service; or
2. The amount purchased by 200% of the  
accumulated City/State deposits.

ACCRUED LIABILITY--ACTIVE TEACHERS (BASIC MEMBERS)

In the valuation performed as of December 31, 1979, the Entry Age Normal Cost Method was used for valuation of normal retirement benefits as well as ancillary benefits.

For purposes of this valuation, it was assumed that all retirements take place at age 63. At retirement, the plan provides for basic members a life annuity of 2.25% of the highest consecutive 5-year average salary, times years of teaching service to a maximum of 30 years.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

SUMMARY OF ACTUARIAL ASSUMPTIONS

	<u>December 31, 1979</u>	
Interest	5%	
Turnover	2/3 of the 1970 experience, graduated for smoothness:	
	<u>Attained Age</u>	<u>Turnover Rate</u>
	20	.200
	30	.133
	40	.028
	50	.017
	60	.002
Retirement Age	The later of age 63 or attained age on the valuation date	
Salary Scale -- Annual Increase	3½%	
Mortality	The 1971 Group Annuity Mortality Table with projection to 1975 by Scale D. For males the male rates were used with age setback one year. For females, the male rates were used with age setback seven years.	
Valuation Assets	For valuation purposes assets are valued at cost.	
Disablement	1955 UAW rates of disablement (with separate rates for males and females).	



MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

ANALYSIS OF ACTUARIAL ASSUMPTIONS

Shown below is the description of the basis for each principal assumption summarized on the previous page.

INTEREST

In 1979, the Fund's earning rates were as follows:

1. Excluding realized and unrealized capital gains and losses: 7.588%
2. Including realized capital gains and losses: 8.445%

Over the last five years, the averages of the Fund's annual earning rates were as follows:

1. Excluding realized and unrealized capital gains and losses: 6.487%
2. Including realized capital gains and losses: 6.754%

RETIREMENT AGE

Over the last several years, the average retirement age has approximated age 63. In 1979, the average age at retirement was 59.99. This year's costs are calculated using an assumed retirement age of 63.

TURNOVER

Turnover rates corresponding to 2/3 of the turnover rates experienced by the Fund in 1970 were used in this year's valuation. During 1979, actual turnover rates were approximately 23% lower than the assumed rates.

### ASSETS

The cost basis of the assets was used for purposes of the actuarial valuation. Unrealized appreciation on stocks increased from \$8,510,195 on December 31, 1977 to \$9,120,278 on December 31, 1978 and to \$15,080,702 on December 31, 1979.

### SALARY SCALE

A 3½% annual salary scale assumption was used. At the end of 1979, the overall average salary was \$19,816 compared to \$18,997 at the end of 1978 representing a 4.3% increase. Average salaries have increased approximately 7.80% a year since 1974, and approximately 8.14% a year since 1970.

### MORTALITY

For active and retired lives, the 1971 Group Annuity Mortality Table with projection to 1975 was used. (Male Table for males; the mortality rates for females are equal to those for males six years younger.) To account for teacher mortality which is expected to be less than the average group mortality, an additional one year setback was used.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

DEFINITIONS OF TERMS

NORMAL COST

Level cost, to provide for all benefits, expressed as a percentage of payroll, payable from each member's entry age to date of retirement or termination.

ACCRUED LIABILITY

The accumulation of prior Normal Costs which became due each year (theoretically) for each member since his entry date.

UNFUNDED ACCRUED LIABILITY

The portion of the Accrued Liability not covered by assets of the Fund.

ENTRY AGE NORMAL

A method for funding future benefits, using the Normal Cost and Accrued Liability defined above.

PART II.

VALUATION RESULTS AND ANALYSIS

EXHIBIT IMINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONSUMMARY OF COSTS AS OF DECEMBER 31, 1979

Assumed retirement age is 63, 5% Interest and 2/3 of 1970 Turnover		
	<u>Normal Cost</u>	<u>Accrued Liability</u>
1. Active Members		
Retirement benefits	\$5,947,082	\$171,116,926
Disability benefits	735,760	13,158,289
Refunds due to death or withdrawal	2,152,097	15,801,907
2. Deferred Annuitants and Former Members Without Vested Rights	0	6,166,060
3. Annuitants	<u>0</u>	<u>126,945,898</u>
4. Total	\$8,834,939	\$333,189,080
5. Member deposits (8½% of compensation for all basic plan participants)	\$5,153,718	
6. Employer normal cost	\$3,681,221	
7. Valuation assets		\$137,098,147
8. Actual unfunded accrued liability		<u>\$196,090,933</u>
Total Payroll		\$ 60,631,978

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONSUMMARY OF CONTRIBUTION LEVELS FOR TWO YEARS

	<u>December 31, 1979</u>	<u>December 31, 1978</u>
Employer normal cost	\$ 3,681,221	\$ 3,734,181
Percentage of payroll	6.07%	5.75%
Unfunded accrued liability	196,090,933	175,055,100
Employer contribution required to meet normal cost and amortize unfunded accrued liability by December 31, 2009 (1997)* assuming payment at the beginning of the plan year	15,829,780	17,112,242
Percentage of payroll	26.11%	26.34%
Employer contribution required to meet normal cost and prevent unfunded accrued liability from increasing, assuming payment at the end of the plan year	13,669,829	12,673,645
Percentage of payroll	22.55%	19.51%
Administrative expense	402,159	360,486
Percentage of payroll	.66%	.55%
Employer contribution required to meet normal cost and administrative expense and amortize unfunded accrued liability by December 31, 2009 (1997)* assuming payment at the beginning of the plan year	16,231,939	17,472,728
Percentage of payroll	26.77%	26.90%
Employer contribution required to meet normal cost and administrative expense and prevent unfunded accrued liability from increasing, assuming payment at the end of the plan year	14,092,096	13,052,155**
Percentage of payroll	23.24%	20.09%

\*The year in the parentheses is the amortization period for the contribution levels shown in the December 31, 1978 column.

\*\*Includes interest on administrative expense.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

COMPARISON OF CONTRIBUTIONS WITH TOTAL INCOME FROM  
GOVERNMENTAL UNITS

Employer contribution as of December 31, 1979 to meet normal cost and administrative expense and prevent unfunded accrued liability from increasing	\$14,092,096
Percentage of payroll on December 31, 1979	23.24%
Total 1979 state tax revenue	7,005,889
Percentage of payroll on December 31, 1979	11.55%

## MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

SUMMARY OF ANNUITIES IN FORCE ON DECEMBER 31, 1979

Option	Annuity Plan	Number of Annuitants	Annuity Reserve Fund		Contingent Reserve Fund		Total	
			Annual Amount	Reserve	Annual Amount	Reserve	Annual Amount	Reserve
1	Life	1,314	\$1,728,546	\$15,279,592	\$4,356,562	\$42,571,103	\$ 6,085,108	\$ 57,850,695
2	Life, 15 year guarantee	507	834,846	9,444,397	1,736,765	22,403,158	2,571,611	31,847,555
3	Survivorship (50%)	86	199,857	2,225,770	504,009	6,329,684	703,866	8,555,454
4	Annuities Certain	71	103,943	883,337	249,524	2,414,183	353,467	3,297,520
5	Life, 3 year guarantee	47	139,832	1,748,014	281,668	4,219,117	421,500	5,967,131
6	Survivorship (75%)	46	142,224	1,836,136	365,327	5,321,788	507,551	7,157,924
7	Survivorship (100%)	60	133,775	1,847,521	293,762	4,614,878	427,537	6,462,399
8	Death Benefit	10	9,372	125,397	37,307	564,729	46,679	690,126
9	Disability	60	74,285	944,317	291,233	4,172,777	365,518	5,117,094
	Totals	2,201	\$3,366,680	\$34,334,481	\$8,116,157	\$92,611,417	\$11,482,837	\$126,945,898



MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONASSETS AND CURRENT LIABILITIES AS OF DECEMBER 31, 1978 AND 1979

<u>Assets (Cost Basis)</u>	<u>December 31, 1979</u>	<u>December 31, 1978</u>
Cash	\$ 2,322,305	\$ 1,428,024
Stock dividends receivable	388,062	456,627
Accrued interest on investments	1,132,854	1,052,472
Bonds, mortgages and equities (including real estate)	119,559,766	121,305,806*
Land under operating leases	1,410,686	-
Net investment in financing leases	3,924,925	-
Due from affiliate	7,949,257	5,087,492
Receivable for investments sold	103,089	85,229
Accounts receivable - state tax revenues	714,969	712,780
Accounts receivable leases	20,552	-
Miscellaneous receivables	725	725
Total	<u>\$137,527,190</u>	<u>\$130,129,155</u>
<u>Current Liabilities</u>		
Claims payable	\$ 168,300	\$ 265,951
Accounts payable	26,330	10,874
Payable for investments purchased	31,232	670,103
Deferred premiums on written options	128,816	155,683
Sub-Total	\$ 354,678	\$ 1,102,611
Reserve for Section 15 increase	0	**
Balance available for plan benefits	<u>137,172,512</u>	<u>129,026,544</u>
Total	<u>\$137,527,190</u>	<u>\$130,129,155</u>

\*Includes effect of a cumulative write-up of \$1,911,326 and a write-down of \$92,500 in 1978.

\*\*The present value of retirement benefits and the balance available for plan benefits is increased by \$1,911,326 to include the reserve for Section 15 increases.

Note: Assets were split between the basic and coordinated members. As of December 31, 1979, the balance for the basic members was \$137,098,147 and for the coordinated members was \$74,365.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONSUMMARY OF ACTUARIAL GAINS AND LOSSES AS OF DECEMBER 31, 1979

(a) Actual unfunded accrued liability as of December 31, 1978 for coordinated and basic members	\$175,055,100
(b) Normal cost as of December 31, 1978	9,245,123
(c) Interest at 5% on (a) and (b)	9,215,011
(d) Employee contribution during 1979	5,334,540
(e) Employer contribution during 1979	7,043,194
(f) Estimated interest on (d) and (e)	309,443
(g) Expected unfunded accrued liability as of December 31, 1979 (before the effect of a change in the cost-of-living provision for retirees and before splitting out the coordinated members) = (a)+(b)+(c)-(d)-(e)-(f)	\$180,828,057
(h) Actual unfunded accrued liability as of December 31, 1979 (before the effect of a change in the cost-of-living provision for retirees and before splitting out the coordinated members)	\$181,355,710
(i) Actuarial gain (loss) = (g)-(h)	\$ (527,653)
(j) Increase in accrued liability due to a change in the cost-of-living provision for retired members	\$ 14,771,856
(k) Unfunded accrued liability of the coordinated members as of December 31, 1979	\$ 36,633
(l) Unfunded accrued liability as of December 31, 1979 = (h)+(j)-(k)	\$196,090,933

\*The amendment which provided annual cost-of-living increases to retired members after becoming age 65 took effect on July 1, 1976.

## EXHIBIT VII

## MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

COVERED EARNINGS OF ACTIVE PARTICIPANTS INCLUDED  
IN DECEMBER 31, 1979 VALUATION. DISTRIBUTION BY  
SEX AND SERVICE GROUPS\*

## ANNUAL EARNINGS BY SERVICE GROUPS

Service Group	Number of Participants	MALE		Number of Participants	FEMALE		Number of Participants	TOTAL	
		Total Annual Earnings	Average Annual Earnings		Total Annual Earnings	Average Annual Earnings		Total Annual Earnings	Average Annual Earnings
0	0	\$ 0	\$ 0	0	\$ 0	\$ 0	0	\$ 0	\$ 0
1	4	41,319	10,330	17	146,234	8,602	21	187,553	8,931
2	15	234,400	15,627	66	733,731	11,117	81	968,131	11,952
3	20	351,769	17,588	65	763,810	11,751	85	1,115,579	13,124
4	25	373,332	14,933	129	1,684,297	13,057	154	2,057,629	13,361
0 - 4	64	1,000,820	15,638	277	3,328,072	12,015	341	4,328,892	12,695
5 - 9	173	3,240,454	18,731	465	6,678,532	14,362	638	9,918,986	15,547
10 - 14	401	8,800,893	21,947	558	10,100,588	18,101	959	18,901,481	19,710
15 - 19	212	5,538,266	26,124	212	4,599,489	21,696	424	10,137,755	23,910
20 - 24	212	5,685,289	26,817	125	2,706,306	21,650	337	8,391,595	24,901
25 - 29	182	5,034,145	27,660	83	1,837,707	22,141	265	6,871,852	25,932
30 - 34	8	224,684	28,086	28	663,935	23,712	36	888,619	24,684
35 - 39	0	0	0	1	22,260	22,260	1	22,260	22,260
40 +	0	0	0	1	27,538	27,538	1	27,538	27,538
Total	1,252	\$29,524,551	\$23,582	1,750	\$29,964,427	\$17,123	3,002	\$59,488,978	\$19,816

\*Excludes 127 participants with estimated total annual earnings of \$1,143,000, included in the valuation, but for whom data was incomplete, and 74 actives valued in the inactive category.

## MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

COVERED EARNINGS OF ACTIVE PARTICIPANTS INCLUDED  
IN DECEMBER 31, 1979 VALUATION. DISTRIBUTION BY  
SEX AND AGE GROUPS\*

## ANNUAL EARNINGS BY AGE GROUPS

Group	MALE			FEMALE			TOTAL		
	Number of Participants	Total Annual Earnings	Average Annual Earnings	Number of Participants	Total Annual Earnings	Average Annual Earnings	Number of Participants	Total Annual Earnings	Average Annual Earnings
0 - 19	0	\$ 0	\$ 0	0	\$ 0	\$ 0	0	\$ 0	\$ 0
20 - 24	0	0	0	11	91,559	8,324	11	91,559	8,324
25 - 29	20	283,859	14,193	118	1,344,653	11,395	138	1,628,512	11,801
30 - 34	169	2,884,486	17,068	406	5,531,386	13,624	575	8,415,872	14,636
35 - 39	233	4,878,859	20,939	311	5,258,253	16,908	544	10,137,112	18,634
40 - 44	200	4,939,005	24,695	204	3,733,798	18,303	404	8,672,803	21,467
45 - 49	213	5,647,475	26,514	208	4,054,937	19,495	421	9,702,412	23,046
50 - 54	213	5,610,956	26,343	193	3,829,030	19,840	406	9,439,986	23,251
55 - 59	160	4,200,222	26,251	174	3,545,912	20,379	334	7,746,134	23,192
60 - 64	39	948,266	24,315	112	2,330,316	20,806	151	3,278,582	21,712
65 - 69	4	109,423	27,356	13	244,583	18,814	17	354,006	20,824
70 - 74	1	22,000	22,000	0	0	0	1	22,000	22,000
75 - 79	0	0	0	0	0	0	0	0	0
80 - 84	0	0	0	0	0	0	0	0	0
85 +	0	0	0	0	0	0	0	0	0
Total	1,252	\$29,524,551	\$23,582	1,750	\$29,964,427	\$17,123	3,002	\$59,488,978	\$ 19,816

\*Excludes 127 participants with estimated total annual earnings of \$1,143,000, included in the valuation, but for whom data was incomplete.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONCOMPARISON OF INCREASES IN AVERAGE SALARY

<u>All Active Teachers</u>			<u>New Annuitants</u>		
<u>Year</u>	<u>Average Salary</u>	<u>% Increase</u>	<u>Year</u>	<u>Average Salary</u>	<u>% Increase</u>
1979	\$19,816	4.3%	1979	\$21,974	8.9%
1978	18,997	7.6%	1978	20,183	6.3%
1977	17,661	15.0%	1977	18,987	8.7%
1976	15,361	5.3%	1976	17,460	5.9%
1975	14,590	7.2%	1975	16,491	6.0%
1974	13,612	11.6%	1974	15,563	13.0%
1973	12,193	1.1%	1973	13,773	5.6%
1972	12,064	13.0%	1972	13,044	10.8%
1971	10,674	8.9%	1971	11,776	10.6%
1970	9,799	-	1970	10,643	5.0%
			1969	10,136	6.2%
			1968	9,544	4.8%
			1967	9,106	6.5%
			1966	8,552	3.0%
			1965	8,302	

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONCOMPARISON OF AVERAGE AGES AT ENTRY

<u>Year</u>	<u>Average*</u> <u>Employment Age</u> <u>for</u> <u>New Entrants</u>
1979**	32.5
1978	32.5
1977	30.1
1976	29.8
1975	30.1
1974	30.6
1973	29.4
1972	27.8
1971	27.1
1970	26.9
1969	27.0
1968	28.2
1967	30.9
1966	28.6
1965	27.8

\*Arithmetic mean.

\*\*Includes coordinated members.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONCOMPARISON OF AVERAGE AGES AT RETIREMENT

<u>Year</u>	<u>Average Age* at Retirement</u>
1979	59.99
1978	62.20
1977	61.66
1976	63.36
1975	62.85
1974	64.41
1973	64.14
1972	64.69
1971	63.86
1970	64.38
1969	63.33
1968	64.77
1967	63.84
1966	64.28
1965	64.35

\*Arithmetic mean.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONSUMMARY OF ACTIVE MEMBERSHIP AND ANNUITANTSACTIVE MEMBERS

	<u>Number</u>	<u>Annual Covered Payroll</u>
As of December 31, 1978	3,361	\$63,847,263
New entrants, status changes, and other adjustments	(116)*	(1,768,571)**
Salary increases	-	2,458,638**
Withdrawals from service	(135)	(2,675,160)**
Retirements (including deceased eligible for death benefits)	<u>(108)</u>	<u>(2,373,192)**</u>
As of December 31, 1979	<u>3,002***</u>	<u>\$59,488,978***</u>

ANNUITANTS

	<u>Number</u>	<u>Annual Amount</u>
As of December 31, 1978	2,165	\$10,596,026
New entrants	108	1,073,502
Terminations	(15)	(63,845)
Deaths	(57)	(233,764)
Net of other increases	<u>0</u>	<u>110,918**</u>
As of December 31, 1979	<u>2,201</u>	<u>\$11,482,837</u>

\*The reason this number is negative is that there were fewer new entrants than active participants who became inactive during the year.

\*\*Approximate figures.

\*\*\*Excludes 127 participants with estimated total annual earnings of \$1,143,000, included in the valuation, but for whom data was incomplete, and 74 actives valued in the inactive category.



MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONAPPROXIMATE BREAKDOWN OF THE CHANGE IN UNFUNDED  
ACCURED LIABILITY AS OF DECEMBER 31, 1979

1. Actual unfunded accrued liability as of December 31, 1979	\$196,090,933
2. Actual unfunded accrued liability as of December 31, 1978	\$175,055,102
3. Increase in actual unfunded accrued liability = (1)-(2)	<u>\$ 21,035,831</u>

Sources of Increase and(Decrease)

Amortization of unfunded accrued liability		\$ 5,772,957
Change in cost-of-living provision for retired members		\$ 14,771,856
Unfunded accrued liability of coordinated members as of December 31, 1979		\$ (36,633)
Experience gains and losses		
Interest - excluding capital gains	\$(3,172,793)	
Realized capital gains	(1,091,847)	
Salary change experience	1,495,625	
Turnover experience	2,423,140	
Retirement experience	1,092,808	
Mortality experience	(186,173)	
Disability experience	10,747	
New entrants	108,148	
Other - unallocated	<u>(152,004)</u>	<u>\$ 527,651</u>
Total		<u>\$ 21,035,831</u>

\*The portion of the 1979 contribution applied to amortize the unfunded accrued liability is \$(5,772,957). This is derived from Exhibit VI as the excess of item (a) over item (g) therein.

PART III.

SUMMARY OF THE PRINCIPAL PROVISIONS  
OF THE PLAN

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

SUMMARY OF THE PRINCIPAL PROVISIONS OF THE PLAN

- I. ELIGIBILITY--Any teacher employed by the Board of Education of the City of Minneapolis shall be eligible for membership in the Association.
- II. STATE CONTRIBUTIONS--The State shall contribute to the Association an employer contribution equal to the amount, expressed as a percent of payroll, that the State is required to pay for all contributing members of the State Teachers Retirement Association. Of the amount so contributed by the State, an amount equal to  $6\frac{1}{2}\%$  of compensation shall be deposited in the Retirement Deposit Fund on behalf of each basic member.
- III. MEMBER CONTRIBUTIONS ("REQUIRED DEPOSITS")--Each basic member shall deposit in the Retirement Deposit Fund  $8\frac{1}{2}\%$  of all compensation.
- IV. NORMAL RETIREMENT BENEFITS ("FORMULA ANNUITY")  
FOR BASIC MEMBERS--
  1. Eligibility--A member is eligible for the Formula Annuity if he has attained age 60 or has completed 30 years of teaching service regardless of age when he retires. Each member so eligible may elect to relinquish all other benefits from the required and City/State deposits and receive in lieu thereof the Formula Annuity.
  2. Annual Amount--The annual Formula Annuity benefit is 2.25% ( $1\frac{2}{3}\%$  for participants who cease to be employed on or before May 1, 1974) of average annual compensation received by the member during any 5 consecutive years of teaching service, multiplied by his years of teaching service (maximum 30 years).
  3. Normal Form of Payment--single life annuity. Specified optional forms are available.
- V. WITHDRAWAL BENEFIT FOR BASIC MEMBERS--
  - A. Benefit from Member Deposits--
    1. Eligibility--the member ceases to be employed in teaching in the public schools of Minneapolis.

2. Amount--The accumulation from the member's deposits may be withdrawn in a single sum or in installments. However, if the member is not entitled to receive an annuity from City/State deposits, the accumulation from the member's deposits shall be returned. Alternatively, that accumulation may be applied by the member at rates published by the Board to purchase an annuity. The annuity shall commence according to the member's election.
3. Normal Form of payment--single life annuity. Optional annuity forms are available.

B. Benefit from City/State Deposits--

1. Eligibility--the member ceases to be employed in teaching in the public schools of Minneapolis.
2. Amount--The accumulation from City/State deposits may be applied by the member at rates published by the Board to purchase an annuity to commence not before age 50 provided that:
  - (a) if the member ceases teaching after the completion of 20 years of service and the attainment of age 55, or if the member attains the age of 62 at the commencement of the annuity payments, such benefit shall not be less than \$2.00 per month for each year of teaching service;
  - (b) if the member ceases teaching with less than 10 years of teaching service, all City/State deposits credited before he attained age 45 are cancelled; and
  - (c) if a member hired after July 1, 1967 ceases teaching with less than 7 years of teaching service, all City/State deposits accumulated after July 1, 1967 are cancelled.
3. Normal Form of Payment--single life annuity. Optional annuity forms are available.

- C. Additional Benefit--If an annuity is purchased for the member in accordance with either A or B above, or both, an additional annuity ("Subsection (9) annuity") equal to the lesser of \$1,800 or the aggregate annual annuity so purchased is also paid.
- D. A member who is vested in City/State deposits (see B above) and who terminates after May 1, 1974, prior to attainment of age 60, is entitled to elect to receive a formula annuity at age 60. In such event the member will be entitled to an additional annuity provided by:

- (a) the interest accumulated from date of termination to age 60 on the City/State and the member's deposits.
- (b) the rate published by the Board for the purchase of an additional annuity.

VI. DISABILITY BENEFITS FOR BASIC MEMBERS--

- 1. Eligibility--A member must be totally disabled (which is the presumably permanent inability of the member by reason of physical or mental disability to render further satisfactory service as a teacher) and have completed 3 years of teaching service to be eligible for a disability benefit.
- 2. Annual Amount--The total disability annuity is equal to the annuity which would become available to the member on the valuation date (the date 15 years after the commencement of total disability but not later than June 30 next following the attainment of age 65) under the provisions of Sections (2) and (3) of Article IX (see V above) from the accumulation of City/State and required deposits upon assumed compensation continuing at the rate last received by the member to the valuation date.
- 3. Additional Benefit (Subsection (9) Annuity)--An additional annuity equal to the lesser of \$1,800 or the annual benefit otherwise available is also paid.
- 4. Normal Form of Payment--A single life annuity, commencing after the Board has determined that the total disability exists, is paid during the continued existence of the disability.

VII. DEATH BENEFITS FOR BASIC MEMBERS--

- 1. General--A member may elect one of the three death benefits as described below. If no election is made, the "C" Death Benefit or, if there is no individual eligible to receive that benefit, the death benefit of greatest value shall be paid.
- 2. "A" Death Benefit--The full amount of the accumulation to the credit of the member in the Retirement Deposit Fund may be paid to a beneficiary in a lump sum, in installments or as an annuity. In the later case, an additional annuity (Subsection (9) Annuity), equal to the lesser of \$1,800 or the annual annuity so provided, is also paid.

3. "B" Death Benefit--

- (a) Eligibility--The "B" death benefit is available to a member who dies while in the teaching service, on leave of absence or who is entitled to deferred benefit and who leaves a dependent survivor.
- (b) Amount--The death benefit shall be computed as the annuity purchased by the "amount" defined below applied as a net single premium at the rates published by the Board.

The "amount" to be applied shall be determined as the actuarial equivalent of any annuity benefit, including a deferred annuity, which would have been available to the member if he resigned from teaching at the time of death.

- (c) Normal form of payment--Life annuity to dependent survivor.

4. "C" Death Benefit--

- (a) Eligibility--The "C" death benefit is available to a member who dies while in the teaching service of the City or on leave of absence and who leaves a beneficiary for whom benefits are provided.
- (b) Widow's Benefit--The dependent widow of the deceased member shall receive \$163.50 per month for each month during which she maintains a child who is under 18 and who is entitled to benefits as described below. The payments cease upon her death or remarriage or if she no longer maintains such a child, and payments are reduced if her earnings exceed \$1,680 for any 12 month period.
- (c) Child's Benefit--Each dependent child of the deceased member shall receive \$163.50 per month while he is under age 18 and \$163.50 per month while he is a full-time student between the ages of 18 and 22.
- (d) Maximum Benefit--The maximum total "C" Death Benefit paid to all beneficiaries is \$434.40 per month. Such maximum may be amended from time to time.

VIII. ANNUAL AUTOMATIC ANNUITY INCREASE--

- (a) Eligibility--Every member entitled to receive an annuity is entitled to an Annual Automatic Annuity Increase in his annuity. All beneficiaries (except "C" Death benefit beneficiaries) shall be entitled to the same Annual Automatic Annuity Increase as the member would have been entitled to receive if living and according to the age the member would have attained if living.

- (b) Amount--The amount of the Annual Automatic Annuity Increase in any year shall be equal to  $1\frac{1}{2}\%$  of the benefit the member was receiving as of the end of the preceding year, which increase shall first become payable on the July 1 of the calendar year in which the member becomes 65. If a member is entitled to a Total Disability Annuity, the Annual Automatic Annuity Increase of  $1\frac{1}{2}\%$  shall commence upon the earlier of attainment of age 60 or 9 years after the member becomes entitled to such annuity.