

4239489

6/06/55

P. M. M. & CO.

1684

① MINNEAPOLIS TEACHERS RETIREMENT
FUND ASSOCIATION

② * Final Report of Actuarial Valuation
as of December 31, 1974

③ 1975

④ 2 Sp.

LEGISLATIVE REFERENCE LIBRARY
STATE OF MINNESOTA

OFFICE OF SENATE RESEARCH
STATE CAPITOL
ST. PAUL, MINN. 55155

RECEIVED

JUN 4 1975

SECRETARY OF
THE SENATE

retirement - public employees

PEAT, MARWICK, MITCHELL & CO.

CERTIFIED PUBLIC ACCOUNTANTS

222 SOUTH RIVERSIDE PLAZA

CHICAGO, ILLINOIS 60606

March 28, 1975

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, 1974. The valuation was performed on the basis 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, Section 356.21;
2. Summarize the actuarial status of the Fund;
3. Analyze the experience of the Fund.

Summary of Findings

The results of our valuation may be summarized as follows:

1. Contribution levels have been computed under 5% interest and $3\frac{1}{2}\%$ salary increase assumptions, as required by statute.
2. The employer's normal cost for the year is 5.57% of payroll.
3. The necessary contribution to meet normal cost, and prevent the unfunded accrued liability (deficit) from increasing is 12.29% of payroll, a very slight increase from the December 31, 1973 valuation.
4. Assets of the Fund are in excess of the present value of benefits for current retirees.

P. M. M. & CO.

Board of Trustees
March 28, 1975
2

Based on the above mentioned data and information, our interpretation of plan provisions and our 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.

* * * * *

We look forward to discussing our valuation in detail with you.

PEAT, MARWICK, MITCHELL & CO.

Norman E. Hill
Norman E. Hill, F.S.A.

CONTENTS

	<u>Page</u>
<u>PART I. VALUATION METHODS AND ASSUMPTIONS</u>	
Methods used in valuation	1
Summary of actuarial assumptions	3
Analysis of actuarial assumptions	4
Definitions of terms	6
<u>PART II. VALUATION RESULTS AND ANALYSIS</u>	
Exhibit I - Summary of costs	7
Exhibit II - Summary of contribution levels for two years	8
Exhibit III - Comparison of contributions with total income from governmental units	9
Exhibit IV - Summary of annuities in force on December 31, 1974	10
Exhibit V - Assets and current liabilities as of December 31, 1974	11
Exhibit VI - Summary of actuarial gains and losses and their sources	12
Exhibit VII - Annual earnings by years of service	13
Exhibit VIII - Annual earnings by attained age	14
Exhibit IX - Comparison of increases in salaries	15
Exhibit X - Comparison of average ages at entry	16
Exhibit XI - Comparison of average ages at retirement	17
Exhibit XII - Summary of active membership and annuitants	18
<u>PART III. SUMMARY OF THE PRINCIPAL PROVISIONS OF THE PLAN</u>	19

P. M. M. & CO.

PART I.

VALUATION METHODS AND ASSUMPTIONS

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, 1974 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 according to a special modification of the 1951 Group Annuity Table - Males projected for mortality improvement to 1970 for males. The mortality rates for females are equal to those for males five years younger.

DEFERRED ANNUITANTS

Summaries were prepared by the Association for all deferred annuitants by attained age, showing for each the years of service and accumulated deposits. It was assumed that future benefits would be the amount purchased by 200% of members' deposits, plus a life annuity starting at age 64 equal to the greater of:

1. \$4 per month per year of service; or
2. 200% of the accumulated City deposits.

ACCRUED LIABILITY--ACTIVE TEACHERS

The Entry Age Normal cost method was used in the valuation. After summarizing employer Normal Cost based on teachers' entry ages, this cost was expressed as a percentage of payroll. The Accrued Liability for active teachers is the accrued value of all prior Normal Costs from each teacher's entry date to December 31, 1974 calculated under the actuarial assumptions summarized herein.

For purposes of this survey, it was assumed that all retirements take place at age 64 under the formula plan. The plan provides a life annuity of $1\frac{2}{3}\%$ of the highest consecutive 5-year average salary, times years of teaching service.

In the event of termination prior to age 64, it was assumed that the available benefit would be based on the accumulated member and City deposits.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

SUMMARY OF ACTUARIAL ASSUMPTIONS

December 31, 1974

Interest

5%

Turnover

2/3 of the 1970 experience, graduated for smoothness:

Attained
Age

Turnover
Rate

20

.200

30

.133

40

.028

50

.017

60

.002

Retirement Age

64 or attained age plus one, if later

Salary Scale--

Annual Increase

3½%

(

Mortality

A modification of the 1951 Group Annuity Table projected for mortality improvement to 1970 with a 5 year age setback for females

Valuation Assets

Cost plus a net write-down of \$1,754,588

ANALYSIS OF ACTUARIAL ASSUMPTIONS

Shown below is the description of the basis for each principal assumption summarized on the previous page. Gains and losses from various actuarial assumptions are summarized in Exhibit VI.

INTEREST

In 1974, the Fund's earnings rates were as follows:

1. Excluding realized and unrealized capital gains and losses: 4.954%
2. Including realized capital gains and losses: 5.294%

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

1. Excluding realized and unrealized capital gains and losses: 4.846%
2. Including realized capital gains and losses: 5.025%

RETIREMENT AGE

Over the last several years, the average retirement age has been about 64. As a result of this experience, costs were calculated with an assumed retirement age of 64.

TURNOVER

Rates were used corresponding to 2/3 of the turnover rates experienced by the Fund in 1970 since during 1974, actual turnover rates were again approximately 1/3 lower than the 1970 rates.

UNREALIZED APPRECIATION

Cost less a write-down of \$1,754,588 was used for purposes of the actuarial valuation.

Over the last six years, unrealized appreciation on stocks has decreased from \$15,750,295 on December 31, 1968 to -\$6,015,137 on December 31, 1974. However, based on 1975 experience subsequent to the date of this report, total market value is again in excess of cost.

SALARY SCALE

A 3½% annual salary scale assumption was used. At the end of 1974, the overall average salary was \$13,612 compared to \$12,195 at the end of 1973 representing an 11.6% increase. However, the average salary at the end of 1973 was only 1.1% greater than the average salary at the end of 1972.

MORTALITY

A special modification of the 1951 Group Annuity Table with a projection for mortality improvement to 1970 was used. For female lives, a 5-year age setback was assumed due to lighter female mortality.

The purpose of the special modification is to account for teacher mortality which is lighter than the population as a whole.

PART II.

VALUATION RESULTS AND ANALYSIS

DEFINITIONS OF TERMS

NORMAL COST

Level cost expressed as percentage of payroll to provide for all benefits, 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.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONSUMMARY OF COSTS

	5% Interest and 2/3 of 1970 Turnover	
	<u>Normal Cost</u>	<u>Accrued Liability</u>
1. Active Members		
Retirement benefits	\$4,109,588	\$ 92,499,742
Disability benefits	438,999	0
Refunds due to death or withdrawal	1,925,625	0
2. Deferred Annuitants and Former Members Without Vested Rights	0	2,013,567
3. Annuitants	<u>0</u>	<u>68,435,309</u>
4. Total	\$6,474,212	\$162,948,618
5. Member deposits	<u>3,487,739</u>	
6. Employer normal cost	\$2,986,473	
7. Valuation assets		<u>\$ 92,928,061</u>
8. Unfunded accrued liability		<u>\$ 70,020,557</u>
Total payroll		<u>\$ 53,657,529</u>

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONSUMMARY OF CONTRIBUTION LEVELS FOR TWO YEARS

	<u>December 31, 1973</u>	<u>December 31, 1974</u>
Employer normal cost	\$ 2,819,672	\$ 2,986,473
Percentage of payroll	5.55%	5.57%
Unfunded accrued liability	65,470,335	70,020,557
Employer contribution to meet normal cost and amortize unfunded accrued liability by December 31, 1997	7,243,764	7,819,292
Percentage of payroll	14.26%	14.57%
Employer contribution to meet normal cost and prevent unfunded accrued liability from increasing	6,093,189	6,596,618
Percentage of payroll	12.00%	12.29%
Administrative expense	244,555	263,877
Percentage of payroll	.48%	.49%
Employer contribution to meet normal cost and administrative expense and amortize unfunded accrued liability by December 31, 1997	7,488,319	8,083,169
Percentage of payroll	14.74%	15.06%
Employer contribution to meet normal cost and administrative expense and prevent unfunded accrued liability from increasing	6,337,744	6,860,495
Percentage of payroll	12.48%	12.78%

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION
COMPARISON OF CONTRIBUTIONS WITH TOTAL INCOME FROM
GOVERNMENTAL UNITS

Employer contribution to meet normal cost and administrative expense and prevent unfunded accrued liability from increasing	\$6,860,495
Percentage of payroll	<u>12.78%</u>
Contributions to Fund other than employee contributions:	
City contributions--approximately 6½% of payroll	\$3,655,947
Required tax revenue, net of \$546,431 applied to certain retirement benefit increases under Section 8, 9, and 14 granted after retirement	<u>\$5,036,998</u>
Total contribution	<u>\$8,692,945</u>
Percentage of payroll	<u>16.20%</u>

EXHIBIT IVMINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONSUMMARY OF ANNUITIES IN FORCE ON DECEMBER 31, 1974

Option	Annuity Plan	Number of Annuitants	Annuity Reserve Fund		Contingent Reserve Fund		Total	
			Annual Amount	Reserve	Annual Amount	Reserve	Annual Amount	Reserve
1	Life	1,216	\$1,314,239	\$10,822,067	\$2,938,898	\$24,200,280	\$4,253,137	\$35,022,347
2	Life, 15 year guarantee	454	538,554	5,867,583	1,022,265	11,137,648	1,560,819	17,005,231
3	Survivorship (50%)	69	116,145	1,126,943	255,776	2,481,768	371,921	3,608,711
4	Annuities Certain	75	86,693	717,537	185,785	1,537,696	272,478	2,255,233
5	Life, 3 year guarantee	126	193,003	2,252,045	317,152	3,700,671	510,155	5,952,716
6	Survivorship (75%)	22	43,617	532,213	99,213	1,210,593	142,830	1,742,806
7	Survivorship (100%)	24	35,376	488,378	70,247	969,785	105,623	1,458,163
8	Death Benefit	14	15,311	230,485	58,798	885,120	74,109	1,115,605
9	Disability	40	33,579	441,655	152,125	2,000,858	185,704	2,442,513
Totals		2,040	\$2,376,517	\$22,478,906	\$5,100,259	\$48,124,419	\$7,476,776	\$70,603,325
less Section 8, 9 and 14 increases					546,431	5,159,691	546,431	5,159,691
plus future Section 14 "1½%" increases						4,942,233		4,942,233
less Section 15 increases					206,571*	1,950,558	206,571*	1,950,558
Grand Total		2,040	\$2,376,517	\$22,478,906	\$4,347,257	\$45,956,403	\$6,723,774	\$68,435,309

*Approximate figure

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONASSETS AND CURRENT LIABILITIES AS OF DECEMBER 31, 1974ASSETS (COST BASIS)

Cash	\$ 1,025,505
Accrued employer contributions	4,859,046
Stock dividends receivable	201,061
Accrued interest on investments	748,638
Bonds, mortgages and equities (including real estate)	93,323,002 *
Due from affiliate	648,492
Miscellaneous receivables	150,769
Deposits	<u>425</u>
Total	\$100,956,938

CURRENT LIABILITIES

Claims payable	\$ 36,792
Accounts payable	9,085
Deferred credits	<u>6,071,674</u>
Sub-total	\$ 6,117,551
Reserve for Section 15 increases	1,911,326
Balance available for future funding	<u>92,928,061</u>
Total	\$100,956,938

*Includes effect of asset write-down of \$3,665,914 along with a cumulative write-up of \$1,911,326.

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONSUMMARY OF ACTUARIAL GAINS AND LOSSES AND THEIR SOURCES

Actual unfunded accrued liability	\$70,020,557
Expected unfunded accrued liability	<u>62,781,506</u>
Actuarial (loss) or gain	<u><u>\$(7,239,051)</u></u>

SOURCES OF GAIN AND (LOSS)

Interest - excluding realized and unrealized capital gains and losses	\$ 366,228
Realized capital gains	318,417
Salary	(6,724,963)
Turnover	3,310,513
Mortality	(515,329)
New entrants	(99,753)
Book asset write-down	(3,665,714)
Other	<u>(228,250)</u>
	<u><u>\$(7,239,051)</u></u>

EXHIBIT VIIMINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONANNUAL EARNINGS BY YEARS OF SERVICE

Service Group	MALE			FEMALE			TOTAL		
	Number of People	Total Annual Earnings	Average Annual Earnings	Number of People	Total Annual Earnings	Average Annual Earnings	Number of People	Total Annual Earnings	Average Annual Earnings
0	73	\$ 363,605	\$ 4,981	199	\$ 827,247	\$ 4,157	272	\$ 1,190,852	\$ 4,378
1	52	560,011	10,769	137	1,196,807	8,736	189	1,756,818	9,295
2	55	629,544	11,446	152	1,385,030	9,112	207	2,014,574	9,732
3	78	875,213	11,221	179	1,761,807	9,842	257	2,637,020	10,261
4	77	963,660	12,515	197	1,956,447	9,931	274	2,920,107	10,657
0 - 4	335	3,392,033	10,125	864	7,127,338	8,249	1,199	10,519,371	8,773
5 - 9	472	7,126,491	15,098	727	8,102,056	11,145	1,199	15,228,547	12,701
10 - 14	230	4,377,947	19,035	294	4,286,423	14,580	524	8,664,370	16,535
15 - 19	240	4,998,090	20,825	233	3,548,256	15,229	473	8,546,346	18,068
20 - 24	215	4,681,752	21,776	143	2,414,170	16,882	358	7,095,922	19,821
25 - 29	71	1,478,680	20,826	87	1,574,021	18,092	158	3,052,701	19,321
30 - 34	7	152,070	21,724	11	184,999	16,818	18	337,069	18,726
35 - 39	4	86,342	21,586	7	100,338	14,334	11	186,680	16,971
40 +	0	0	0	2	26,523	13,262	2	26,523	13,262
Total	1,574	\$26,293,405	\$16,705	2,368	\$27,364,124	\$11,556	3,942	\$53,657,529	\$13,612

EXHIBIT VIIIMINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONANNUAL EARNINGS BY ATTAINED AGE

Age Group	MALE			FEMALE			TOTAL		
	Number of People	Total Annual Earnings	Average Annual Earnings	Number of People	Total Annual Earnings	Average Annual Earnings	Number of People	Total Annual Earnings	Average Annual Earnings
0-19	0	\$ 0	\$ 0	0	\$ 0	\$ 0	0	\$ 0	\$ 0
20-24	21	138,916	6,615	79	413,313	5,232	100	552,229	5,522
25-29	230	2,222,025	9,661	600	5,144,181	8,574	830	7,366,206	8,875
30-34	269	3,498,069	13,004	397	3,928,709	9,896	666	7,426,778	11,151
35-39	221	3,753,931	16,986	228	2,633,934	11,552	449	6,387,865	14,227
40-44	236	4,630,841	19,622	201	2,562,158	12,747	437	7,192,999	16,460
45-49	229	4,606,972	20,118	230	3,146,947	13,682	459	7,753,919	16,893
50-54	205	4,252,074	20,742	204	3,101,193	15,202	409	7,353,267	17,979
55-59	97	1,925,456	19,850	194	2,929,872	15,102	291	4,855,328	16,685
60-64	47	954,087	20,300	170	2,657,943	15,635	217	3,612,030	16,645
65-69	18	308,509	17,139	64	825,999	12,906	82	1,134,508	13,835
70-74	1	2,525	2,525	0	0	0	1	2,525	2,525
75-79	0	0	0	0	0	0	0	0	0
80-84	0	0	0	1	19,875	19,875	1	19,875	19,875
85 +	0	0	0	0	0	0	0	0	0
Total	1,574	\$26,293,405	\$16,705	2,368	\$27,364,124	\$11,556	3,942	\$53,657,529	\$13,612

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONCOMPARISON OF INCREASES IN SALARIES

<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>
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	9.6%

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONCOMPARISON OF AVERAGE AGES AT ENTRY

<u>Year</u>	<u>Average Employment Age for New Entrants</u>
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

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATION

COMPARISON OF AVERAGE AGES AT RETIREMENT

<u>Year</u>	<u>Average Age at Retirement</u>
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

MINNEAPOLIS TEACHERS RETIREMENT FUND ASSOCIATIONSUMMARY OF ACTIVE MEMBERSHIP AND ANNUITANTSACTIVE MEMBERS

	<u>Number</u>	<u>Annual Covered Payroll</u>
As of December 31, 1973	4,166	\$ 50,797,397
New entrants and other adjustments	207	3,331,182*
Salary increases		5,297,270*
Withdrawals from service	353	4,554,406*
Retirements (including deceased eligible for death benefits)	<u>78</u>	<u>1,213,914*</u>
As of December 31, 1974	<u>3,942</u>	<u>\$ 53,657,529</u>

ANNUITANTS

	<u>Number</u>	<u>Annual Amount</u>
As of December 31, 1973	2,014	\$ 7,173,201
New entrants	108	520,794
Terminations	19	68,171
Deaths	63	209,969
Net of other increases	<u>0</u>	<u>60,921</u>
As of December 31, 1974	<u>2,040</u>	<u>\$ 7,476,776</u>

*Approximate figures.

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. CITY CONTRIBUTIONS--The City shall deposit in the Retirement Deposit Fund on behalf of each member $6\frac{1}{2}\%$ of the compensation the member receives for service as a teacher.
- III. MEMBER CONTRIBUTIONS-("REQUIRED DEPOSITS")--Each member shall deposit in the Retirement Deposit Fund $6\frac{1}{2}\%$ of all compensation he receives for service as a teacher.
- IV. NORMAL RETIREMENT BENEFIT ("FORMULA ANNUITY")--
 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 deposits and receive in lieu thereof the Formula Annuity.
 2. Annual Amount--The annual Formula Annuity benefit is $1-2/3\%$ of average annual compensation received by the member during any 5 consecutive years of teaching service, multiplied by his years of teaching service.
 3. Normal Form of Payment--single life annuity. Specified optional forms are available.
- V. WITHDRAWAL BENEFIT--
 - 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 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 Deposits--

1. Eligibility--the member ceases to be employed in teaching in the public schools of Minneapolis.

2. Amount--The accumulation from City 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, 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 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 deposits 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 (a) annuity") equal to the lesser of \$1,200 or the aggregate annual annuity so purchased is also paid.

VI. DISABILITY BENEFITS--

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 10 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 and required deposits upon assumed compensation continued 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 \$1,200 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--

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 \$1,200 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 has completed 20 years of teaching service at the time of death and who leaves a dependent survivor.
 - (b) Amount--
 - (i) If Eligible for the Formula Annuity at Time of Death--An annuity is paid in the amount which can be purchased by applying, as a net single premium at rates published by the Board, the present value of the Formula Annuity that would have become available if the member had retired on the date of death.
 - (ii) If Not Eligible for the Formula Annuity at Time of Death--An annuity is paid in the amount which can be purchased by applying, as a net single premium at rates published by the Board, the present value of the annuity that would have become available under Subsections (2) and (3) of Article IX (see V above) if the member had ceased teaching on the date of death.
 - (c) Normal Form of Payment--single 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 and who leaves a beneficiary for whom benefits are provided.
- (b) Widow's Benefit--The dependent widow of the deceased member shall receive \$248.30 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.
- (c) Child's Benefit--Each dependent child of the deceased member shall receive \$248.30 per month while he is under age 18 and \$248.30 per month while he is a full-time student between the ages 18 and 22.
- (d) Maximum Benefit--The maximum total "C" Death Benefit paid to all beneficiaries is \$579.30 per month.

VIII. ANNUAL AUTOMATIC ANNUITY INCREASE--

- (a) Eligibility--Every member entitled to receive an annuity is entitled to an Automatic Annual 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 72. 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.

IX. STOCK APPRECIATION FUNDED ANNUITY INCREASES--

- (a) Eligible Employees--All members who have been retired and receiving an annuity for at least two full calendar years and who have attained age 65 are eligible for the Stock Appreciation Fund Annuity Increases. All beneficiaries of deceased members (except "C" Death Benefit beneficiaries) shall receive the same increases the member would have been entitled to receive if living and according to the age the member would have attained if living.
- (b) Effective Date of Increases-- All increases in annuities shall commence as of July 1 of each year.

- (c) Amount of Increase--Each eligible member may (at the discretion of the Board) have his annuity increased by a percentage determined by dividing the total increase in book value which is in excess of the annual amount required to fund the Annual Automatic Annuity Increases granted during the year by the total reserve on annuities of all qualified members on the effective date.
- (d) Minimum Annuities--The annuity payment to any member will never be less than the amount originally determined on the date of retirement or January 1, 1972, if later. No annuity increase granted under the Annual Automatic Annuity Increase provision shall be reduced nor shall such increase be denied pursuant to this provision.
- (e) Increases Granted - A 3% increase was granted in 1972 and a 1% increase was granted in 1973.