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CITY OF PHILADELPHIA
MUNICIPAL RETIREMENT SYSTEM

ACTUARIAL VALUATION REPORT

AS OF

JULY 1, 1985

[MARCH 20, 1986]

JOHNSON & HIGGINS

OF WASHINGTON D.C., INC.

EDWARD H. FRIEND & COMPANY DIVISION

CONSULTING ACTUARIES • EMPLOYEE BENEFIT CONSULTANTS
CASUALTY RISK CONSULTANTS

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WASHINGTON, D.C. 20006

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Board of Pensions and Retirement
City of Philadelphia
1212 Two Penn Center Plaza
Philadelphia, Pennsylvania 19102

Ladies and Gentlemen:

We respectfully present the results of our actuarial valuation as of July 1, 1985 of the City of Philadelphia Municipal Retirement System.

The employee data and the financial information used in this report were provided by the City and the Board of Pensions and Retirement. The actuarial valuation report may be used to support contributions to the Retirement System for the fiscal year ending June 30, 1987.

The valuation reflects changes in funding that are required due to the Municipal Pension Plan Funding Standard and Recovery Act enacted December 18, 1984.

A summary of the determinations made in this actuarial valuation is as follows
(000 omitted in numbers shown):

Actuarial Accrued Liability as of July 1, 1985	\$2,807,575
Assets as of July 1, 1985 for Valuation Purposes	\$1,076,159
Unfunded Actuarial Accrued Liability as of July 1, 1985	\$1,731,416

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City Normal Cost as a Percent of Payroll for the
Year, Assuming Payment is Made at End of Year (Be-
fore Deduction of Contributions from Commonwealth
of Pennsylvania)

Municipal Division	7.033%
Police Division	9.716
Fire Division	<u>9.627</u>
All Divisions Combined	7.921%

The actuarial assumptions underlying these calculations represent, in the aggregate, the actuary's best estimate of anticipated future experience of the Retirement System.

The City's funding policy provides for (i) payment of the normal cost in accordance with the calculations made by the actuary plus (ii) level dollar payments toward amortization of the Bogen and Dombrowski unfunded actuarial accrued liabilities plus (iii) payments increasing 6.0% per annum toward the amortization of the remaining unfunded actuarial accrued liability. The period of amortization ends in the year 1992 for the Bogen liability, in the year 2009 for the Dombrowski liability and in the year 2019 for the remaining unfunded actuarial accrued liability. Accordingly, the total July 1, 1985 unfunded actuarial accrued liability will be fully amortized by June 30, 2019.

For the year ending June 30, 1987, this schedule provides for the following payments:

Annual Payment Toward
Unfunded Actuarial Accrued Liability
(000 Omitted)

Dombrowski Liability	\$ 3,813
Bogen Liability	5,034
Remaining Liability	<u>86,429</u>
Total Payment	\$95,276

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Board of Pensions and Retirement
March 20, 1986
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This report contains supporting data and background material pertinent to the determination of the normal cost and accrued liabilities of the Retirement System.

EDWARD H. FRIEND & COMPANY
A Division of Johnson & Higgins
of Washington, D.C., Inc.



Albert Pike, 3rd, F.C.A., A.S.A.
Vice President

AP:WRH:sdt
PCYA/VAL/86/3A


CITY OF PHILADELPHIA
MUNICIPAL RETIREMENT SYSTEM

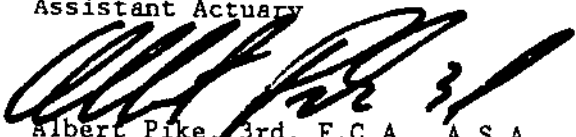
ACTUARIAL VALUATION REPORT


AS OF
JULY 1, 1985

Prepared by:

EDWARD H. FRIEND & COMPANY
A Division of Johnson & Higgins
of Washington, D.C., Inc.


Wendy R. Harrison
Assistant Actuary


Albert Pike, 3rd, F.C.A., A.S.A.
Vice President


Edward H. Friend, F.S.A., F.C.A.
Senior Vice President

March 20, 1986
Washington, D.C.

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PART I
SUMMARY AND ANALYSIS OF FINDINGS

This part presents a summary and analysis of the findings of the actuarial valuation as of July 1, 1985 of the City of Philadelphia Municipal Retirement System.

A. Summary of Findings

A summary of the findings of the actuarial valuation for the municipal division, police division and fire division combined is presented in the following table. The results, determined as of July 1, 1985, are the basis upon which the City contributions for the fiscal year ending June 30, 1987 will be calculated. The valuation reflects changes in the funding required by the Municipal Pension Plan Funding Standard and Recovery Act (Act 205) enacted December 18, 1984.

July 1, 1985 Actuarial Valuation
(\$000 Omitted)

1. Participants	
a. Active	32,517
b. Retired	19,476
c. Disabled	4,216
d. Terminated Vested	465
e. Total	56,674
2. Total Annual Salaries	\$ 788,053
3. Actuarial Accrued Liability	\$2,807,575
4. Assets for Valuation Purposes	\$1,076,159
5. Unfunded Actuarial Accrued Liability	\$1,731,416
6. City Normal Cost as a Percent of Payroll (Before Deduction of Contributions from Commonwealth)	
a. Assuming Beginning of Year Payment	7.267%
b. Assuming End of Year Payment	7.921%

Part II presents further detail with respect to these determinations. In addition, it includes a comparison between official funding policies with funding standards specified under generally accepted accounting principles (GAAP) and the estimated progress of the fund for the 20-year period of July 1, 1985 through June 30, 2005.

B. Analysis of Findings

A comparison of the current, July 1, 1985, valuation with the prior, July 1, 1984, valuation is as follows:

	<u>Valuation</u>		
	(\$000 Omitted)		
	<u>July 1, 1984</u>	<u>July 1, 1985</u>	<u>Change</u>
City Normal Cost Rate Assuming Payment at End of Year			
Municipal Division	7.836%	7.033%	-0.803%
Police Division	11.708	9.716	-1.992
Fire Division	<u>11.892</u>	<u>9.627</u>	<u>-2.265</u>
All Divisions Combined	9.144%	7.921%	-1.223%
July 1, 1985 Unfunded Actuarial Accrued Liability	\$1,612,212 ¹⁾	\$1,731,416	+119,204

¹⁾ Expected July 1, 1985 value based on July 1, 1984 valuation.

The above changes are the result of several factors -- actuarial experience during the year, change in the funding method as required by Act 205 and changes in the actuarial assumptions underlying the determination of plan costs.

Actuarial experience during the year was favorable in the aggregate. The primary source of gain was due to investment experience of 14.4% on an adjusted market value basis as compared to an assumed rate of 9%. Partially offsetting the investment gains were losses from salary increases in excess of the assumed rate of 6.0%.

A summary of the impact on the plan's normal cost and the unfunded actuarial accrued liability of these changes due to experience are summarized on the following table:

Results of July 1, 1985 Valuation Prior to Change
in Funding Method and Assumptions

	<u>Normal Cost Rate</u> (End of Year)	<u>Unfunded Actuarial Accrued Liability</u> (000 Omitted)
Expected July 1, 1985 Results Based on July 1, 1984 Valuation	9.144%	\$1,612,212
Impact of Non-Investment Actuarial Experience	+.316	+26,206
Impact of Investment Gains	--	<u>-50,720</u>
July 1, 1985 Valuation Results Prior to Changes	9.460%	\$1,587,698

In addition to the changes noted above, plan costs were impacted by a number of changes to the non-economic actuarial assumptions underlying plan costs. These changes stem from an actuarial experience study for the period July 1, 1980 through July 1, 1985. Also affecting plan costs was a change in the funding method from the projected unit credit actuarial cost method to the entry age actuarial cost method as required by Act 205. A summary of these changes and their impact on plan costs is as follows.

Active Member Mortality

The assumed rates of mortality for active members were decreased by approximately one-third for both males and females. A comparison of prior and current mortality rates at selected ages is as follows:

(Illustration on following page)

Rates of Mortality for Active Members

<u>Attained Age</u>	<u>Previous Assumptions Used in July 1, 1984 Actuarial Valuation</u>		<u>Assumptions Used in July 1, 1985 Actuarial Valuation</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
22	.000969	.000944	.000642	.000656
32	.001003	.000762	.000664	.000529
42	.002339	.001290	.001550	.000896
52	.006261	.003337	.004149	.002318
62	.015509	.008541	.010277	.005932

In addition, the assumed percentage of service-connected deaths for police and fire members was decreased from 20% to 10%.

Disability

For police and fire members, no changes were made in the assumed rates of disability. However, rates of disability for municipal members were decreased 25%. A comparison of prior and current rates at selected ages is as follows:

Disability Rates for Municipal Members

<u>Attained Age</u>	<u>Previous Assumptions Used in July 1, 1984 Actuarial Valuation</u>		<u>Assumptions Used in July 1, 1985 Actuarial Valuation</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
22	.000014	.000016	.000011	.000012
32	.000718	.000439	.000539	.000329
42	.004549	.002465	.003412	.001849
52	.017309	.012334	.012982	.009251
62	.020000	.015000	.015000	.011250

Separation from Service

The assumed rates of member terminations due to quit or discharge have been decreased 20% for municipal, police and fire members. A comparison of the prior and current rates at selected ages is as follows:

(Illustration on following page)

Turnover Rates for Municipal Members

<u>Attained Age</u>	<u>Previous Assumptions Used in July 1, 1984 Actuarial Valuation</u>		<u>Assumptions Used in July 1, 1985 Actuarial Valuation</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
22	.135787	.131071	.108630	.104857
32	.054667	.078654	.043734	.062923
42	.026080	.040687	.020864	.032550
52	.016694	.026407	.013355	.021126

Turnover Rates for Police and Fire Members

<u>Attained Age</u>	<u>Previous Assumptions Used in July 1, 1984 Actuarial Valuation</u>	<u>Assumptions Used in July 1, 1985 Actuarial Valuation</u>
22	.025825	.020660
32	.017215	.013772
42	.005915	.004732

Retirement Age

The rates of assumed retirement were changed for both the municipal and uniformed members. Generally, rates were increased at the age when the member first becomes eligible for retirement and were decreased at age 65 and later. A comparison of rates before and after the changes is as follows:

<u>Age</u>	<u>Previous Assumption Used in July 1, 1984 Actuarial Valuation</u>			<u>Assumption Used in July 1, 1985 Actuarial Valuation</u>		
	<u>Police and</u>		<u>Fire</u>	<u>Police and</u>		<u>Fire</u>
	<u>Municipal</u>	<u>Female</u>		<u>Municipal</u>	<u>Female</u>	
	<u>Male</u>			<u>Male</u>		
45	--	--	.120	--	--	.150
46	--	--	.075	--	--	.090
47	--	--	.100	--	--	.100
48	--	--	.105	--	--	.105
49	--	--	.115	--	--	.115
50	--	--	.115	--	--	.120
51	--	--	.125	--	--	.125
52	--	--	.145	--	--	.145
53	--	--	.150	--	--	.150
54	--	--	.170	--	--	.170

(Continued on following page)

Age	Previous Assumption Used in July 1, 1984 Actuarial Valuation			Assumption Used in July 1, 1985 Actuarial Valuation		
	Municipal		Police and Fire	Municipal		Police and Fire
	Male	Female		Male	Female	
55	.150	.130	.190	.175	.175	.180
56	.080	.070	.215	.090	.090	.200
57	.090	.085	.225	.090	.090	.225
58	.095	.095	.225	.090	.090	.225
59	.095	.110	.230	.090	.090	.225
60	.115	.125	.230	.115	.115	.230
61	.130	.135	.245	.115	.115	.230
62	.280	.320	.295	.300	.300	.300
63	.185	.190	.265	.180	.180	.300
64	.200	.195	.260	.180	.180	.300
65	.310	.305	1.000	.300	.300	.300
66	.235	.225	1.000	.225	.225	.300
67	.220	.200	1.000	.200	.200	.300
68	.220	.200	1.000	.200	.200	.300
69	.245	.220	1.000	.200	.200	.300
70+	1.000	1.000	1.000	1.000	.1000	1.000

Funding Method

As required under Act 205, the funding method was changed to the entry age actuarial cost method effective July 1, 1985. The Act also generally requires that the unfunded actuarial accrued liability be funded in annual level dollar payments. Because the City of Philadelphia has been classified as a Distress Level III municipality, it is exempted from this requirement and may amortize the July 1, 1985 unfunded actuarial accrued liability over 40 years ending 2019 with payments increasing 6.0% per annum.

The following table illustrates the impact of the changes in actuarial assumptions and funding methods outlined above:

(Illustration on following page)

Impact of Changes in Actuarial
Assumption and Funding Method

	<u>Normal Cost Rate</u>	<u>Unfunded Actuarial Accrued Liability</u> (\$000 Omitted)
1. Results of July 1, 1985 Valuation Prior to Changes	9.460%	\$1,587,698
2. Impact of Change in Funding Method	-1.809	+150,987
3. Impact of Changes in Actu- arial Assumption	<u>+0.270</u>	<u>- 7,269</u>
4. July 1, 1985 Valuation Results (After Changes)	7.921%	\$1,731,416

As mentioned previously, the results of this valuation determine the City's contribution requirements for the fiscal year ending June 30, 1987. Because of the one year delay in the recognition of the report's findings, the unfunded actuarial accrued liability is adjusted from July 1, 1985 to July 1, 1986 to recognize the one year delay and any significant benefit modifications adopted during that period. The unfunded actuarial accrued liability as adjusted is amortized over the 40-year period ending June 30, 2019 assuming payments (net of the Bogen and Dombrowski class action obligations) increase annually based on the assumed annual increase in aggregate payroll.

The following table summarizes the derivation of the anticipated July 1, 1986 unfunded actuarial accrued liability and the corresponding payment for the fiscal year ending June 30, 1987 (000 omitted):

(Illustration on following page)

	<u>Unfunded Actuarial Accrued Liability</u>	<u>June 30, 1987 Annual Payment</u>
1. Amount Per Schedule Established in July 1, 1984 Actuarial Valuation	\$1,672,594	\$89,270
2. Decrease Due to Investment Gains	- 50,720	-2,528
3. Increase Due to Non-Investment Actuarial Experience	+ 26,206	+1,306
4. Increase Due to Change in Funding Method	+150,987	+7,525
5. Decrease Due to Change in Actuar- ial Assumptions	- 7,269	- 362
6. Increase Due to One-Year Delay in Recognition of Changes	<u>+ 1,304</u>	<u>+ 65</u>
7. Total: Sum of (1) Through (6)	\$1,793,102	\$95,276 ^{1J}

^{1J} Subsequent annual payments, excluding the Bogen and Dombrowski payments, will increase 6.0% per annum.

The above table assumes that the City will fund the Retirement System based on Distress Level III of Act 205. If the City does not adopt the distress level funding, the unfunded actuarial accrued liability must be funded over 40 years ending June 30, 2016 in level dollar payments. In this case, the amortization payment as of June 30, 1987 will increase from \$95,276,000 to \$177,627,000.

C. Other Report Sections

Part III presents various supporting tables including an employee age/service "scatter" along with salaries by age groupings and by service groupings. In addition, tables showing current pension amounts by age are presented.

Part IV summarizes certain financial information, including a statement of assets and a statement of receipts and disbursements for the fiscal year ending June 30, 1985.

Part V presents the salient features of the Retirement System on which valuation determinations are based, and Part VI presents the actuarial cost method, factors and assumptions used in determining costs.

Part VII of the report presents the actuarial present value of accrued benefits determined in accordance with Statement No. 35 of the Financial Accounting Standards Board. This Part reflects a measurement of the accrued benefits for the Retirement System as of July 1, 1985 and relates the value of these accrued benefits to the market value of funds on hand.

It is important to note that the liability for the accrued benefits of the Retirement System shown in Part VII is different from the entry age liability. The former is the amount that would need to be on hand if the plan were to disregard future pay increases. The latter is the amount that would be on hand if a continuation of the plan is intended had the plan always been funded under the entry age method and had actuarial experience exactly followed the current actuarial assumptions.

The determination of accrued benefits reflects all benefits earned by members as of July 1, 1985 and is developed on the basis of a 9% annual investment return assumption (reflective of market value interest rates as of July 1, 1985).

Reference to the first section of Part VII will show the actuarial present value of accrued benefits to be \$2,321,869,000. The vested accrued liability as of July 1, 1985 is \$2,180,919,000. This compares with the market value of fund assets of \$1,091,382,000.

PART II
DERIVATION OF COSTS

The purpose of this part is to present the costs of the Retirement System. Cost estimates have been determined on the basis of the entry age actuarial cost method. The cost estimates derived in this July 1, 1985 actuarial valuation will be used as the basis for pension costs for the fiscal year ending June 30, 1987. Pension costs are made up of two components, the normal cost and the payment towards the unfunded actuarial accrued liability.

Derivation of Normal Cost

The normal cost is determined as the sum of the individual normal costs determined for each member based on the assumption that the plan had always been in existence and the actuarial assumptions underlying the cost determinations had been exactly realized. Benefits payable under all circumstances (i.e., retirement, death, disability and termination) are included in the calculations. From this result is subtracted the anticipated employee contributions to be made during the year to determine the City normal cost (before deducting contributions from the Commonwealth of Pennsylvania). The City normal cost is divided by total payroll to determine the normal cost as a percent of pay for each division and the entire System.

Derivation of the Unfunded Actuarial Accrued Liability

The actuarial accrued liability is determined as the sum of the actuarial present value of all normal costs which would have accumulated if the assumed normal cost had always been contributed in the past and the actuarial assumptions had been exactly realized.

The valuation assets which are compared to liabilities are determined at adjusted market value as of July 1, 1985. As such, the fixed income portion of

the assets reflects current market value rates of return. The liabilities, on the other hand, have been determined assuming the valuation interest rate assumption of 9%. In order that both assets and liabilities be valued on the same basis, the portion of the fixed income portfolio which can be matched with expected future payments is determined based upon the valuation interest rate, 9%, and the difference between this value of assets and the market value of assets is subtracted from the accrued liability.

From the accrued liability is further subtracted the assets of the fund to determine the unfunded actuarial accrued liability as of the valuation date.

Experience gains and losses are determined as the difference between the expected unfunded actuarial accrued liability and the actual unfunded actuarial accrued liability (as determined in the preceding paragraphs) both calculated as of the valuation date.

The portion of the unfunded actuarial accrued liability attributable to the Dombrowski class action suit is amortized in level dollar payments over 40 years ending June 30, 2009. The portion of the unfunded actuarial accrued liability attributable to the Bogen class action suit is amortized in level dollar payments over 20 years ending June 30, 1992. The remaining unfunded actuarial accrued liability as of July 1, 1985 is amortized over 40 years ending June 30, 2019 in annual payments increasing 6.0% per annum.

A detailed analysis of the derivation of plan costs is presented in the following Tables 1 through 4.

TABLE 1
DERIVATION OF NORMAL COST AS OF JULY 1, 1985
(\$000 Omitted)

	<u>Municipal</u>	<u>Police</u>	<u>Fire</u>	<u>Total</u>
1. Number of Active Members	22,658	7,195	2,664	32,517
2. Total Normal Cost				
a. Service Retirement	\$ 34,956	\$ 20,803	\$ 7,704	\$ 63,463
b. Pre-Retirement Death	3,018	936	351	4,305
c. Disability Retirement	6,896	5,356	1,988	14,240
d. Vested Termination	5,243	558	218	6,019
e. Refund of Non-Vested Members' Contributions	1,999	435	170	2,604
f. Administrative Expenses	<u>1,315</u>	<u>491</u>	<u>194</u>	<u>2,000</u>
g. Total	\$ 53,427	\$ 28,579	\$ 10,625	\$ 92,631
3. Expected Employee Contributions	\$ 19,568	\$ 11,495	\$ 4,298	\$ 35,361
4. City Normal Cost: (2g) - (3)	\$ 33,859	\$ 17,084	\$ 6,327	\$ 57,270
5. Current Total Annual Payroll	\$524,760	\$191,652	\$71,641	\$788,053
6. City Normal Cost as a Percent of Pay Assuming Payment at Beginning of Year: (4) ÷ (5)	6.452%	8.914%	8.832%	7.267%
7. City Normal Cost as a Percent of Pay Assuming Payment at End of Year: (6) x 1.09	7.033%	9.716%	9.627%	7.921%

TABLE 2

DERIVATION OF UNFUNDED ACTUARIAL
ACCRUED LIABILITY AS OF JULY 1, 1985
(\$000 Omitted)

	<u>MUNICIPAL</u>	<u>POLICE</u>	<u>FIRE</u>	<u>TOTAL</u>
1. Number of Members				
a. Active	22,658	7,195	2,664	32,517
b. Retired	12,318	4,779	2,379	19,476
c. Disabled	1,936	1,835	445	4,216
d. Terminated Vested	357	93	15	465
e. Total	<u>37,269</u>	<u>13,902</u>	<u>5,503</u>	<u>56,674</u>
2. Total Annual Benefits				
a. Retired	\$ 69,474	\$ 37,813	\$ 18,595	\$ 125,882
b. Disabled	13,584	15,788	4,261	33,633
c. Terminated Vested	2,270	681	103	3,054
3. Present Value of Benefits				
a. Active Members				
(i) Service Retirement	\$1,009,905	\$ 626,878	\$242,998	\$1,879,781
(ii) Pre-Retirement Death	72,623	20,295	7,811	100,729
(iii) Disability Retirement	158,182	111,195	42,744	312,121
(iv) Vested Termination	111,966	8,980	3,268	124,214
(v) Refund of Non-Vested Members' Contributions	6,961	849	199	8,009
(vi) Subtotal	<u>\$1,359,637</u>	<u>\$ 768,197</u>	<u>\$297,020</u>	<u>\$2,424,854</u>
b. Non-Active Members				
(i) Service Retired	\$ 550,466	\$ 329,947	\$151,561	\$1,031,974
(ii) Disabled	113,483	137,441	36,004	286,928
(iii) Terminated Vested	12,212	5,157	845	18,214
(iv) Non-Vested Members' Contributions	896	122	27	1,045
(v) Subtotal	<u>\$ 677,057</u>	<u>\$ 472,667</u>	<u>\$188,437</u>	<u>\$1,338,161</u>
c. Total	<u>\$2,036,694</u>	<u>\$1,240,864</u>	<u>\$485,457</u>	<u>\$3,763,015</u>
4. Present Value of Future Normal Costs				
a. Service Retirement	\$ 329,004	\$ 193,172	\$ 70,441	\$ 592,617
b. Pre-Retirement Death	30,526	8,712	3,208	42,446
c. Disability Retirement	70,472	49,797	18,174	138,443
d. Vested Termination	58,725	5,417	1,972	66,114
e. Refund of Non-Vested Members' Contributions	20,398	3,938	1,475	25,811
f. Total	<u>\$ 509,125</u>	<u>\$ 261,036</u>	<u>\$ 95,270</u>	<u>\$ 865,431</u>

TABLE 2 (CONTINUED)

DERIVATION OF UNFUNDED ACTUARIAL
ACCURED LIABILITY AS OF JULY 1, 1985
(\$000 Omitted)

	<u>MUNICIPAL</u>	<u>POLICE</u>	<u>FIRE</u>	<u>TOTAL</u>
5. Actuarial Accrued Liability: (3) - (4)				
a. Active Members				
(i) Service Retirement	\$ 680,901	\$ 433,706	\$172,557	\$1,287,164
(ii) Pre-Retirement Death	42,097	11,583	4,603	58,283
(iii) Disability Retirement	87,710	61,398	24,570	173,678
(iv) Vested Termination	53,241	3,563	1,296	58,100
(v) Refund of Non-Vested Members' Contributions	(13,437)	(3,089)	(1,276)	(17,802)
(vi) Subtotal	\$ 850,512	\$ 507,161	\$201,750	\$1,559,423
b. Non-Active Members				
(i) Service Retired	\$ 550,466	\$ 329,947	\$151,561	\$1,031,974
(ii) Disabled	113,483	137,441	36,004	286,928
(iii) Terminated Vested	12,212	5,157	845	18,214
(iv) Non-Vested Members' Contributions	896	122	27	1,045
(v) Subtotal	\$ 677,057	\$ 472,667	\$188,437	\$1,338,161
c. Total	\$1,527,569	\$ 979,828	\$390,187	\$2,897,584
6. Rationalization of Liability to Market Return Basis				\$ (90,009)
7. Net Actuarial Accrued Liability: (5) + (6)				\$2,807,575
8. Assets for Valuation Purposes				\$1,076,159
9. Unfunded Actuarial Accrued Liability: (7) - (8)				\$1,731,416
10. Dombrowski/Bogen Balances as of July 1, 1985:				
a. Dombrowski				\$ 37,009
b. Bogen				25,335
c. Total				\$ 62,344
11. Remaining Unfunded Actuarial Accrued Liability as of July 1, 1985: (10) - (9)				\$1,669,072

TABLE 3

DEVELOPMENT OF ANNUAL PAYMENTS TOWARD
THE UNFUNDED ACTUARIAL ACCRUED LIABILITY
FOR FISCAL YEAR ENDING JUNE 30, 1987
(\$000 Omitted)

1. Expected July 1, 1985 Unfunded Actuarial Accrued Liability Based on July 1, 1984 Valuation		\$1,612,212
2. Change in July 1, 1985 Unfunded Actuarial Accrued Liability Due to Actuarial Experience		\$ (24,514)
3. Change in July 1, 1985 Unfunded Actuarial Accrued Liability Due to Change in Funding Method from Projected Unit Credit to Entry Age		\$ 150,987
4. Change in July 1, 1985 Unfunded Actuarial Accrued Liability Due to Change in Assumptions		\$ (7,269)
5. Actual July 1, 1985 Unfunded Actuarial Accrued Liability: (1) + (2) + (3) + (4)		\$1,731,416
6. Anticipated Changes in Unfunded Actuarial Accrued Liability from July 1, 1985 to July 1, 1986, Excluding Impact of Item (7) Below:		
a. Interest: .09 x [(2) + (3) + (4)]	\$10,728	
b. Change in Normal Cost Requirements	(9,424)	
c. Adjustment Due to (i) Significant Differences Between Experience and Assumptions and/or (ii) Benefit Modifications		
d. Total	<u>0</u>	\$ 1,304
7. Increase in Unfunded Actuarial Accrued Liability from July 1, 1985 to July 1986 in Accordance with Amortization Schedule [\$1,672,594 - \$1,612,212] per 1984 Valuation Report		\$ 60,382
8. Anticipated July 1, 1986 Unfunded Actuarial Accrued Liability: (5) + (6) + (7)		\$1,793,102
9. Allocation of Anticipated July 1, 1986 Unfunded Actuarial Accrued Liability		
a. Dombrowski		\$ 36,527
b. Bogen		22,582
c. Remaining		<u>1,733,993</u>
d. Total		\$1,793,102

TABLE 3 (CONTINUED)

DEVELOPMENT OF ANNUAL PAYMENTS TOWARD
THE UNFUNDED ACTUARIAL ACCRUED LIABILITY
FOR FISCAL YEAR ENDING JUNE 30, 1987
(\$000 Omitted)

10. Annual Payment for Fiscal Year Ending June 30, 1987 Based on Act 205, Distress Level III	
a. Dombrowski	\$ 3,813
b. Bogen	5,034
c. Remaining	<u>86,429^{1J}</u>
d. Total	\$ 95,276
11. Annual Payment Required Under Act 205 if Distress Level Funding is Not Utilized	
a. Dombrowski	\$ 3,813
b. Bogen	5,034
c. Remaining	<u>168,780^{2J}</u>
d. Total	\$177,627

^{1J} Amortized over 33 years at 9% per annum interest, assuming payments increase 6% per annum in the future.

^{2J} Amortized over 30 years at 9% per annum interest, assuming level dollar payments.

TABLE 4

SCHEDULE OF ANNUAL PAYMENTS TO FUND THE
ANTICIPATED JULY 1, 1986 UNFUNDED ACTUARIAL ACCRUED
LIABILITY OVER THE 33-YEAR PERIOD ENDING JUNE 30, 2019
(\$000 Omitted)

Fiscal Year Ending June 30	Annual Payment (Made at End of Year) Toward:				Progress of Unfunded Actuarial Accrued Liability	Estimated Annual Payroll	Annual Payment as a Percent of Payroll
	Dombrowski	Bogen	Remaining*	Total **			
1986	NA	NA	NA	NA	\$1,793,102	\$ 788,053	NA
1987	\$3,813	\$5,034	\$ 86,429	\$ 95,276	1,859,205	835,336	11.4%
1988	3,813	5,034	91,615	100,462	1,926,071	885,457	11.3
1989	3,813	5,034	97,112	105,959	1,993,459	938,584	11.3
1990	3,813	5,034	102,939	111,786	2,061,085	994,899	11.2
1991	3,813	5,034	109,115	117,962	2,128,620	1,054,593	11.2
1992	3,813	5,034	115,662	124,509	2,195,687	1,117,869	11.1
1993	3,813		122,602	126,415	2,266,885	1,184,941	10.7
1994	3,813		129,958	133,771	2,337,133	1,256,037	10.7
1995	3,813		137,756	141,568	2,405,907	1,331,399	10.6
1996	3,813		146,021	149,834	2,472,605	1,411,283	10.6
1997	3,813		154,782	158,595	2,536,545	1,495,960	10.6
1998	3,813		164,069	167,882	2,596,952	1,585,718	10.6
1999	3,813		173,913	177,726	2,652,952	1,680,861	10.6
2000	3,813		184,348	188,161	2,703,557	1,781,713	10.6
2001	3,813		195,409	199,222	2,747,655	1,888,615	10.5
2002	3,813		207,133	210,946	2,783,998	2,001,932	10.5
2003	3,813		219,561	223,374	2,811,183	2,122,048	10.5
2004	3,813		232,735	236,548	2,827,642	2,249,371	10.5
2005	3,813		246,699	250,512	2,831,618	2,384,334	10.5
2006	3,813		261,501	265,314	2,821,150	2,527,394	10.5
2007	3,813		277,191	281,004	2,794,049	2,679,037	10.5
2008	3,813		293,823	297,635	2,747,878	2,839,779	10.5
2009	3,813		311,452	315,265	2,679,922	3,010,166	10.5
2010			330,139	330,139	2,590,976	3,190,776	10.3
2011			349,948	349,948	2,474,216	3,382,223	10.3
2012			370,944	370,944	2,325,952	3,585,156	10.3
2013			393,201	393,201	2,142,086	3,800,265	10.3
2014			416,793	416,793	1,918,081	4,028,281	10.3
2015			441,801	441,801	1,648,907	4,269,978	10.3
2016			468,309	468,309	1,329,000	4,526,177	10.3
2017			496,407	496,407	952,203	4,797,748	10.3
2018			526,192	526,192	511,709	5,085,612	10.3
2019			557,763	557,763	0	5,390,749	10.3

* Payments increase 6.0% per annum.

** Numbers may not add due to rounding.

Comparison of Funding with Requirements of GAAP

The funding policy adopted by the City provides that the Bogen unfunded actuarial accrued liability be amortized in level dollar payments over 20 years ending June 30, 1992 and the Dombrowski unfunded actuarial accrued liability be amortized in level dollar payments over 40 years ending June 30, 2009, as ordered by the Court of Common Pleas of Philadelphia County. The remaining unfunded actuarial accrued liability is amortized over 40 years ending June 30, 2019 with payments increasing 6.0% per annum.

Table 5 on the following page compares this funding policy to amortize the unfunded actuarial accrued liability with the funding standards specified under generally accepted accounting principles (GAAP). The standards specified by GAAP require that the unfunded actuarial accrued liability be funded over 40 years in level dollar payments.

For purposes of this table, the anticipated July 1, 1981 unfunded actuarial accrued liability was used as the starting point. Adjustments resulting from benefit modifications, changes in assumptions, funding method, and/or actuarial experience recognized in subsequent valuations have been reflected in the table. Under GAAP standards, adjustments determined under subsequent valuations are amortized over a 40-year period from when first recognized.

The table shows the annual and accumulated "deficit" between the funding policies of the City and those under GAAP (Columns (6) and (7), respectively). It is important to note that because the funding policies of the City result in the complete amortization of the unfunded actuarial accrued liability, the accumulated deficit between the City's funding policy and GAAP decreases to 0 at the end of the last 40-year GAAP amortization period.

TABLE 5

COMPARISON OF OFFICIAL UNFUNDED ACCRUED LIABILITY FUNDING
WITH FUNDING UNDER THE PROVISIONS OF APB NO. 8

Fiscal Year Ending June 30	Schedule of Annual Payments to Fund the Anticipated July 1, 1986 Unfunded Accrued Liability Over the 33-Year Period Ending June 30, 2019				Reflection of Comparison Between Official Schedule and 40-Year Amortization Under Gen- erally Accepted Accounting Principles (GAAP)		
	(1) Annual Payment (Made at End of Year) Toward: Dombrowski Unfunded Accrued Liability	(2) Bogen Unfunded Accrued Liability	(3) New Unfunded Accrued Liability	(4) Total (1)+(2)+(3)	(5) GAAP 40-Year Amortization (per APB No.8)	(6) GAAP "Deficit" (5)-(4)	(7) Accumulated "Deficit" (7) (1.09)+(6)
1982	\$3,813	\$5,034	\$ 59,410	\$ 68,257	\$136,206	\$ 67,950	\$ 67,950
1983	3,813	5,034	63,272	72,118	136,206	64,088	138,153
1984	3,813	5,034	64,850	73,696	130,870	57,173	207,761
1985	3,813	5,034	69,065	77,912	130,870	52,958	279,417
1986	3,813	5,034	75,871	84,717	125,707	40,989	345,554
1987	3,813	5,034	86,429	95,276	136,909	41,633	418,287
1988	3,813	5,034	91,615	100,462	136,909	36,447	492,380
1989	3,813	5,034	97,112	105,959	136,909	30,950	567,644
1990	3,813	5,034	102,939	111,786	136,909	25,123	643,855
1991	3,813	5,034	109,115	117,962	136,909	18,947	720,749
1992	3,813	5,034	115,662	124,509	136,909	12,400	798,017
1993	3,813	0	122,602	126,415	136,909	10,494	880,333
1994	3,813	0	129,958	133,771	136,909	3,138	962,701
1995	3,813	0	137,756	141,568	136,909	-4,659	1,044,684
1996	3,813	0	146,021	149,834	136,909	-12,925	1,125,781
1997	3,813	0	154,782	158,595	136,909	-21,686	1,205,416
1998	3,813	0	164,069	167,882	136,909	-30,973	1,282,930
1999	3,813	0	173,913	177,726	136,909	-40,817	1,357,577
2000	3,813	0	184,348	188,161	136,909	-51,252	1,428,507
2001	3,813	0	195,409	199,222	136,909	-62,313	1,494,760
2002	3,813	0	207,133	210,946	136,909	-74,037	1,555,251
2003	3,813	0	219,561	223,374	136,909	-86,465	1,608,759
2004	3,813	0	232,735	236,548	136,909	-99,639	1,653,908
2005	3,813	0	246,699	250,512	136,909	-113,603	1,689,157
2006	3,813	0	261,501	265,314	136,909	-128,405	1,712,776

TABLE 5 (CONTINUED)

**COMPARISON OF OFFICIAL UNFUNDED ACCRUED LIABILITY FUNDING
WITH FUNDING UNDER THE PROVISIONS OF APB NO. 8**

Fiscal Year Ending June 30	Schedule of Annual Payments to Fund the Anticipated July 1, 1986 Unfunded Accrued Liability Over the 33-Year Period Ending June 30, 2019				Reflection of Comparison Between Official Schedule and 40-Year Amortization Under Gen- erally Accepted Accounting Principles (GAAP)		
	(1) Annual Payment (Made at End of Year) Toward: Dombrowski Unfunded Accrued Liability	(2) Bogen Unfunded Accrued Liability	(3) New Unfunded Accrued Liability	(4) Total (1)+(2)+(3)	(5) GAAP 40-Year Amortization (per APB No.8)	(6) GAAP "Deficit" (5)-(4)	(7) Accumulated "Deficit" (7) (1.09)+(6) -1
2007	\$3,813	\$ 0	\$277,191	\$281,004	\$136,909	\$-144,095	\$1,722,831
2008	3,813	0	293,823	297,635	136,909	-160,726	1,717,159
2009	3,813	0	311,452	315,265	136,909	-178,356	1,693,348
2010	0	0	330,139	330,139	136,909	-193,230	1,652,519
2011	0	0	349,948	349,948	136,909	-213,039	1,588,207
2012	0	0	370,944	370,944	136,909	-234,035	1,497,110
2013	0	0	393,201	393,201	136,909	-256,292	1,375,558
2014	0	0	416,793	416,793	136,909	-279,884	1,219,474
2015	0	0	441,801	441,801	136,909	-304,892	1,024,335
2016	0	0	468,309	468,309	136,909	-331,400	785,125
2017	0	0	496,407	496,407	136,909	-359,498	496,288
2018	0	0	526,192	526,192	136,909	-389,283	151,671
2019	0	0	557,763	557,763	136,909	-420,854	-255,532
2020	0	0	0	0	136,909	136,909	-141,621
2021	0	0	0	0	136,909	136,909	-17,458
2022	0	0	0	0	703	703	-18,327
2023	0	0	0	0	703	703	-19,274
2024	0	0	0	0	6,039	6,039	-14,969
2025	0	0	0	0	6,039	6,039	-10,277
2026	0	0	0	0	11,202	11,202	0

Estimated Progress of Pension Fund

The estimated progress of the pension fund for the fiscal years 1986 through 2005 is presented in Table 6. The adjusted market value of fund assets as of July 1, 1985 is used as the starting point. This projection is useful in showing the emerging benefit payments of the fund and the concurrent fund growth. The projection is based upon the same assumptions as used to determine the annual cost and related liabilities of the System.

The City contribution of normal cost plus the scheduled payments toward amortizing the unfunded actuarial accrued liability is used in the projection. The first year of the projection reflects the anticipated City contribution based upon the July 1, 1984 valuation. Subsequent contributions are based upon the July 1, 1985 valuation. The normal cost component of the contribution increases annually by 6.0%, reflecting anticipated increases in salary. The employee contributions shown in the projection also increase annually, reflecting assumed salary increases.

The projection of the fund is limited to the period ending with the fiscal year ending June 30, 2005. Fluctuations from the figures shown within this 20-year period are to be expected.

The underlying trend of fund growth will tend to follow that shown in the table even though the actual numbers will vary. The projection shows that the contributions to the fund, City and employee combined, will exceed the benefits being paid for at least the next 20 years. However, expected contributions, while exceeding expected benefit payments, are not anticipated to add substantial amounts to existing assets. The majority of the growth in assets over this period will be derived from income on investments.

TABLE 6

ESTIMATED PROGRESS OF CITY OF PHILADELPHIA MUNICIPAL RETIREMENT
SYSTEM FUND FOR THE PERIOD JULY 1, 1985 THROUGH JUNE 30, 2005
(\$000 Omitted)

Fiscal Year Ending June 30	Fund at Beginning of Year	City Contributions 1/	Employee Contributions 1/	Benefit Payments 1/	Investment Income	Net Increase	Fund at End of Year
1986	\$1,076,159	\$156,564	\$35,362	\$168,566	\$ 90,860	\$114,220	\$1,190,379
1987	1,190,379	161,444	37,484	178,826	100,774	120,876	1,311,255
1988	1,311,255	171,131	39,733	190,033	111,249	132,079	1,443,334
1989	1,443,334	181,398	42,117	202,535	122,681	143,661	1,586,995
1990	1,586,995	192,282	44,644	215,792	135,128	156,262	1,743,257
1991	1,743,257	203,819	47,322	230,201	148,664	169,605	1,912,862
1992	1,912,862	216,048	50,162	245,362	163,374	184,222	2,097,084
1993	2,097,084	229,011	53,171	262,145	179,334	199,372	2,296,456
1994	2,296,456	242,752	56,362	279,896	196,622	215,840	2,512,296
1995	2,512,296	257,317	59,743	298,508	215,362	233,915	2,746,210
1996	2,746,210	272,756	63,328	317,842	235,706	253,948	3,000,158
1997	3,000,158	289,122	67,128	337,975	257,826	276,100	3,276,259
1998	3,276,259	306,469	71,155	358,938	281,913	300,599	3,576,858
1999	3,576,858	324,857	75,425	380,726	308,179	327,735	3,904,593
2000	3,904,593	344,348	79,950	402,688	336,890	358,501	4,263,093
2001	4,263,093	365,009	84,747	424,637	368,383	393,502	4,656,596
2002	4,656,596	386,910	89,832	447,475	403,000	432,267	5,088,862
2003	5,088,862	410,125	95,222	471,228	441,077	475,195	5,564,058
2004	5,564,058	434,732	100,935	495,280	483,020	523,407	6,087,465
2005	6,087,465	460,816	106,991	519,045	529,329	578,091	6,665,556

1/ City contributions are assumed to be made at end of year. Employee contributions and benefit payments are assumed to be made mid-year.

PART III

PLAN MEMBERSHIP

Data with respect to active, retired, disabled and terminated vested members as of July 1, 1985 was provided by the Philadelphia Board of Pensions and Retirement for use in the determination of benefit liabilities and annual costs.

The active member data, supplied on tape and on listing, contained information for all employees who were members of the Retirement System as of July 1, 1985. The data contained basic identifying information on each employee in addition to the annual rate of base compensation, overtime pay, longevity payments and employee contribution totals. The data was reviewed for consistency and completeness.

The nonactive member data, also supplied on tape and on listing, contained information for all retired, disabled and terminated vested members as of July 1, 1985. No information was available regarding the beneficiaries of current members designated to receive survivor benefits.

The "Reconciliation of Included Members," shown as follows, summarizes the changes in plan membership for the period between valuations. Based upon the information provided, changes in status due to retirement, disablement, death and new entrants could be identified. However, information regarding transfers, return to employment, and data corrections was not available. As a result, the terms "Net Other Terminations" and "Net Reduction" include the following:

Active:

Terminated and left member contributions on deposit
Died without a spouse or beneficiary
Returned to work
Transferred from one division to another

Retired or Disabled:

Died during the period
Returned to employment

Terminated Vested: Retired or died during the period
 Returned to employment

The "Summary of Annual Payroll and Annual Benefits" provides a breakdown of payroll for active members and benefit payments for non-active members.

Reconciliation of Included Members

	<u>Municipal</u>	<u>Police</u>	<u>Fire</u>	<u>Total</u>
A. <u>Active Members</u>				
1. Active as of July 1, 1984	23,404	7,309	2,677	33,390
2. New Entrants	+1,306	+173	+56	1,535
3. Separations from Active Service				
a. Refunded Contributions	-962	-55	-6	-1,023
b. Terminated Vested	-31	-6	-4	-41
c. Became Disabled	-81	-35	-12	-128
d. Died	-46	-14	-2	-62
e. Retired	-483	-202	-50	-735
f. Net Other Terminations	-449	+25	+5	-419
4. Active as of July 1, 1985	22,658	7,195	2,664	32,517
B. <u>Retired Members</u>				
1. Retired as of July 1, 1984	8,267	2,851	1,533	12,651
2. New Retirees	+483	+202	+50	+735
3. Terminations				
a. Death	-175	-81	-40	-296
b. Other	-112	-6	-14	-132
4. Retired as of July 1, 1985	8,463	2,966	1,529	12,958
C. <u>Surviving Spouses</u>				
1. Receiving Benefit as of July 1, 1984	3,240	1,680	810	5,730
2. New Spouses	+193	+91	+40	+324
3. Terminations	-87	-58	-24	-169
4. Receiving Benefit as of July 1, 1985	3,346	1,713	826	5,885
D. <u>Other Beneficiaries</u>				
1. Receiving Benefit as of July 1, 1984	473	99	20	592
2. New Beneficiaries	+39	+6	+2	+47
3. Terminations	-3	-5	+2	-6
4. Receiving Benefit as of July 1, 1985	509	100	24	633

	<u>Municipal</u>	<u>Police</u>	<u>Fire</u>	<u>Total</u>
E. <u>Disabled Members</u>				
1. Disabled as of July 1, 1984	1,893	1,824	453	4,170
2. New Disabilities	+81	+35	+12	+128
3. Terminations	-38	-24	-20	-82
4. Disabled as of July 1, 1985	<u>1,936</u>	<u>1,835</u>	<u>445</u>	<u>4,216</u>

F. <u>Terminated Vested Members</u>				
1. Terminated Vested as of July 1, 1984	340	97	11	448
2. New Vested Terminations	+31	+6	+4	+41
3. Terminations (Deletions)	-14	-10	0	-24
4. Terminated Vested as of July 1, 1985	<u>357</u>	<u>93</u>	<u>15</u>	<u>465</u>

Summary of Annual Payroll and Annual Benefits
(\$000 Omitted)

	<u>Municipal</u>	<u>Police</u>	<u>Fire</u>	<u>Total</u>
A. <u>Active Members</u>				
1. Active as of July 1, 1984	\$501,808	\$187,908	\$70,435	\$760,151
2. New Entrants	22,952	3,744	1,206	27,902
3. Active as of July 1, 1985	<u>\$524,760</u>	<u>\$191,652</u>	<u>\$71,641</u>	<u>\$788,053</u>
B. <u>Retired Members</u>				
1. Retired as of July 1, 1984	\$ 53,507	\$ 28,817	\$14,863	\$ 97,187
2. New Retirees	5,538	3,374	890	9,802
3. Retired as of July 1, 1985	<u>\$ 59,045</u>	<u>\$ 32,191</u>	<u>\$15,753</u>	<u>\$106,989</u>
C. <u>Surviving Spouses</u>				
1. Receiving Benefit as of July 1, 1984	\$ 8,372	\$ 4,839	\$ 2,548	\$ 15,759
2. New Spouses	805	483	212	1,500
3. Receiving Benefit as of July 1, 1985	<u>\$ 9,177</u>	<u>\$ 5,322</u>	<u>\$ 2,760</u>	<u>\$ 17,259</u>
D. <u>Other Beneficiaries</u>				
1. Receiving Benefit as of July 1, 1984	\$ 1,109	\$ 270	\$ 78	\$ 1,457
2. New Beneficiaries	143	30	4	177
3. Receiving Benefit as of July 1, 1985	<u>\$ 1,252</u>	<u>\$ 300</u>	<u>\$ 82</u>	<u>\$ 1,634</u>

	<u>Municipal</u>	<u>Police</u>	<u>Fire</u>	<u>Total</u>
E. <u>Disabled Members</u>				
1. Disabled as of July 1, 1984	\$ 12,797	\$ 15,327	\$ 4,062	\$ 32,186
2. New Disabilities	787	461	199	1,447
3. Disabled as of July 1, 1985	\$ 13,584	\$ 15,788	\$ 4,261	\$ 33,633

F. Terminated Vested Members

1. Terminated Vested as of July 1, 1984	\$ 2,024	\$ 630	\$ 64	\$ 2,718
2. New Vested Terminations	246	51	39	336
3. Terminated Vested as of July 1, 1985	\$ 2,270	\$ 681	\$ 103	\$ 3,054

As the preceding tables illustrate, plan membership remained relatively stable during the period. The net change in the number of members and the percentage change is as follows:

	<u>Number of Members</u>	<u>Percentage Increase (Decrease)</u>
Active	-873	(2.6)%
Retired	+307	2.4
Surviving Spouses	+155	2.7
Other Beneficiaries	+41	6.9
Disabled	+46	1.1
Terminated Vested	+17	3.8

A distribution of the active municipal employees by present age and salary, by service as of July 1, 1985 and salary, and by service and age are presented in Tables 7a, b and c. Similar information for active police employees and active fire employees is shown on Tables 8a, b and c and Tables 9a, b and c.

A distribution of terminated vested members by age and monthly pension is shown in Table 10. Tables 11a, b and c present distributions of the municipal division retired and disabled members by number of members, total monthly pensions and the average monthly pension. This information is shown separately for members retiring before and after July 1, 1984. Similarly, Tables 12a, b and c and 13a, b and c show this information for retired and disabled police members and fire members respectively.

TABLE 7A

MUNICIPAL ANNUAL EARNINGS BY AGE GROUPS

AGE GROUP	M A L E			F E M A L E			A L L		
	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	14	187602	13400	10	118181	11818	24	305783	12741
20-24	385	7190430	18676	345	5652677	16384	730	12843107	17593
25-29	1511	32989481	21832	889	17490453	19674	2400	50479934	21033
30-34	2144	50395450	23505	1104	23228620	21040	3248	73624070	22667
35-39	2661	67401628	25329	1248	27567975	22089	3909	94969603	24295
40-44	1852	48662614	26275	1058	22729876	21483	2910	71392490	24533
45-49	1753	45362095	25876	953	20545358	21558	2706	65907453	24356
50-54	1825	46408601	25429	870	18481543	21243	2695	64890144	24078
55-59	1504	38747872	25763	708	13764195	19441	2212	52512067	23739
60-64	784	19460249	24821	467	8199279	17557	1251	27659528	22109
65-69	214	5202610	24311	171	2252726	13173	385	7455336	19364
70-74	70	1504285	21489	67	620317	9258	137	2124602	15508
75-79	14	245064	17504	23	126564	5502	37	371628	10044
80-84	7	148596	21228	5	29314	5862	12	177910	14825
85+	1	27856	27856	0	0	0	1	27856	27856
TOTAL	14739	363934433	24691	7918	160807078	20309	22657	524741511	23160

TABLE 7B

MUNICIPAL ANNUAL EARNINGS BY SERVICE GROUPS

SERVICE GROUP	M A L E			F E M A L E			A L L		
	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	701	12894310	18394	605	10057183	16623	1306	22951493	17573
1	1089	22114069	20306	762	12851318	16865	1851	34965387	18890
2	647	14143099	21859	470	8769230	18657	1117	22912329	20512
3	849	19894078	23432	503	9862566	19607	1352	29756644	22009
4	1025	22864808	22307	546	10679086	19558	1571	33543894	21351
0-4	4311	91910364	21320	2886	52219383	18094	7197	144129747	20026
5-9	2361	58674449	24851	1276	26611920	20855	3637	85286369	23449
10-14	3374	85740413	25412	1388	30439247	21930	4762	116179660	24397
15-19	2158	56738635	26292	1189	25309316	21286	3347	82047951	24513
20-24	1223	33360618	27277	594	13106747	22065	1817	46467365	25573
25-29	873	24339535	27880	411	9055662	22033	1284	33395197	26008
30-34	390	11643778	29855	150	3431690	22877	540	15075468	27917
35-39	46	1424634	30970	17	476906	28053	63	1901540	30183
40+	3	102007	34002	7	156207	22315	10	258214	25821
TOTAL	14739	363934433	24691	7918	160807078	20309	22657	524741511	23160

TABLE 7C
MUNICIPAL SERVICE GROUPS BY AGE GROUPS

AGE GROUP	0-4	5-9	S E 10-14	R V I 15-19	C E 20-24	G R O 25-29	U P 30-34	35-39	40+	TOTAL
				M	A	L	E			
0-19	14	0	0	0	0	0	0	0	0	14
20-24	378	7	0	0	0	0	0	0	0	385
25-29	1161	291	59	0	0	0	0	0	0	1511
30-34	916	612	583	33	0	0	0	0	0	2144
35-39	669	494	1093	396	9	0	0	0	0	2661
40-44	342	256	557	517	176	4	0	0	0	1852
45-49	242	199	316	438	401	144	13	0	0	1753
50-54	191	163	309	349	322	379	112	0	0	1825
55-59	186	168	254	276	189	241	170	19	1	1504
60-64	140	114	143	106	99	84	73	25	0	784
65-69	50	32	37	30	23	19	19	2	2	214
70-74	18	16	16	12	4	2	2	0	0	70
75-79	2	6	5	1	0	0	0	0	0	14
80-84	1	3	2	0	0	0	1	0	0	7
85+	1	0	0	0	0	0	0	0	0	1
TOTAL	4311	2361	3374	2158	1223	873	390	46	3	14739

	F	E	M	A	L	E				
0-19	10	0	0	0	0	0	0	0	0	10
20-24	330	15	0	0	0	0	0	0	0	345
25-29	659	172	58	0	0	0	0	0	0	889
30-34	491	261	288	64	0	0	0	0	0	1104
35-39	416	235	315	267	15	0	0	0	0	1248
40-44	280	140	197	245	166	30	0	0	0	1058
45-49	193	125	146	174	137	160	18	0	0	953
50-54	160	90	156	174	125	109	55	1	0	870
55-59	147	93	122	142	86	71	37	8	2	708
60-64	112	65	74	90	54	30	36	5	1	467
65-69	57	40	23	27	7	8	3	3	3	171
70-74	25	23	5	6	4	2	1	0	1	67
75-79	4	15	3	0	0	1	0	0	0	23
80-84	2	2	1	0	0	0	0	0	0	5
85+	0	0	0	0	0	0	0	0	0	0
TOTAL	2886	1276	1388	1189	594	411	150	17	7	7918

TABLE 8A

POLICE ANNUAL EARNINGS BY AGE GROUPS

AGE GROUP	M A L E			F E M A L E			A L L		
	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	97	2306192	23775	38	894055	23527	135	3200247	23705
25-29	534	13287509	24883	126	3061265	24295	660	16348774	24770
30-34	1091	28155410	25807	164	4112590	25076	1255	32268000	25711
35-39	1742	46080158	26452	130	3274587	25189	1872	49354745	26364
40-44	1692	46047338	27214	58	1521201	26227	1750	47568539	27182
45-49	887	24676194	27819	9	239541	26615	896	24915735	27807
50-54	397	11197946	28206	3	102173	34057	400	11300119	28250
55-59	190	5573057	29331	0	0	0	190	5573057	29331
60-64	32	975855	30495	0	0	0	32	975855	30495
65-69	3	82803	27601	0	0	0	3	82803	27601
70-74	2	65360	32680	0	0	0	2	65360	32680
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	6667	178447822	26765	528	13205412	25010	7195	191653234	26637

TABLE 88

POLICE ANNUAL EARNINGS BY SERVICE GROUPS

SERVICE GROUP	M A L E			F E M A L E			A L L		
	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	120	2602498	21687	53	1141143	21531	173	3743641	21639
1	80	1873470	23418	40	936735	23418	120	2810205	23418
2	7	170791	24398	3	69640	23213	10	240431	24043
3	306	7665782	25051	109	2720489	24958	415	10386271	25027
4	206	5170226	25098	76	1904283	25056	282	7074509	25086
0-4	719	17482767	24315	281	6772290	24100	1000	24255057	24255
5-9	929	23758458	25574	150	3853337	25688	1079	27611795	25590
10-14	1600	42114397	26321	58	1516056	26138	1658	43630453	26315
15-19	2088	56262413	26945	26	689014	26500	2114	56951427	26940
20-24	888	25325283	28519	9	249185	27687	897	25574468	28511
25-29	330	9947970	30145	3	79355	26451	333	10027325	30112
30-34	99	3103800	31351	1	46175	46175	100	3149975	31499
35-39	13	425949	32765	0	0	0	13	425949	32765
40+	1	26785	26785	0	0	0	1	26785	26785
TOTAL	6667	178447822	26765	528	13205412	25010	7195	191653234	26637

TABLE 8C

POLICE SERVICE GROUPS BY AGE GROUPS

AGE GROUP	0-4	5-9	S E R V I C E 10-14 15-19 20-24	G R O U P 25-29 30-34	35-39	40+	TOTAL
			M A L E				
0-19	0	0	0	0	0	0	0
20-24	96	1	0	0	0	0	97
25-29	351	181	2	0	0	0	534
30-34	182	390	487	32	0	0	1091
35-39	85	281	756	620	0	0	1742
40-44	2	74	257	950	409	0	1692
45-49	1	2	98	347	338	101	887
50-54	0	0	0	128	113	143	397
55-59	2	0	0	11	28	83	190
60-64	0	0	0	0	0	3	32
65-69	0	0	0	0	0	2	3
70-74	0	0	0	0	0	1	2
75-79	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0
TOTAL	719	929	1600	2088	888	330	6667
			F E M A L E				
0-19	0	0	0	0	0	0	0
20-24	37	1	0	0	0	0	38
25-29	98	26	2	0	0	0	126
30-34	87	56	18	3	0	0	164
35-39	58	41	22	9	0	0	130
40-44	1	25	14	10	7	1	58
45-49	0	1	2	4	0	2	9
50-54	0	0	0	0	2	0	3
55-59	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0
TOTAL	281	150	58	26	9	3	528

TABLE 9A

FIRE ANNUAL EARNINGS BY AGE GROUPS

AGE GROUP	M A L E			F E M A L E			A L L		
	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	1	23468	23468	0	0	0	1	23468	23468
20-24	11	250400	22763	0	0	0	11	250400	22763
25-29	99	2287146	23102	1	21531	21531	100	2308677	23086
30-34	483	12379627	25630	0	0	0	483	12379627	25630
35-39	876	23341715	26645	0	0	0	876	23341715	26645
40-44	644	17721491	27517	0	0	0	644	17721491	27517
45-49	358	10057961	28094	0	0	0	358	10057961	28094
50-54	131	3802313	29025	0	0	0	131	3802313	29025
55-59	46	1316849	28627	0	0	0	46	1316849	28627
60-64	11	331362	30123	0	0	0	11	331362	30123
65-69	3	107117	35705	0	0	0	3	107117	35705
70-74	0	0	0	0	0	0	0	0	0
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	2663	71619449	26894	1	21531	21531	2664	71640980	26892

TABLE 9B

FIRE ANNUAL EARNINGS BY SERVICE GROUPS

SERVICE GROUP	M A L E			F E M A L E			A L L		
	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	55	1184205	21531	1	21531	21531	56	1205736	21531
1	110	2578426	23440	0	0	0	110	2578426	23440
2	2	46936	23468	0	0	0	2	46936	23468
3	34	850617	25018	0	0	0	34	850617	25018
4	2	48136	24068	0	0	0	2	48136	24068
0-4	203	4708320	23193	1	21531	21531	204	4729851	23185
5-9	357	9117950	25540	0	0	0	357	9117950	25540
10-14	704	18578400	26389	0	0	0	704	18578400	26389
15-19	740	20103596	27167	0	0	0	740	20103596	27167
20-24	440	12587524	28608	0	0	0	440	12587524	28608
25-29	184	5435004	29538	0	0	0	184	5435004	29538
30-34	21	649234	30915	0	0	0	21	649234	30915
35-39	14	439421	31387	0	0	0	14	439421	31387
40+	0	0	0	0	0	0	0	0	0
TOTAL	2663	71619449	26894	1	21531	21531	2664	71640980	26892

TABLE 9C
FIRE SERVICE GROUPS BY AGE GROUPS

AGE GROUP	0-4	5-9	S E R V I C E 10-14	15-19	20-24	G R O U P 25-29	30-34	35-39	40+	TOTAL
M A L E										
0-19	1	0	0	0	0	0	0	0	0	1
20-24	11	0	0	0	0	0	0	0	0	11
25-29	94	2	3	0	0	0	0	0	0	99
30-34	77	191	214	1	0	0	0	0	0	483
35-39	20	163	396	287	10	0	0	0	0	876
40-44	0	1	89	337	211	6	0	0	0	644
45-49	0	0	1	113	164	80	0	0	0	358
50-54	0	0	1	2	55	70	3	0	0	131
55-59	0	0	0	0	0	27	12	7	0	46
60-64	0	0	0	0	0	1	6	4	0	11
65-69	0	0	0	0	0	0	0	3	0	3
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0	0	0
TOTAL	203	357	704	740	440	184	21	14	0	2663
F E M A L E										
0-19	0	0	0	0	0	0	0	0	0	0
20-24	0	0	0	0	0	0	0	0	0	0
25-29	1	0	0	0	0	0	0	0	0	1
30-34	0	0	0	0	0	0	0	0	0	0
35-39	0	0	0	0	0	0	0	0	0	0
40-44	0	0	0	0	0	0	0	0	0	0
45-49	0	0	0	0	0	0	0	0	0	0
50-54	0	0	0	0	0	0	0	0	0	0
55-59	0	0	0	0	0	0	0	0	0	0
60-64	0	0	0	0	0	0	0	0	0	0
65-69	0	0	0	0	0	0	0	0	0	0
70-74	0	0	0	0	0	0	0	0	0	0
75-79	0	0	0	0	0	0	0	0	0	0
80-84	0	0	0	0	0	0	0	0	0	0
85+	0	0	0	0	0	0	0	0	0	0
TOTAL	1	0	0	0	0	0	0	0	0	1

TABLE 10

TERMINATED VESTED MEMBERS AS OF JULY 1, 1985

Attained Age	Municipal Members		Police Members		Fire Members	
	Number of Lives	Monthly Pension	Number of Lives	Monthly Pension	Number of Lives	Monthly Pension
UNDER 40	75	\$ 35,216.30	37	\$21,085.72	4	\$2,275.19
40-44	67	36,367.76	51	33,374.18	6	4,118.84
45-49	74	38,709.02	5	2,291.91	4	1,647.79
50-54	122	71,724.06	0	0.00	1	502.32
55-59	10	4,654.24	0	0.00	0	0.00
60-64	5	1,250.00	0	0.00	0	0.00
OVER 64	<u>4</u>	<u>1,222.08</u>	<u>0</u>	<u>0.00</u>	<u>0</u>	<u>0.00</u>
TOTAL	357	\$189,143.46	93	\$56,751.81	15	\$8,544.14

Average Monthly Pension

Municipal	\$529.81
Police	\$610.23
Fire	\$569.61

TABLE 11A
NUMBER OF DISABLED AND RETIRED MUNICIPAL MEMBERS AS OF JULY 1, 1985

ATTAINED AGE	-----DISABLED-----			-----NUMBER OF LIVES-----			-----TOTAL-----		
	PRIOR	NEW	TOTAL	PRIOR	NEW	TOTAL	PRIOR	NEW	TOTAL
UNDER 45	78	14	92	363	34	397	441	48	489
45-49	102	14	116	114	8	122	216	22	238
50-54	274	25	299	181	19	200	455	44	499
55-59	407	14	421	966	239	1205	1373	253	1626
60-64	460	9	469	1912	200	2112	2372	209	2581
65-69	292	4	296	2480	123	2603	2772	127	2899
70-74	160	1	161	2165	47	2212	2325	48	2373
75-79	48	0	48	1738	30	1768	1786	30	1816
80-84	21	0	21	1009	11	1020	1030	11	1041
OVER 84	13	0	13	675	4	679	688	4	692
TOTAL	1855	81	1936	11603	715	12318	13458	796	14254

NOTE - 'PRIOR' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED MORE THAN ONE YEAR BEFORE THE VALUATION DATE,
 'NEW' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED IN THE YEAR PRECEDING THE VALUATION DATE.

TABLE 11B

TOTAL MONTHLY PENSIONS OF DISABLED AND RETIRED MUNICIPAL MEMBERS AS OF JULY 1, 1985

ATTAINED AGE	TOTAL MONTHLY PENSION AMOUNTS						TOTAL		
	PRIOR	DISABLED- NEW	TOTAL	PRIOR	RETIRED NEW	TOTAL	PRIOR	NEW	TOTAL
UNDER 45	45335.01	9550.25	54885.26	70743.04	10261.48	81004.52	116078.05	19811.73	135889.78
45-49	57273.57	11549.77	68823.34	39934.39	5317.61	45252.00	97207.96	16867.38	114075.34
50-54	168478.67	21140.32	189618.99	62717.08	10075.18	72792.26	231195.75	31215.50	262411.25
55-59	260464.27	12407.94	272872.21	723298.27	249558.14	972856.41	983762.54	261966.08	1245728.62
60-64	265942.53	6415.88	272358.41	1235300.42	157476.49	1392776.91	1501242.95	163892.37	1665135.32
65-69	157315.40	2896.05	160211.45	1244796.28	79391.05	1324187.33	1402111.68	82287.10	1484398.78
70-74	77190.97	1599.56	78790.53	869201.66	17971.77	887173.43	946392.63	19571.33	965963.96
75-79	22810.25	0.00	22810.25	579299.29	7252.24	586551.53	602109.54	7252.24	609361.78
80-84	7559.18	0.00	7559.18	274460.65	2482.16	276942.81	282019.83	2482.16	284501.99
OVER 84	4037.31	0.00	4037.31	149274.61	662.60	149937.21	153311.92	662.60	153974.52
TOTAL	1066407.16	65559.77	1131966.93	5249025.69	540448.72	5789474.41	6315432.85	606008.49	6921441.34

NOTE - 'PRIOR' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED MORE THAN ONE YEAR BEFORE THE VALUATION DATE,
 'NEW' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED IN THE YEAR PRECEDING THE VALUATION DATE.

TABLE 11C

AVERAGE MONTHLY PENSION OF DISABLED AND RETIRED MUNICIPAL MEMBERS AS OF JULY 1, 1985

ATTAINED AGE	-----AVERAGE MONTHLY PENSION AMOUNTS-----								
	PRIOR	DISABLED- NEW	TOTAL	PRIOR	RETIRED- NEW	TOTAL	PRIOR	TOTAL- NEW	TOTAL
UNDER 45	581.22	682.16	596.58	194.88	301.81	204.04	263.22	412.74	277.89
45-49	561.51	824.98	593.30	350.30	664.70	370.92	450.04	766.70	479.31
50-54	614.89	845.61	634.18	346.50	530.27	363.96	508.12	709.44	525.87
55-59	639.96	886.28	648.15	748.76	1044.18	807.35	716.51	1035.44	766.13
60-64	578.14	712.88	580.72	646.08	787.38	659.46	632.90	784.17	645.15
65-69	538.75	724.01	541.25	501.93	645.46	508.72	505.81	647.93	512.04
70-74	482.44	1599.56	489.38	401.48	382.38	401.07	407.05	407.74	407.06
75-79	475.21	0.00	475.21	333.31	241.74	331.76	337.13	241.74	335.55
80-84	359.96	0.00	359.96	272.01	225.65	271.51	273.81	225.65	273.30
OVER 84	310.56	0.00	310.56	221.15	165.65	220.82	222.84	165.65	222.51
TOTAL	574.88	809.38	584.69	452.39	755.87	470.00	469.27	761.32	485.58

NOTE - 'PRIOR' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED MORE THAN ONE YEAR BEFORE THE VALUATION DATE,
 'NEW' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED IN THE YEAR PRECEDING THE VALUATION DATE.

TABLE 12A

NUMBER OF DISABLED AND RETIRED POLICE MEMBERS AS OF JULY 1, 1985

ATTAINED AGE	-----NUMBER OF LIVES-----			-----NUMBER OF LIVES-----			-----NUMBER OF LIVES-----		
	-----DISABLED-----			-----RETIRED-----			-----TOTAL-----		
	PRIOR	NEW	TOTAL	PRIOR	NEW	TOTAL	PRIOR	NEW	TOTAL
UNDER 45	327	25	352	157	9	166	484	34	518
45-49	238	4	242	287	104	391	525	108	633
50-54	346	4	350	630	67	697	976	71	1047
55-59	385	2	387	700	46	746	1085	48	1133
60-64	226	0	226	415	22	437	641	22	663
65-69	143	0	143	505	20	525	648	20	668
70-74	73	0	73	566	13	579	639	13	652
75-79	33	0	33	500	7	507	533	7	540
80-84	23	0	23	433	9	442	456	9	465
OVER 84	6	0	6	287	2	289	293	2	295
TOTAL	1800	35	1835	4480	299	4779	6280	334	6614

NOTE - 'PRIOR' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED MORE THAN ONE YEAR BEFORE THE VALUATION DATE,
 'NEW' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED IN THE YEAR PRECEDING THE VALUATION DATE.

TABLE 12B

TOTAL MONTHLY PENSIONS OF DISABLED AND RETIRED POLICE MEMBERS AS OF JULY 1, 1985

ATTAINED AGE	TOTAL MONTHLY PENSION AMOUNTS								
	DISABLED			RETIRED					
	PRIOR	NEW	TOTAL	PRIOR	NEW	TOTAL	PRIOR	NEW	TOTAL
UNDER 45	248742.97	24163.35	272906.32	61660.45	5954.35	67614.80	310403.42	30117.70	340521.12
45-49	181482.48	5716.89	187199.37	265028.89	128891.43	393920.32	446511.37	134608.32	581119.69
50-54	245143.85	5274.69	250418.54	597237.25	85515.96	682753.21	842381.10	90790.65	933171.75
55-59	271321.69	3262.05	274583.74	674008.89	58737.78	732746.67	945330.58	61999.83	1007330.41
60-64	157639.67	0.00	157639.67	342820.39	24321.92	367142.31	500460.06	24321.92	524781.98
65-69	95483.76	0.00	95483.76	278061.86	11981.28	290043.14	373545.62	11981.28	385526.90
70-74	44871.03	0.00	44871.03	233064.55	3684.26	236748.81	277935.58	3684.26	281619.84
75-79	17371.09	0.00	17371.09	162573.39	1890.84	164464.23	179944.48	1890.84	181835.32
80-84	12075.00	0.00	12075.00	135436.58	2362.50	137799.08	147511.58	2362.50	149874.08
OVER 84	3150.00	0.00	3150.00	77310.32	525.00	77835.32	80460.32	525.00	80985.32
TOTAL	1277281.54	38416.98	1315698.52	2827202.57	323865.32	3151067.89	4104484.11	362282.30	4466766.41

NOTE - 'PRIOR' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED MORE THAN ONE YEAR BEFORE THE VALUATION DATE,
 'NEW' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED IN THE YEAR PRECEDING THE VALUATION DATE.

UNITED STATES COMPANY

NOTE - 'PRIOR' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED MORE THAN ONE YEAR BEFORE THE VALUATION DATE,
'NEW' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED IN THE YEAR PRECEDING THE VALUATION DATE.

TABLE 13A
NUMBER OF DISABLED AND RETIRED FIRE MEMBERS AS OF JULY 1, 1985

ATTAINED AGE	--NUMBER OF LIVES--			--NUMBER OF LIVES--			--NUMBER OF LIVES--		
	PRIOR	DISABLED-NEW	TOTAL	PRIOR	RETIRED-NEW	TOTAL	PRIOR	RETIRED-NEW	TOTAL
UNDER 45	57	4	61	42	3	45	99	7	106
45-49	43	1	44	53	23	76	96	24	120
50-54	36	6	42	124	17	141	160	23	183
55-59	52	1	53	191	15	206	243	16	259
60-64	106	0	106	374	12	386	480	12	492
65-69	70	0	70	468	9	477	538	9	547
70-74	43	0	43	512	7	519	555	7	562
75-79	24	0	24	285	5	290	309	5	314
80-84	2	0	2	133	1	134	135	1	136
OVER 84	0	0	0	105	0	105	105	0	105
TOTAL	433	12	445	2287	92	2379	2720	104	2824

NOTE - 'PRIOR' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED MORE THAN ONE YEAR BEFORE THE VALUATION DATE,
'NEW' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED IN THE YEAR PRECEDING THE VALUATION DATE.

TABLE 13B

TOTAL MONTHLY PENSIONS OF DISABLED AND RETIRED FIRE MEMBERS AS OF JULY 1, 1985

ATTAINED AGE	TOTAL MONTHLY PENSION AMOUNTS--						TOTAL		
	DISABLED		TOTAL	RETIRED		TOTAL	PRIOR	NEW	TOTAL
	PRIOR	NEW		PRIOR	NEW				
UNDER 45	48956.35	4536.47	53492.82	17137.07	1104.36	18241.43	66093.42	5640.83	71734.25
45-49	38535.63	1848.99	40384.62	60105.87	29410.97	89516.84	98641.50	31259.96	129901.46
50-54	32775.41	8379.08	41154.49	118153.33	22600.38	140753.71	150928.74	30979.46	181908.20
55-59	41472.58	1783.73	43256.31	181312.11	20683.31	201995.42	222784.69	22467.04	245251.73
60-64	83078.18	0.00	83078.18	324051.84	8998.13	333049.97	407130.02	8998.13	416128.15
65-69	50456.24	0.00	50456.24	308987.71	5603.20	314590.91	359443.95	5603.20	365047.15
70-74	27939.35	0.00	27939.35	260128.55	2013.77	262142.32	288067.90	2013.77	290081.67
75-79	14305.03	0.00	14305.03	122453.24	1497.24	123950.48	136758.27	1497.24	138255.51
80-84	1050.00	0.00	1050.00	39319.52	262.50	39582.02	40369.52	262.50	40632.02
OVER 84	0.00	0.00	0.00	25775.03	0.00	25775.03	25775.03	0.00	25775.03
TOTAL	338568.77	16548.27	355117.04	1457424.27	92173.86	1549598.13	1795993.04	108722.13	1904715.17

NOTE - 'PRIOR' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED MORE THAN ONE YEAR BEFORE THE VALUATION DATE,
 'NEW' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED IN THE YEAR PRECEDING THE VALUATION DATE.

TABLE 13C

AVERAGE MONTHLY PENSION OF DISABLED AND RETIRED FIRE MEMBERS AS OF JULY 1, 1985

ATTAINED AGE	AVERAGE MONTHLY PENSION AMOUNTS								
	DISABLED			RETIRED			TOTAL		
	PRIOR	NEW	TOTAL	PRIOR	NEW	TOTAL	PRIOR	NEW	TOTAL
UNDER 45	858.88	1134.12	876.93	408.03	368.12	405.37	667.61	805.83	676.74
45-49	896.18	1848.99	917.83	1134.07	1278.74	1177.85	1027.52	1302.50	1082.51
50-54	910.43	1396.51	979.87	952.85	1329.43	998.25	943.30	1346.93	994.03
55-59	797.55	1783.73	816.16	949.28	1378.89	980.56	916.81	1404.19	946.92
60-64	783.76	0.00	783.76	866.45	749.84	862.82	848.19	749.84	845.79
65-69	720.80	0.00	720.80	660.23	622.58	659.52	668.11	622.58	667.36
70-74	649.75	0.00	649.75	508.06	287.68	505.09	519.04	287.68	516.16
75-79	596.04	0.00	596.04	429.66	299.45	427.42	442.58	299.45	440.30
80-84	525.00	0.00	525.00	295.64	262.50	295.39	299.03	262.50	298.76
OVER 84	0.00	0.00	0.00	245.48	0.00	245.48	245.48	0.00	245.48
TOTAL	781.91	1379.02	798.02	637.26	1001.89	651.37	660.29	1045.41	674.47

NOTE - 'PRIOR' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED MORE THAN ONE YEAR BEFORE THE VALUATION DATE,
 'NEW' INDICATES LIVES WHOSE BENEFIT PAYMENTS COMMENCED IN THE YEAR PRECEDING THE VALUATION DATE.

PART IV
FINANCIAL EXPERIENCE OF FUND

The assets of the Retirement System as of July 1, 1985 are \$1,091,382,000 on a market value basis and \$1,110,975,000 on a cost value basis. A summary of the asset holdings is shown on Table 14 and the receipts and disbursements statement is shown on Table 15. Table 16 provides a statement of fund equity as of June 30, 1985 and Table 17 provides a summary of administrative expenses for the 1985 fiscal year. Table 18 summarizes the derivation of adjusted market value of assets used for valuation purposes.

A review of Table 14, Statement of Assets and Liabilities, shows that the Retirement System is invested primarily in debt securities (long term and short term bonds). As of July 1, 1985, debt securities comprise 62% of the fund on a market value basis. Since the July 1, 1982 actuarial valuation, the trust fund assets have been expanded to include investments in equity securities. As of July 1, 1985, equity securities comprise 35% of the fund assets on a market value basis. During the year ending June 30, 1985, the Board of Pensions and Retirement engaged the services of 10 outside money managers to invest the assets of the Retirement System. These 10 managers, 6 equity and 4 debt, held approximately 86% of the assets as of June 30, 1985.

Table 15 shows the monies received and disbursed during the fiscal year ending June 30, 1985. The table shows that employee and employer contributions constitute approximately 65% and investment income constituted approximately 34% of the revenues for the year. On the disbursement side, benefit payments were approximately 93% of all disbursements, on a market value basis.

In addition to showing the receipts and disbursements, Table 15 indicates the approximate rates of return for the year. This is summarized as follows:

Cost Value	8.9%
Market Value	16.1%

Table 18 shows the derivation of adjusted market value of assets used in the cost calculations. All assets other than equities are valued at market. Equity securities are valued as the product of (i) the 3-year average of the ratio of market value to book value (but not before July 1, 1984) and (ii) the cost value of the equity securities as of the valuation date. Also shown on the table is the approximate rate of return on an adjusted market value basis of 14.4%.

TABLE 14

STATEMENT OF ASSETS AND LIABILITIES
(Fiscal Year Ending June 30, 1985)

	<u>Cost Value</u>	<u>Market Value</u>
<u>Assets:</u>		
Cash	\$ 292,816	\$ 292,816
Equity Securities	361,928,769	383,136,691
Debt Securities	716,498,316	675,697,394
Due From Other Funds	14,297,652	14,297,652
Accounts Receivable	2,886,158	2,886,158
Interest and Dividends Receivable	16,702,747	16,702,747
Due From Other Governmental Units	988,461	988,461
Other Assets	<u>7,115</u>	<u>7,115</u>
Total Assets	\$1,113,602,034	\$1,094,009,034
 <u>Liabilities:</u>		
Vouchers Payable	\$ 129,183	\$ 129,183
Accounts Payable	13,375	13,375
Salaries and Wages Payable	28,782	28,782
Accrued Expenses	604,182	604,182
Due to Other Funds	32,981	32,981
Funds Held in Escrow	3,066	3,066
Deferred Revenue	1,580,579	1,580,579
Other Liabilities	<u>235,184</u>	<u>235,184</u>
Total Liabilities	\$ 2,627,332	\$ 2,627,332
 <u>Fund Balance:</u>	 \$1,110,974,702	 \$1,091,381,702

TABLE 15

STATEMENT OF RECEIPTS AND DISBURSEMENTS

	<u>Cost Value</u>	<u>Market Value</u>
<u>Balance as of July 1, 1984:</u>	\$1,069,341,455*	\$ 920,895,078
<u>Receipts:</u>		
Contributions		
Commonwealth of Pennsylvania	\$ 11,984,913	\$ 11,984,913
City of Philadelphia	133,325,793	133,325,793
Employees	34,397,170	34,397,170
Quasi-Public Agencies	2,638,258	2,638,258
Interest and Dividends	94,635,125	94,635,125
Amortization of Premium/Discount	1,413,545	--
Miscellaneous	<u>1,603,358</u>	<u>1,603,358</u>
Total Receipts	\$ 279,998,162	\$ 278,584,617
<u>Disbursements:</u>		
Withdrawals	\$ 3,683,295	\$ 3,683,295
Benefit Payments	157,890,917	157,890,917
Administrative Expenses	1,541,703	1,541,703
Change in Accounting Method	68,787,552	--
Unamortized Premium/Discount	630,864	--
Loss on Investments	5,728,256	5,728,256
Miscellaneous	<u>102,328</u>	<u>102,328</u>
Total Disbursements	\$ 238,364,915	\$ 168,946,499
<u>Change in Unrealized Appreciation/ Depreciation:</u>	\$ --	\$ 60,848,506
<u>Balance as of July 1, 1985:</u>	\$1,110,974,702	\$1,091,381,702
<u>Approximate Return on Investments During Year:</u>	8.9%	16.1%

* Amortized cost value as of July 1, 1984. Accounting method changed to cost value basis during fiscal year.

TABLE 16

STATEMENT OF FUND EQUITY
(Cost Value)

Members' Pension Contributions	\$ 293,503,965
Fund Balance:	
Reserved for Purchase Commitments	25,815
Designated for Pension Benefits	<u>817,444,922</u>
Total as of June 30, 1985	\$1,110,974,702

TABLE 17

STATEMENT OF ADMINISTRATIVE EXPENSES
FOR YEAR ENDING JUNE 30, 1985

	<u>Estimated Obligations</u>
Personal Services	\$ 658,788
Purchase of Services	604,300
Materials and Supplies	29,000
Equipment	20,000
Employer's Share of Fringe Benefits	214,233
Payments to Other Funds	<u>45,500</u>
Total	\$1,571,821

TABLE 18

DERIVATION OF ASSETS FOR VALUATION PURPOSES

1. Cash		\$ 292,816
2. Equity Securities		
a. Market Value as of July 1, 1984	\$114,820,052	
b. Cost Value as of July 1, 1984	\$117,827,102	
c. July 1, 1984 Ratio: [a ÷ b]	0.97447913	
d. Market Value as of July 1, 1985	\$383,136,691	
e. Cost Value as of July 1, 1985	\$361,928,769	
f. July 1, 1985 Ratio: [d ÷ e]	1.05859695	
g. Average of Ratio of Market Value to Cost Value: [c + f] ÷ 2	1.01653804	
h. Adjusted Market Value: (e) x (g)		\$ 367,914,362
3. Debt Securities		\$ 675,697,394
4. Other Assets		\$ 7,115
5. Receivables		\$ 34,875,018
6. Liabilities		\$ 2,627,332
7. Assets for Valuation Purposes: (1) + (2)(h) + (3) + (4) + (5) - (6)		\$1,076,159,373
8. Approximate Return on Investments During Year on Adjusted Asset Basis		14.4%

PART V

SALIENT FEATURES OF THE RETIREMENT SYSTEM

	<u>Municipal (Plan J)</u>	<u>Uniformed (Plans D and X)</u>
1. <u>Participation:</u>	Full-time employees commence participation on their date of employment. Temporary employees commence participation after the completion of 6 months of employment.	Same as municipal
2. <u>Credited Service:</u>	Credited service means the period of employment with the City during which the employee makes contributions to the Retirement System. Certain leaves of absence may also be credited.	Same as municipal
3. <u>Total Compensation:</u>	<p>Total compensation means:</p> <p>(a) for members represented by AFSCME District Council 33, AFL-CIO or District Council 47, AFL-CIO or employees of the Common Pleas Court, Municipal Court or Traffic Court, the base rate of pay, longevity payments and overtime received during a 12-month period</p> <p>(b) for members who hold an elected office, exempt position or other position not represented by a union, the base rate of pay and longevity payments received during a 12-month period.</p>	Total compensation means the base rate of pay and longevity payments received during a 12-month period.
4. <u>Final Compensation:</u>	Final compensation means the greater of the annual base rate of pay at the time of termination and the total compensation received during the 12-month period immediately preceding termination.	Same as municipal
5. <u>Average Final Compensation:</u>	<p>Average final compensation means:</p> <p>(a) for members represented by AFSCME District Council 33, AFL-CIO or District Council 47, AFL-CIO or employees of the Common Pleas Court, Municipal Court or Traffic Court, the arithmetic average of the total compensation received during the three calendar or anniversary years which produces the highest average</p>	<p>Average final compensation means the highest of (a), (b) and (c) below:</p> <p>(a) the total compensation received during the 12-month period which produces the highest figure; or</p> <p>(b) the annual base rate of pay, excluding longevity payments, calculated from the final pay period; or</p>

Municipal (Plan J)

Uniformed (Plans D and X)

- (b) for members who hold an elected office, exempt position or other positions not represented by a union, the arithmetic average of the total compensation received during the three calendar or anniversary years which produces the highest average.

- (c) the arithmetic average of the total compensation received during the five calendar years of employment which produces the highest average.

6. Employee Contributions:

Each employee who participates in the Social Security System, contributes 3-3/4% of his total compensation up to the taxable wage base (\$39,600 in 1985 and \$42,000 in 1986) and 6% of his total compensation above the taxable wage base to the Retirement System.

Same as municipal

Each employee who does not participate in the Social Security System contributes 6% of his total compensation to the Retirement System.

7. Service Retirement:

a. Eligibility:

Each municipal employee is eligible to retire and receive a service pension upon the attainment of age 55.

Each uniformed employee is eligible to retire and receive a service pension upon the attainment of age 45.

b. Benefit Amount:

The service pension equals the sum of:
2-1/2% of the employee's average final compensation multiplied by his years of credited service to a maximum of 20 years;

The service pension equals 2-1/2% of the employee's average final compensation multiplied by his years of credited service, subject to a maximum of 100% of average final compensation.

plus

2% of the employee's average final compensation multiplied by his years of credited service in excess of 20;

such sum limited to 80% of the employee's average final compensation.

Municipal (Plan J)

Uniformed (Plans D and X)

8. Deferred Vested Retirement:

a. Eligibility:

A terminating employee who has completed 10 or more years of credited service is eligible for a deferred vested retirement benefit.

Same as municipal

b. Benefit Amount:

The annual deferred vested benefit is determined in the same manner as service pensions, based on average final compensation and credited service at the time of termination. This benefit commences at his service retirement date. If the member dies prior to the commencement of his deferred vested benefit, an ordinary death benefit is payable (see item 11 below).

Same as municipal

Alternatively, the terminating employee may request at any time prior to benefit commencement to receive a return of employee contributions (without interest) in lieu of the deferred vested benefit.

9. Withdrawal Benefit:

Each terminating employee who has completed less than 10 years of credited service will receive a withdrawal benefit equal to his employee contributions (without interest).

Same as municipal

10. Service-Connected Death:

a. Eligibility:

The beneficiary of each active employee who dies solely from the performance of duties of the employee's position with the City is eligible for an immediate death benefit.

Same as municipal

b. Benefit Amount:

The death benefit equals the sum of:

Same as municipal

the total employee contributions paid to the Retirement System; plus

a yearly payment of 60% of the employee's final compensation reduced by any death benefits payable under the provisions of the Workers' Compensation Act.

Municipal (Plan J)

Uniformed (Plans D and X)

This benefit is payable to the spouse until her death or remarriage, whichever occurs first. The spouse is entitled to an additional yearly payment of 10% of final compensation for each dependent child (up to two children) until the child reaches age 18.

If there is no spouse, or if the spouse dies or remarries, each dependent child (up to three children) is eligible for a yearly payment of 25% of final compensation until the child reaches age 18. If there is no spouse or dependent children, each dependent parent is entitled to a yearly payment of 15% of final compensation for the remainder of his lifetime.

11. Ordinary Death:

a. Eligibility:

The beneficiary of an active employee (or a terminated vested employee who did not withdraw his employee contributions) who dies after completion of 10 years of credited service or who has attained age 55 is eligible for an immediate death benefit equal to an annual pension or a lump sum payment, whichever the beneficiary chooses.

The beneficiary of an active employee who dies before completion of 10 years of credited service or attainment of age 55 is eligible for a lump sum payment.

The beneficiary may be any relative by blood or marriage.

b. Annual Pension:

The annual ordinary death pension, payable for life, is equal to the regular service pension the employee would have received had he been eligible to retire on the day before he died and had elected option 2, joint and 100% contingent annuitant (see item 14 below).

The beneficiary of any employee who dies while actively employed (or a terminated vested employee who did not withdraw his employee contributions) is eligible for a death benefit equal to an annual pension or a lump sum payment, whichever the beneficiary chooses.

The beneficiary may be any relative by blood or marriage.

The annual ordinary death pension, payable for life, is equal to the regular service pension the employee would have received (based upon a minimum of 10 years of service) had he been eligible to retire on the day before he died and had elected option 2, joint and 100% contingent annuitant (see item 14 below).

c. Lump Sum Payment:

Municipal (Plan J)

The lump sum payment is equal to:

10% of the deceased employee's average final compensation multiplied by his years of credited service to a maximum of 10; plus

the deceased employee's contributions to the Retirement System; minus

the total amount of the deceased employee's life insurance which was paid for by the City.

Uniformed (Plans D and X)

Same as municipal

12. Service-Connected Disability:

a. Eligibility:

An active employee who is found by the Board of Pensions and Retirement to be mentally or physically permanently incapacitated from any further performance of duties due solely to the result of the performance of duties is eligible for an immediate service-connected disability pension.

Same as municipal

b. Benefit Amount:

The service-connected disability benefit is equal to:

Same as municipal

the employee's contributions to the Retirement System; plus

a yearly benefit of 70% of the greater of (i) the employee's base rate of pay plus longevity payments at the time of disablement and (ii) the total compensation received during the 12-month period ending on the date of disablement; reduced by any disability benefits payable under the provisions of the Workers' Compensation Act.

If the employee leaves his employee contributions with the Retirement System, he may choose a survivor benefit option (see item 14 below) in order to provide for continuation of benefit payments after his death. If he elects to receive his employee contributions, the benefit is payable for his lifetime only.

Municipal (Plan J)

Uniformed (Plans D and X)

13. Ordinary Disability:

a. Eligibility:

An active employee who is found by the Board to be mentally or physically permanently incapacitated from the further performance of duties due to an accident or illness not caused by the performance of duties is eligible for an immediate ordinary disability benefit provided he has completed at least 10 years of credited service.

An active employee who is found by the Board to be mentally or physically permanently incapacitated from the further performance of duties due to an accident or illness not caused by the performance of duties is eligible for an immediate ordinary disability benefit provided he has completed at least 5 years of credited service and is a fireman. If the disability is permanent and partial and the employee is a policeman, he must have completed at least 10 years of credited service. If the disability is permanent and total and the employee is a policeman, there is no service requirement.

b. Benefit Amount:

The annual ordinary disability benefit is equal to the benefit determined under the service pension formula using average final compensation and credited service as of the date of disablement.

Same as municipal, except that each eligible employee is automatically credited with a minimum of 10 years of service for purposes of calculating the annual benefit.

Same as municipal

14. Survivor Benefits:

Service pensions, deferred vested benefits, service-connected disability benefits (if employee contributions are left on deposit), and ordinary disability benefits are payable under 4 optional forms. Options 1, 2, and 3 provide benefits actuarially equivalent to a lifetime only pension while option 4 has no reduction.

Option 1 provides that a reduced benefit is payable to the employee with the provision that upon his death, the beneficiary will receive a lump sum equal to the excess, if any, of the employee's contributions over the sum of the payments received.

Option 2 provides a reduced benefit payable to the employee with the provision that 100% of the reduced benefit will continue to be paid to the designated beneficiary for life after the death of the employee.

Municipal (Plan J)

Option 3 is the same as option 2 except that only 50% of the reduced benefit is continued to the designated beneficiary.

Option 4 provides that upon the employee's death, 50% of the benefit will continue to be paid to the surviving spouse for the remainder of her lifetime, provided that the employee and his spouse were married for 2 years prior to retirement. If there is no eligible spouse at the time the employee dies, or the spouse dies before the full amount of the contributions have been returned, 50% of the benefit is continued to dependent children until age 18, or if no dependent children, payments are given to dependent parents for the remainder of their lives. In addition, option 4 provides for a guaranteed return of employee contributions as described in option 1 above.

The monthly minimum pension to a pensioner is equal to \$25 multiplied by the number of the pensioner's completed years of credited service, to a maximum of 10 years.

Any employee at service retirement age with less than 3 years, but more than 1 year of credited service, may waive his right to receive a monthly benefit and in lieu thereof, receive a lump sum payment of twice his employee contributions without interest.

Uniformed (Plans D and X)

The monthly minimum pension to pensioners receiving service-connected disability benefits is equal to \$500. The monthly minimum pension to all other pensioners is equal to \$440 with the provision that such pension will increase to \$500 at the time the pensioner attains age 60.

Same as municipal

15. Minimum Pension:

16. Waiver of Benefit:

PART VI

ACTUARIAL COST METHOD, FACTORS AND ASSUMPTIONS USED IN COST DETERMINATIONS

The actuarial cost method, factors and assumptions used in determining cost estimates are presented below.

1. Member Data: The member data used in the determination of cost estimates consists of pertinent information with respect to the active, retired, disabled and deferred vested municipal and uniformed members of the City of Philadelphia Municipal Retirement System as supplied by the Philadelphia Board of Pensions and Retirement to the actuary.
2. Valuation Date: July 1, 1985.
3. Actuarial Cost Method: The costs of the System have been determined in accordance with the individual entry age actuarial cost method. The Bogen unfunded actuarial accrued liability is amortized in level dollar payments over 20 years ending June 30, 1992 and the Dombrowski unfunded actuarial accrued liability is amortized in level dollar payments over 40 years ending June 30, 2009 as ordered by the Court of Common Pleas of Philadelphia County. The remaining unfunded actuarial accrued liability as of July 1, 1985 is amortized over 40 years ending June 30, 2019 with payments increasing 6.0% per annum. Changes in the actuarial accrued liability realized after July 1, 1985 will be amortized as follows:
 - a. Changes in actuarial assumptions: 20 years
 - b. Experience gains and losses: 15 years
 - c. Benefit modifications applicable to active members: 20 years
 - d. Benefit modifications applicable to non-active members: 10 years

4. Annual Rate of Withdrawal Prior to Retirement: The assumed annual rates of withdrawal may best be illustrated by the following probabilities at quinquennial ages:

<u>Attained Age</u>	<u>Municipal</u>		<u>Uniformed</u>
	<u>Males</u>	<u>Females</u>	<u>Unisex</u>
20	.120022	.109707	.021000
25	.090326	.100505	.020300
30	.055510	.073123	.016544
35	.032213	.049504	.009848
40	.023083	.035723	.005592
45	.018176	.028560	.000000
50	.014635	.023075	.000000
55	.000000	.000000	.000000

In addition, it is assumed that a terminating employee who is vested (10 years of service) will elect a refund of employee contributions unless his age plus years of service at termination sum to 55 or more (rule of 55), in which event he will be assumed to elect a deferred pension commencing at service retirement age.

5. Annual Rate of Disability Prior to Retirement: The assumed annual rates of disability may best be illustrated by the following probabilities at quinquennial ages:

<u>Attained Age</u>	<u>Municipal</u>		<u>Uniformed</u>
	<u>Males</u>	<u>Females</u>	<u>Unisex</u>
20	.000010	.000012	.000994
25	.000028	.000054	.001220
30	.000339	.000230	.002265
35	.001137	.000602	.004608
40	.002661	.001423	.008668
45	.005740	.003288	.016239
50	.010706	.007249	.020000
55	.014193	.010450	.020000
60	.015000	.011250	.020000
65	.000000	.000000	.000000

In addition, it is assumed that 90% of all disabilities among municipal members are ordinary (10% are service-connected) and that 80% of all disabilities among uniformed members are ordinary (20% are service-connected).

6. Annual Rate of Mortality Prior to Retirement: It is assumed that deaths among active municipal male members may be represented by 55% of the UP-84 Mortality Table with ages set forward one year. Deaths among municipal female members are assumed to be represented by 50% of the UP-84 Mortality Table with ages set back four years. In addition, it is assumed that 95% of all deaths among active municipal members are ordinary (5% are service-connected).

It is assumed that deaths among active uniformed members may be represented by 55% of the UP-84 Mortality Table with ages set forward one year. In addition, it is assumed that 90% of all deaths among active uniformed members are ordinary (10% are service-connected).

7. Service Retirement: It is assumed that active members will retire in accordance with the following rates:

<u>Attained Age</u>	<u>Municipal Unisex</u>	<u>Uniformed Unisex</u>
45	--	.150
46	--	.090
47	--	.100
48	--	.105
49	--	.115
50	--	.120
51	--	.125
52	--	.145
53	--	.150
54	--	.170

(Illustration continued on following page)

<u>Attained Age</u>	<u>Municipal Unisex</u>	<u>Uniformed Unisex</u>
55	.175	.180
56	.090	.200
57	.090	.225
58	.090	.225
59	.090	.225
60	.115	.230
61	.115	.230
62	.300	.300
63	.180	.300
64	.180	.300
65	.300	.300
66	.225	.300
67	.200	.300
68	.200	.300
69	.200	.300
70+	1.000	1.000

8. Annual Rate of Mortality After Retirement: Post-retirement mortality has been assumed to follow the UP-84 Mortality Table with ages set forward one year for males and to follow 94% of the UP-84 Mortality Table with ages set back four years for females. Post-disablement mortality has been assumed to follow the above mentioned table with the following adjustment factors applied at each age.

<u>Attained Age</u>	<u>Adjustment Factor</u>		<u>Attained Age</u>	<u>Adjustment Factor</u>	
	<u>Male</u>	<u>Female</u>		<u>Male</u>	<u>Female</u>
47 & Before	5.40	6.90	62	1.57	2.00
48	4.59	5.87	63	1.51	1.93
49	4.10	5.24	64	1.46	1.86
50	3.78	4.83	65	1.40	1.79
51	3.46	4.42	66	1.35	1.73
52	3.19	4.07	67	1.32	1.68
53	2.86	3.66	68	1.30	1.66
54	2.59	3.31	69	1.30	1.66
55	2.38	3.04	70	1.24	1.59
56	2.16	2.76	71	1.19	1.52
57	1.94	2.48	72	1.19	1.52
58	1.84	2.35	73	1.13	1.45
59	1.73	2.21	74	1.10	1.41
60	1.67	2.14	75 & Later	1.08	1.38
61	1.62	2.07			

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9. Salary Scale: It is assumed that salaries, including longevity and overtime, will increase at a compound annual rate of 6.0% per annum.
10. Rate of Investment Return: It is assumed that the assets of the fund will accumulate at a compound annual rate of 9% per annum, net of the annual expenses incurred in the investment of the fund's assets by the equity and debt money managers contracted by the Board of Pensions and Retirement.
11. Expenses: The administrative expenses of servicing the Retirement System are estimated based upon the estimated operating budget of the Board of Pensions and Retirement for fiscal year 1986 excluding the costs of the money managers contracted to invest the fund's assets.
12. Value of Investments: Assets held by the fund exclusive of equity securities are valued at market value as reported by the City. Equity securities are determined based on the product of (i) the average of the ratio of the market value of the equity securities to their cost value as of the valuation date and the two immediately preceding July 1 dates (but not prior to July 1, 1984) and (ii) the corresponding cost value of the equity securities as of the valuation date.
13. Family Composition: It is assumed that 70% of all active members and 60% of all nonactive members will be survived by a spouse and that female (male) spouses are four years younger (older) than members.
14. Form of Annuity: It is assumed that all members will elect Option 4 unless otherwise indicated in the participant's data.
15. Capitalized Value of Bonds: In order that both current assets and liabilities be valued on the same basis, the portion of the fixed income portfolio which can be matched with expected future payments is determined based on the valuation interest rate and the difference between

this value of assets and the market value of assets is subtracted from the accrued liability.

16. Rate of Covered Payroll Growth: It is assumed that the annual rate of growth of total covered payroll is 6% per annum. This is supported by the actuarial experience study for the 5-year period ending July 1, 1985 which showed that the rate of growth of covered payroll averaged 7.5% for the period of the study.

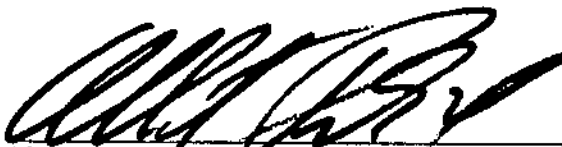
C. Actuary's Opinion

This Statement to the best of our knowledge fairly reflects the present value of accrued benefits of the City of Philadelphia Municipal Retirement System as of July 1, 1985.

In preparing this Statement, we have relied upon information provided to us regarding plan provisions, plan members, plan assets and other matters, as more fully detailed in the notes to the Statement.

The present values shown herein have been estimated on the basis of actuarial assumptions which, in the opinion of the actuary, are appropriate for the purposes of the Statement, are reasonable in the aggregate (taking into account the experience of the plan and reasonable expectations), and, when applied in combination, represent his best estimate of the measure of anticipated experience under the plan.

EDWARD H. FRIEND & COMPANY
A Division of Johnson & Higgins
of Washington, D.C., Inc.



Albert Pike, 3rd, F.C.A., A.S.A.
Vice President

March 20, 1986
Washington, D.C.