

MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM  
OF THE STATE OF RHODE ISLAND

ACTUARIAL VALUATION AS OF JUNE 30, 1980

Bartley E. Segal Company, Inc.  
April, 1981

MARTIN L. SEGAL COMPANY  
INCORPORATED

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April 24, 1981

Retirement Board of the Municipal  
Employees' Retirement System  
State of Rhode Island  
198 Dyer Street  
Providence, Rhode Island 02903

Dear Members of the Board:

We are pleased to submit herewith our Actuarial Valuation of the Municipal Employees' Retirement System as of June 30, 1980.

Our report analyzes the actuarial status of the System, and projects the cost requirements for the Board to certify to each municipality for the fiscal year beginning July 1, 1982.

We received a great deal of help from State employees in obtaining the information which forms the basis of this report. Most important, Mr. Joseph G. Iannelli, Executive Director; Mr. John F. Sullivan, Assistant Director; and Mr. Carlo Mancucci, Senior Accountant, were available whenever needed to answer any questions and provide any information requested. Indeed, the material they provided on their own initiative anticipated many of our needs.

For convenience, this report is divided into the following sections:

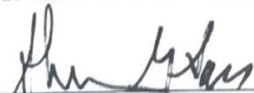
- I. SUMMARY
- II. EMPLOYEE DATA
- III. RETIREE DATA
- IV. RETIREMENT FUND
- V. ACTUARIAL ASSUMPTIONS AND METHODS
- VI. RESULTS OF VALUATION

Following the report, we have attached our actuarial certificate detailing the cost factors, assumptions, and plan of benefits used for the valuation.

We will be pleased to meet with you to discuss this report at your convenience.

Sincerely yours,

MARTIN E. SEGAL COMPANY, INCORPORATED

By   
 Sherman G. Saks  
 Senior Vice President

Benefit Provisions

The Municipal Employees' Retirement System of Rhode Island covers employees of the many municipalities, housing authorities and water districts which have elected to participate. There is one plan for general employees and a second optional plan for police and firemen\*. General employees contribute 6 per cent of their annual earnings; those police and firemen under the optional program contribute 7 per cent.

The System generally provides unreduced benefits of 2 per cent of earnings. Such benefits are available to members at least age 58 with 10 years of service or after 30 years at any age. Police and firemen may retire at age 55 if they have 10 years of service or after 25 years at any age. Benefits are based on the average of the highest 3 consecutive years' earnings.

The plan also provides non-service-connected disability and vested benefits after 5 and 10 years of service, respectively; service-connected disability pensions with no minimum service requirement; widow's benefits for service-connected death; and certain lump sum death benefits.

More detail can be found in the actuarial certificate following this report.

Employee Data

We received data on 4,051 active general employees and 310 police and firemen as of June 30, 1980, who were participating in the system. The average salary was \$9,400 for general employees and \$13,600 for police and firemen. On the average, the general employees were age 47 and had 9 years of service; police and firemen were age 39 with 10 years of service.

\*Throughout this report "general employees" means participants under the regular program and "police and firemen" means participants under the optional program.

#### Retiree Data

We received data on 1,201 pensioners and 17 beneficiaries as of June 30, 1980. The pensioners' average monthly benefit was \$225. Of all the pensioners on the rolls, 13 per cent had retired in the year ended June 30, 1980.

#### Retirement Fund

As of June 30, 1980, the Fund had assets of \$65.0 million available as an offset to the actuarial liabilities for future benefits.

#### Actuarial Valuation

Our valuation was prepared as of June 30, 1980. Our calculations were based on what we believe are reasonable assumptions as to expected future experience. The assumptions are the same as those used in our previous actuarial valuation. We used the "entry age normal cost" method of funding, which spreads the cost of each employee's pension as a level percentage of his earnings from date of hire to retirement.

The employer normal cost\* for general employees is \$1.7 million. This is 4.4 per cent of the payroll of participating general employees. The employer normal cost for police and firemen is \$0.3 million or 8.2 per cent of payroll.

For general employees, the actuarial liability\* (for benefits earned before July 1, 1980) is \$74.9 million of which \$26.9 million represents the liability to those already receiving pensions. The unfunded actuarial liability at the end of the year is \$17.9 million after accounting for assets of \$57.1 million. For police and firemen,

\*Please refer to the "Actuarial Assumptions and Methods" section of the report for definitions of these terms.

the actuarial liability is \$10.1 million of which \$2.5 million is for those receiving pensions. The unfunded actuarial liability stands at \$2.2 million after accounting for police and fire assets of \$7.9 million.

The value of the System's vested benefits is \$83 million. Thus the assets are short of this amount by \$18 million.

Based on the normal cost plus 25 year amortization of each municipality's unfunded actuarial liability, the annual employer cost as of June 30, 1980 adjusted for payment on December 31, 1980 is \$3.9 million (10.3 per cent of covered payroll) for general employees and \$0.6 million (13.5 per cent of covered payroll) for police and firemen. These amounts are in addition to the required employee contributions.

11. EMPLOYEE DATA

We received data on 4,051 general employees and 310 police and firemen participating in the System on June 30, 1980. The data included age, service, sex, and salary for each of them. The average salary of the participants was \$9,400 for general employees and \$13,600 for police and firemen.

Tables 1A and 1B give detailed age, service and average salary data on general employees and police and firemen, respectively. In preparing these tables, we assumed an annual salary of \$8,000 for the employees for whom earnings were missing.

Tables 2A and 2B summarize certain basis statistics on active general employees and police and firemen. Table 2C gives active employee statistical data separately for each participating municipality. As we continue to receive data on an automated basis, we will be able to show year by year changes in this basic employee data.

Overall, the data was usable as received. We recommend that the Board continue to pursue its program of storing all basic information on participants on computer files.

Table 1A  
Number and Average Salaries of Employees in Active Service  
as of June 30, 1980  
By Age and By Years of Service  
GENERAL EMPLOYEES

Age	Total	Years of service										35 and over	Unknown
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 and over	Unknown			
Total	4,051 \$ 9,400	1,343 \$8,700	1,299 \$ 9,300	859 \$ 9,300	269 \$11,000	23 \$11,100	87 \$12,400	23 \$13,300	39 \$11,400	9 \$15,000			
Under 20	16 \$ 8,500	15 \$8,200	--	--	--	--	--	--	--	--	--	1 \$11,900	
20 - 24	165 8,200	150 8,200	15 \$8,600	--	--	--	--	--	--	--	--	--	--
25 - 29	354 9,500	205 9,400	124 9,800	23 \$9,500	--	--	--	--	--	--	--	2 9,000	
30 - 34	361 10,300	168 9,400	120 11,000	47 11,400	5 \$10,500	--	--	--	--	--	--	1 15,900	
35 - 39	329 9,300	149 8,100	115 9,500	50 11,400	13 12,600	--	--	--	--	--	--	2 16,900	
40 - 44	403 9,000	171 7,800	118 8,400	68 11,300	28 12,400	11 \$10,200	--	--	--	5 \$13,300	--	2 13,900	
45 - 49	515 9,000	135 8,200	185 8,900	144 8,600	26 11,700	16 13,100	8 12,400	--	--	--	--	1 27,300	
50 - 54	656 9,300	158 9,000	221 8,600	178 8,700	50 12,200	19 13,200	19 13,900	7 \$11,600	4 \$ 9,900	--	--	--	
55 - 59	706 9,400	133 8,800	222 9,400	198 8,700	73 10,200	36 10,100	25 12,500	8 14,500	11 13,000	--	--	--	
60 - 64	420 9,600	45 9,400	136 9,600	117 9,100	57 9,600	29 10,400	20 10,300	5 13,600	11 12,300	--	--	--	
65 & over	127 10,100	8 7,000	35 9,200	32 10,200	17 11,000	12 10,800	10 12,700	3 13,400	10 9,800	--	--	--	
Unknown	19 9,600	6 8,900	8 9,800	2 10,000	--	--	--	--	3 10,000	--	--	--	

Number and Average Salaries of Employees in Active Service  
as of June 30, 1980

By Age and By Years of Service

POLICE AND FIREMEN

Age	Total	Years of service								
		0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 and over	Unknown
Total	310 \$13,600	70 \$11,500	110 \$12,900	70 \$14,600	31 \$14,800	18 \$18,100	7 \$17,200	2 \$14,300	1 \$12,500	1 \$13,200
20 - 24	17 \$10,300	15 \$10,100	2 \$11,700	--	--	--	--	--	--	--
25 - 29	52 11,900	30 11,400	22 12,600	--	--	--	--	--	--	--
30 - 34	60 13,100	10 12,300	36 13,100	13 \$13,800	--	--	--	--	--	1 \$13,200
35 - 39	65 14,100	5 13,300	21 13,200	32 14,400	7 \$15,500	--	--	--	--	--
40 - 44	29 13,800	1 8,700	8 12,300	12 14,300	8 15,100	--	--	--	--	--
45 - 49	25 15,800	--	6 14,500	3 13,700	6 14,000	9 \$18,300	1 \$18,700	--	--	--
50 - 54	24 14,900	2 15,500	6 13,100	6 15,700	6 14,100	4 17,500	--	--	--	--
55 - 59	24 15,400	1 7,200	6 12,700	2 19,700	3 15,300	4 17,500	6 17,000	2 \$14,300	--	--
60 - 64	6 14,200	--	2 7,700	2 16,600	1 15,500	1 20,900	--	--	--	--
65 & over	5 12,800	5 12,800	--	--	--	--	--	--	--	--
Unknown	3 12,000	1 11,000	1 12,300	--	--	--	--	--	1 \$12,500	--

RHODE ISLAND MUNICIPAL ERS

Table 2a  
Statistical Data on Active Employees  
On June 30, 1980 and 1979  
GENERAL EMPLOYEES

	June 30, 1980	June 30, 1979
Number of covered employees	4,051	3,707
Total annual salary	\$38,009,500	\$35,245,200
Average annual salary	\$9,400	\$9,500
Average age	47	47½
Average years of service	9	9
Number eligible for service retirement	489	425
Number vested but not eligible to retire	911	925

RHODE ISLAND MUNICIPAL ERS

Table 2B

Statistical Data on Active Employees  
On June 30, 1980 and 1979

## POLICE AND FIREMEN

	June 30, 1980	June 30, 1979
Number of covered employees	310	292
Total annual salary	\$4,200,600	\$3,980,800
Average annual salary	\$13,600	\$13,600
Average age	39	39½
Average years of service	10	10
Number eligible for service retirement	27	23
Number vested but not eligible to retire	102	93

RHODE ISLAND MUNICIPAL ERS

Table 2C

Statistical Data on Active Employees on June 30, 1980  
by Municipality

Municipality	Number	Average age	Average service	Average salary
<u>General Employees</u>				
01 Barrington	151	48	9	\$ 8,300
02 Bristol	115	47	10½	9,800
03 Burrillville	97	48½	8½	7,300
07 Cranston	559	48½	10½	8,800
09 E. Greenwich	113	47	8½	7,900
10 E. Providence	309	47½	11½	11,800
14 Hopkinton	26	40½	4½	7,900
15 Jamestown	32	46	10	9,600
16 Johnston	181	49½	10½	8,500
21 Newport	289	43½	9½	9,900
23 N. Kingstown	183	44½	7½	10,400
24 N. Providence	208	45	6	7,800
25 N. Smithfield	79	49½	7½	7,500
26 Pawtucket	691	46½	9	10,200
29 Richmond	11	49	8½	5,700
30 Scituate	64	50	9	7,100
31 Smithfield	124	48	6	7,900
32 S. Kingstown	180	41½	5½	8,800
33 Tiverton	70	49	7½	9,100
34 Warren	73	48	8½	8,400
36 Westerly	9	43	8½	15,700
39 Woonsocket	386	47½	9½	9,600
51 Cranston Housing	11	49	8½	11,300
52 E. Providence Housing	11	53	9	12,100
53 Pawtucket Housing	35	52½	11	12,900
56 Cumberland Housing	7	39	6	11,800
57 Lincoln Housing	6	48	8½	11,900
59 Bristol Housing	5	47½	5½	11,800
65 Burrillville Housing	2	59½	9½	11,000
66 N. Providence Housing	5	42	2½	11,200
67 E. Smithfield Water	3	53	9½	10,500
68 Greenville Water	3	45	5½	13,300
71 Warren Housing	3	50	4	13,800
72 Johnston Housing	4	51½	9	9,300
79 Coventry Housing	5	53	6½	8,200
80 S. Kingstown Housing	1	59½	2½	12,800
<u>Police and Fire</u>				
50 E. Greenwich Fire	11	50	13	19,400
54 E. Greenwich Police	29	37½	8	12,400
55 N. Kingstown P & F	85	41	10½	15,000
58 N. Providence, P & F	21	38	5	11,600
60 Barrington P & F	55	39½	13½	13,400
62 Warren Police	11	38½	13	12,600
63 S. Kingstown P & F	26	39½	9½	13,300
64 Primrose Volunteer Fire	4	24½	11	9,800
73 Scituate Police	16	34	9½	12,900
76 N. Smithfield Police	11	24½	10	12,000
77 Tiverton Fire	16	42	9½	12,800

RHODE ISLAND MUNICIPAL ERS

### III. RETIREE DATA

The data on retired members and beneficiaries included age, sex, monthly benefits, retirement date, option, and type of pension.

The following are significant statistics on the retired group as of June 30, 1980 and 1979:

	June 30, 1980	June 30, 1979
<b>Pensioners:</b>		
Number	1,201	1,096
Average age	69	69½
Average monthly benefit	\$225	\$211
<b>Beneficiaries:</b>		
Number	17	17
Average age	63½	62½
Average monthly benefit	\$247	\$247

Table 3 gives distributions of the 152 pensions awarded in the current year by type of pension and amount. Table 4 does the same for age at retirement.

Table 5 gives distributions for all pensions in force at the end of the fiscal year by type and amount. Table 6 does the same by age.

Table 7 has statistical data on pensioners and beneficiaries by municipality.

The data on retirees was reasonably good for retired employees. However, it was inadequate to be certain that beneficiaries were classified correctly.

The data on terminated employees with vested rights was not adequate to calculate a cost for them.

We again recommend that this information be maintained by this system so that it can be incorporated in the next review.

Table 3  
Pensions Awarded in the Year Ended June 30, 1980  
By Type and By Monthly Amount

Monthly amount	Total	Type of pension		
		Service	Ordinary Disability	Accidental Disability
Total	152	135	16	1
Under \$50	3	3	1	---
\$ 50 - \$ 99	11	10	1	---
100 - 149	14	14	---	---
150 - 199	32	25	7	---
200 - 249	22	17	5	---
250 - 299	12	12	---	---
300 - 349	16	15	1	---
350 - 399	4	4	---	---
400 - 449	10	9	1	---
450 - 499	10	9	1	---
500 - 599	8	7	1	---
600 - 699	4	4	---	---
700 - 799	2	2	---	---
800 - 899	1	1	---	---
900 - 999	1	1	---	---
1,100 - 1,199	1	1	---	---
1,200 - 1,299	1	1	---	---



Table 4  
 Pensions Awarded in the Year Ended June 30, 1980  
 By Type and by Age on Effective Date

Type of pension	Age on Effective Date		Total
	15 - 19	20 - 29	
Accidental Disability	1	1	2
Ordinary Disability	1	1	2
Service	1	1	2
Total	16	16	32
Type of pension	Age on Effective Date		Total
	15 - 19	20 - 29	
Accidental Disability	1	1	2
Ordinary Disability	1	1	2
Service	1	1	2
Total	152	135	287
Type of pension	Age on Effective Date		Total
	15 - 19	20 - 29	
Accidental Disability	1	1	2
Ordinary Disability	1	1	2
Service	1	1	2
Total	152	135	287
Type of pension	Age on Effective Date		Total
	15 - 19	20 - 29	
Accidental Disability	1	1	2
Ordinary Disability	1	1	2
Service	1	1	2
Total	152	135	287

Table 5  
 Pensions in Force on June 30, 1980  
 By Type and by Monthly Amount

Type of pension	Monthly Amount		Total
	\$ 50 - \$ 99	\$ 100 - \$ 299	
Accidental Disability	1	1	2
Ordinary Disability	1	1	2
Service	1	1	2
Total	1,218	1,083	2,301
Type of pension	Monthly Amount		Total
	\$ 50 - \$ 99	\$ 100 - \$ 299	
Accidental Disability	1	1	2
Ordinary Disability	1	1	2
Service	1	1	2
Total	1,218	1,083	2,301
Type of pension	Monthly Amount		Total
	\$ 50 - \$ 99	\$ 100 - \$ 299	
Accidental Disability	1	1	2
Ordinary Disability	1	1	2
Service	1	1	2
Total	1,218	1,083	2,301

Table 6

Pensions in Force on June 30, 1980  
By Type and By Age

Age on June 30, 1980	Total	Type of pension			Beneficiary
		Service	Ordinary Disability	Accidental Disability	
Total	1,218	1,083	84	34	17
30 - 34	3	--	1	2	--
35 - 39	4	--	2	1	1
40 - 44	7	--	3	3	1
45 - 49	16	1	12	2	1
50 - 54	24	8	9	6	1
55 - 59	76	52	16	5	3
60 - 64	223	197	18	6	2
65 - 69	331	312	12	5	2
70 - 74	268	258	7	2	1
75 - 79	175	167	3	2	3
80 - 84	65	62	1	--	2
85 - 89	23	23	--	--	--
90 - 94	3	3	--	--	--

RHODE ISLAND MUNICIPAL ERS

Table 7  
Pensioner and Beneficiary, Statistical Data as of June 30, 1980  
by Municipality

Municipality	Number	Average Age	Average Monthly Benefit
<u>General Employees</u>			
01 Barrington	59	65½	\$243
02 Bristol	32	68	234
03 Burrillville	6	65½	202
07 Cranston	213	70	197
09 E. Greenwich	15	64	259
10 E. Providence	124	69	241
14 Hopkinton	7	74½	194
15 Jamestown	7	71	197
16 Johnston	21	65	199
21 Newport	103	68	290
23 N. Kingstown	36	70½	183
24 N. Providence	45	68	196
25 N. Smithfield	16	70½	110
26 Pawtucket	224	70½	201
29 Richmond	--	--	--
30 Scituate	20	71½	221
31 Smithfield*	25	66½	252
32 S. Kingstown	30	69	195
33 Tiverton	19	71½	165
34 Warren	24	68½	200
36 Westerly	7	64½	628
39 Woonsocket	120	69	196
51 Cranston Housing	1	70½	265
52 E. Providence Housing	1	69½	185
53 Pawtucket Housing	9	70	243
56 Cumberland Housing	--	--	--
57 Lincoln Housing	--	--	--
59 Bristol Housing	--	--	--
65 Burrillville Housing	--	--	--
66 N. Providence Housing	--	--	--
67 E. Smithfield Water	1	65½	206
68 Greenville Water	1	61½	261
71 Warren Housing	--	--	--
72 Johnston Housing	--	--	--
79 Coventry Housing	--	--	--
80 S. Kingstown Housing	--	--	--
<u>Police and Fire</u>			
50 E. Greenwich Fire	--	--	--
54 E. Greenwich Police	6	65½	280
55 N. Kingstown P & F	14	62½	424
58 N. Providence P & F	5	59½	336
60 Barrington P & F	13	59	452
62 Warren Police	6	59½	441
63 S. Kingstown P & F	4	60	363
64 Prudence Volunteer Fire	1	66½	301
73 Scituate Police	--	--	--
76 N. Smithfield Police	1	66½	725
77 Tiverton Fire	2	69½	565

RHODE ISLAND MUNICIPAL ERS

\*Includes 2 pensioners formerly covered by the Smithfield Police and Fire Plan.

IV. RETIREMENT FUND

The State maintains the Municipal Employees' Retirement Fund. The Retirement Board provided us with financial statements as of June 30, 1980.

The Fund receives all member and employer contributions. The assets are invested by the State Investment Commission, with the income being added to the Fund and available for reinvestment.

Payments out of the Fund are primarily for refunds of employee contributions, lump sum death benefits, and pension payments. Contribution refunds occur when an employee terminates employment and elects to take a refund, or when he dies after retirement without having received payments from the Fund equal to his total contributions.

Table 8 gives a summary of income and expenditures for the year ended June 30, 1980.

At June 30, 1980, assets totalled \$65.0 million. Table 9 gives a breakdown of the assets. About 72 per cent of the fund was invested in fixed income securities such as bonds and notes.

The financial statements indicate that 88 per cent of the assets relate to general employees, and 12 per cent are for police and firemen. There is also a small unallocated reserve for unclaimed benefits. Table 10 shows the allocation of assets in detail.

Table 8

Summary Statement of Income and Expenses  
For Year Ended June 30, 1980

Employer contributions	\$4,919,253	
Member contributions	<u>2,794,720</u>	
Total contributions		\$7,713,973
Net miscellaneous items		8,914
Investment income:		
Dividends	\$ 967,079	
Interest	3,919,632	
Sale of options	11,901	
Capital gains	17,138	
Less: Investment expense	<u>15</u>	
Net investment income		<u>4,915,736</u>
Total income available for benefit payments		\$12,638,622
Benefit payments:		
Pension benefits	\$3,250,477	
Death benefits	65,600	
Contribution refunds	<u>461,457</u>	
Total benefit payments		<u>3,777,534</u>
Excess of income over expenses		<u>\$ 8,861,088</u>

Note: Detail figures may not add to totals shown because of rounding.

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Table 9

Assets as of June 30, 1980

Cash	\$ 212,500
Account receivable	827,545
Investments	
Government bonds	\$17,320,775
Corporate bonds	19,650,000
Common and preferred stocks	17,967,801
Securities of deposits	7,550,000
Commercial Paper	2,221,925
(Loss) Unamortized premiums and discounts	<u>(625,225)</u>
Total assets	<u>\$32,999,376</u>

Note: Detail figures may not add to totals because of rounding.

RHODE ISLAND BENEFICIAL FRS

Table 10

Allocation of Assets by Plan as of June 30, 1980

Common Employees:	
Pension liability	\$11,600,000
Employer liability	7,000,000
Member liability	13,440,014
Total Common Employees liability	<u>\$32,040,014</u>
Participating Plan:	
Pension liability	\$0,000,000
Employer liability	1,200,000
Member liability	2,526,416
Total Participating Plan liability	<u>3,726,416</u>
Unallocated	
Unallocated liability	0,000,000
Total assets	<u>\$35,766,430</u>

Note: Detail figures may not add to totals because of rounding.

RHODE ISLAND BENEFICIAL FRS

V. ACTUARIAL ASSUMPTIONS AND METHODS

The actual cost of a pension plan consists of the benefit payments and administrative expenses less any investment earnings. An actuarial cost method aims to budget this cost so as to establish a reasonable relationship between employer pension contributions and the employee services that give rise to the pension obligations. The result is an employer contribution which anticipates future costs. A fund accumulates which earns investment income, thus reducing the ultimate cost.

Calculating the appropriate contribution requires that projections, and therefore assumptions, be made as to future experience. Some items, such as mortality rates, can be predicted fairly accurately. Others, such as future salary increases, are, of course, subject to considerable variation. It will be useful to identify the assumptions used, particularly since broad questions of fiscal policy are implicit in certain of the assumptions. These assumptions are the same as those used in our previous actuarial valuation.

Mortality Rates

We assumed that mortality rates would conform with the 1971 Group Annuity Mortality Table. This is a recently published table of pension plan mortality, and we believe it will be a reasonable basis for experience under the System. It is one of the tables in general use in valuing pension plans in the United States. Table 11 gives some life expectancies after retirement.

Salary Projections

The System provides benefits that are based on the three highest consecutive years' salary for each employee. To assume that each employee's salary will be the same in the three years before retirement as it is today would seriously understate the System's cost. Accordingly, we use a salary projection to anticipate future increases in earnings. Additionally, it is appropriate to compute pension normal costs which are level

as a percentage of payroll rather than level as a dollar amount, and a salary projection is also used for this purpose. If the costs were calculated as a level dollar amount for an individual, the cost might be a high per cent of his pay when he was young and a lower per cent of his higher salary at a later age. By use of a salary projection, the contribution for an individual, all other things remaining the same, tends to stay at the same percentage over the years.

How to project future salaries is a major policy question. To what extent should one seek to anticipate, through present contributions, the full impact on pension costs of future salary changes?

For purposes of our cost determination, we have made a moderate allowance for general salary increases in the future. We also reflect salary increases as the result of longevity and promotions. The scale has relatively greater increases at the younger ages to correspond with salary schedules. The salary scale factors are:

<u>Age</u>	<u>Present Salary as a % of Age 65 Salary</u>	<u>Annual Increases (Rate %)</u>
20	17.45	4.84
25	22.07	4.75
30	27.76	4.59
35	34.62	4.39
40	42.68	4.08
45	51.76	3.72
50	61.77	3.45
55	72.98	3.33
60	86.08	3.16

As will appear, the problem of salary projection has a parallel in the question of choosing an assumption as to future investment yield and the two are somewhat interrelated.

Termination Rates

In any employee group, many employees will terminate and receive less than full benefits. Employees terminating with less than ten years of active service, for example, receive only a refund of their contributions. The termination assumption anticipates the release of municipal funds that may have been accumulated for such people, thus resulting in a reduced ongoing cost.

We assumed that terminations each year from all causes except retirement would be as follows:

Age	Death*	General Employees (Rate %)			Total*
		Disability	Withdrawal		
20	.05	.06	21.20		21.31
25	.06	.09	15.80		15.95
30	.08	.11	11.60		11.79
35	.11	.15	8.40		8.66
40	.16	.22	6.20		6.58
45	.29	.36	4.20		4.85
50	.53	.61	2.60		3.73
55	.85	1.01	--		1.86
60	1.31	--	--		1.31

15% of the above disability rates are service-connected.

Age	Death*	Optional Police and Fire (Rate %)			Total*
		Disability	Withdrawal		
20	.05	.12	--		.17
25	.06	.17	--		.23
30	.08	.22	--		.30
35	.11	.29	--		.41
40	.16	.44	--		.60
45	.29	.72	--		1.01
50	.53	1.21	--		1.74
55	.85	--	--		.85

50% of the above disability rates are service-connected.

\*Rates shown are for men, rates for women are slightly lower.  
NOTE: Detail figures may not add to totals shown because of rounding.

Retirement Ages

The System provides unreduced benefits as early as age 58 for general employees and 55 for police and firemen. Long service employees may get unreduced or reduced benefits at even younger ages. We have assumed general employees will retire at age 65, or completion of 10 years of service if later. Police and firemen retirements are assumed to occur when the officer is both age 60 and has 10 years of service. In any case where the employee already meets these assumed conditions of age and service, it is projected that he or she will retire immediately.

Investment Return

Investment return has a major effect on the ultimate cost of a retirement system. In general, if a system is actuarially funded (so that it has a substantial reserve which is earning an investment yield), a yield of 6 per cent - in contrast to a 5 per cent yield - will reduce costs by 16-20 per cent.

An assumption must be made concerning future yields. It must be a rate that will be valid for the long-run that is, not only for money invested today or next year, but also for money invested 10 and 20 years from now.

We selected an investment return assumption of 6 1/2 per cent per year for our calculation. This assumption takes account of probable moderate long-term inflation but is not tied directly to the higher rates currently available.

Cost Method

We have used the "entry age normal cost method of funding." This method spreads the cost of the benefits to be provided to an individual as a level percentage of his pay from his date of employment to his

assumed date of retirement. The normal cost for the entire system is equal to the sum of the normal costs for all participants. In a rough sense, it can be visualized as the cost of benefits earned during the current year.

The actuarial liability represents the amount by which the future normal costs fall short of meeting the cost of future benefit payments. It can also be viewed, roughly, as the value of benefits accrued for service prior to the valuation date.

#### Overall Actuarial Basis

We believe that our assumptions, taken as a whole, are reasonable. To the extent that actual experience is better or worse than assumed, gains or losses will develop, with appropriate decreases or increases in future costs.

#### Missing Data

It was also necessary to make certain "non-actuarial" assumptions where data was missing or incomplete. In all cases, we assumed such individuals had the same characteristics as other participants, taking into account the known characteristics (e.g. male members age 37 with unknown service were assumed to have the same service distribution as male members age 37 with known service).

Table 11  
Expected Number of Years of Life  
Remaining at Specified Ages

Age	Male	Female
55	22.7	28.0
56	21.9	27.1
57	21.1	26.2
58	20.3	25.3
59	19.5	24.4
60	18.8	23.5
61	18.0	22.6
62	17.3	21.8
63	16.5	20.9
64	15.8	20.1
65	15.1	19.2
66	14.4	18.4
67	13.8	17.6
68	13.1	16.8
69	12.5	16.0
70	11.9	15.3
71	11.3	14.5
72	10.8	13.8
73	10.3	13.1
74	9.7	12.4
75	9.2	11.7

1971 Group Annuity Mortality Table.

VI. RESULTS OF VALUATION

General Employees

The costs for general employees as of June 30, 1980, developed as follows:

	<u>Amount</u>	<u>% of Payroll</u>
	\$38,009,400	--
(1) Participating payroll	1,678,300	4.4%
(2) Employer normal cost	17,854,800	--
(3) Unfunded actuarial liability		
(4) Amortization of unfunded actuarial liability	2,118,700	5.6
(5) Total annual cost if paid July 1, 1980 = (2) + (4)	3,797,000	10.0
(6) Total annual cost if paid in December = (5) plus ½ year interest	3,920,300	10.3

The calculations as completed assume that the employer contribution will be paid into the retirement fund at the beginning of each year, and will start to earn interest from that date. In fact, the money is deposited in December. Thus, approximately half a year's interest is lost, and the contribution must be increased to reflect this. Line 6, above, includes this adjustment.

Police and Firemen

The costs for police and firemen as of June 30, 1980, developed as follows:

	<u>Amount</u>	<u>% of Payroll</u>
(1) Participating payroll	\$4,200,500	--
(2) Employer normal cost	346,500	8.2%
(3) Unfunded actuarial liability	2,178,200	--
(4) Amortization of unfunded actuarial liability	202,600	4.8
(5) Total annual cost if paid July 1, 1980 = (2) + (4)	549,100	13.1
(6) Total annual cost if paid in December = (5) plus ½ year interest	566,900	13.5

Note: Detail figures may not add to totals shown because of rounding.

The calculations as completed assume that the employer contribution will be paid into the retirement fund at the beginning of each year, and will start to earn interest from that date. In fact, the money is deposited in December. Thus about half a year's interest is lost, and the contribution must be increased to reflect this. Line 6, above, includes this adjustment.

Comments on Results

The costs reported above are for the System as a whole. The principal cost factors for each municipality are shown in Table 12. (The total of the unfunded actuarial liabilities on Table 12 exceeds the total shown above because some municipalities have assets in excess of their actuarial liabilities -- that is, they are "overfunded." Table 12 shows zero balances for these municipalities, but for the System as a whole the overfunding of these municipalities reduces the unfunded actuarial liability.)

The amortization shown on line 4 is the total of the amortization requirements for the individual municipalities over a period of 25 years from the date the municipality joined the System. The earliest membership date is 1957; those original groups have two years remaining on their amortization program. Other groups have more years left. On a dollar-weighted basis, the remaining amortization period is about 11 years for general employees and 17 years for police and firemen. That is, the total amortization payment reported above would pay off the total unfunded actuarial liability over that period of time.

Looking at the total cost figures compared to the previous year, it can be seen that for general employees, costs dropped by 0.3 per cent of payroll (from 10.3 per cent to 10.0 per cent). The normal cost percentage remained stable at 4.4 per cent and there was a small decrease in the amortization payment when expressed as a per cent of payroll (from 5.9 per cent



to 5.6 per cent). Because the amortization payments are calculated as level dollar payments, they will tend to decrease as a percentage of a rising payroll from year to year. The dollar-weighted aggregate amortization period declined by one year for the general employee group.

For police and firemen costs dropped by 1.1 per cent of payroll (from 14.2 per cent to 13.1 per cent). The normal cost percentage remained stable at 8.2 per cent and the amortization payment as a percent of payroll declined by 1.2 per cent (from 6.0 per cent to 4.8 per cent). (Detail percentages do not add because of rounding.) The same primary reason for this change as indicated above applies to the police and fire group. The dollar-weighted aggregate amortization period declined by one year for this group also.

Table 13 shows the recommended rates for each participating municipality. These rates are to be effective for the year beginning July 1, 1982. The total rates are separated into normal cost and past service amortization components. For comparison, the 1981 and 1980 recommended total rates are also shown. In addition, the recommended remaining amortization periods for each municipality are presented. For the year beginning July 1, 1982, the rate for Hopkinton (code 14) reflects the adoption of the "2% Plan." The Town of Richmond is the only new entering group as of June 30, 1980.

#### Value of Vested Benefits

In private pension plans, it is customary for the actuary to provide the "value of vested benefits." This figure is used by accountants in preparing financial statements, both as a disclosure item and as a factor in determining the pension expense charge, in accordance with Opinion No. 8 of the Accounting Principles Board of the American Institute of Certified Public Accountants, "Accounting for the Cost of Pension Plans." While we recognize that the System may not be covered by this Opinion, a brief discussion of this subject may be helpful.

The "value of vested benefits" represents the single premium value under the plan's investment income and mortality assumptions of all benefits to present and former employees which do not have future employment by the employee as a required condition for their receipt. Thus it includes the present value of an immediate or deferred pension for all pensioners, beneficiaries, vested former employees, and active participants with at least ten years of service. For active employees with less than ten years of service, only the accumulated employee contributions are included, since that is all such employees would receive if they had no further employment.

For the Municipal Employees' Retirement System, the value of vested benefits is as follows:

	<u>General Employees</u>	<u>Police and Firemen</u>
Active members	\$48,925,000	\$5,183,900
Retired members	<u>26,907,300</u>	<u>2,467,600</u>
Total value of vested benefits	\$75,832,300	\$7,651,500
Assets	<u>57,088,200</u>	<u>7,910,100</u>
Unfunded value of vested benefits	<u>\$18,744,100</u>	<u>\$ --</u>

Table 12 includes the unfunded vested benefits for each municipality.

#### Overall Status of System

Although the costs for some municipalities differ substantially from those reported last year, annual valuations will tend to minimize the magnitude of experience fluctuations from year to year. We recommended the continuation of this practice and look forward to working with the Retirement Board in this effort.

Table 12  
Actuarial Cost Factors as of June 30, 1982  
by Municipality

Municipality	Year Joined	Employer Normal Cost	Unfunded Actuarial Liability	Value of Unfunded Vested Benefits
<b>General Employees</b>				
01 Barrington	1957	\$ 57,800	\$ 847,200	\$ 947,100
02 Bristol	1957	53,600	33,500	66,900
03 Burrillville	1968	35,000	315,700	458,600
07 Cranston	1963	217,900	2,994,400	3,304,200
09 E. Greenwich	1957	41,100	--	--
10 E. Providence	1961	142,200	1,538,200	1,628,200
14 Hopkinton	1969	9,200	59,700	38,200
15 Jamestown	1964	13,100	54,800	103,700
16 Johnston	1968	79,600	351,000	181,300
21 Newport	1966	90,300	2,564,500	2,956,900
23 N. Kingstown	1957	74,300	--	--
24 N. Providence	1961	74,400	732,700	666,800
25 N. Smithfield	1964	34,600	--	--
26 Pawtucket	1962	303,400	4,891,000	4,982,200
29 Richmond	1979	3,800	--	--
30 Scituate	1967	20,900	345,900	290,400
31 Smithfield	1959	54,700	369,900	295,000
32 S. Kingstown	1957	71,500	--	--
33 Tiverton	1964	38,000	411,600	506,400
34 Warren	1957	29,300	181,700	196,000
36 Westerly	1976	4,800	614,100	610,900
39 Woonsocket	1962	165,700	1,663,500	1,746,100
51 Cranston Housing	1968	5,900	--	--
52 E. Providence Housing	1968	9,400	46,700	41,200
53 Pawtucket Housing	1968	22,200	--	55,000
56 Cumberland Housing	1969	2,800	7,400	6,800
57 Lincoln Housing	1969	3,600	--	12,000
59 Bristol Housing	1970	3,200	--	--
65 Burrillville Housing	1972	1,800	11,000	15,000
66 N. Providence Housing	1973	2,500	--	--
67 E. Smithfield Water	1973	1,700	28,100	59,600
68 Greenville Water	1973	1,700	37,800	30,100
71 Warren Housing	1975	2,300	6,700	--
72 Johnston Housing	1976	2,600	46,100	61,500
79 Coventry Housing	1977	2,600	28,800	15,400
80 S. Kingstown Housing	1977	800	--	--
<b>Police and Fire</b>				
50 E. Greenwich Fire	1967	23,300	144,900	57,800
54 E. Greenwich Police	1968	30,200	223,400	59,600
55 N. Kingstown P & F	1968	103,600	631,600	--
58 N. Providence P & F	1968	25,800	166,800	41,700
60 Barrington P & F	1970	56,800	405,300	--
62 Warren Police	1970	21,300	327,300	206,600
63 S. Kingstown P & F	1971	37,200	181,000	--
64 Primrose Volunteer Fire	1972	2,800	--	--
73 Scituate Police	1976	13,500	--	--
76 N. Smithfield Police	1977	10,100	31,100	--
77 Tiverton Fire	1977	21,900	132,800	30,700

Table 13  
Rhode Island Municipal Employees Retirement System  
Recommended Contribution Rates

Municipality	YEAR BEGINNING JULY 1, 1982				TOTAL RATE YEAR BEGINNING J	
	Amortization Period	Normal Cost	Past Service	Total Rate	1981	1982
<b>General Employees</b>						
01 Barrington	10	4.77%	9.14%	13.91%	13.39%	12.8
02 Bristol	2	4.89	1.58	6.47	9.91	10.8
03 Burrillville	13	5.10	5.04	10.14	10.19	11.4
07 Cranston	10	4.58	8.23	12.81	12.99	11.8
09 E. Greenwich	2	4.76	--	4.76	4.93	6.8
10 E. Providence	6	4.03	8.43	12.46	12.78	13.2
14* Hopkinton	14	4.59	3.11	7.70	7.62	8.7
15 Jamestown	9	4.40	2.59	6.99	4.43	7.9
16 Johnston	13	5.32	2.56	7.88	7.47	7.5
21 Newport	22	3.26	7.54	10.80	10.14	11.3
23 N. Kingstown	2	4.05	--	4.05	4.42	6.0
24 N. Providence	22	4.73	3.80	8.53	10.44	10.1
25 N. Smithfield	9	5.99	--	5.99	6.15	6.6
26 Pawtucket	22	4.44	5.83	10.27	10.75	11.2
29 Richmond	24	6.22	--	6.22	--	--
30 Scituate	13	4.74	8.58	13.32	15.22	17.3
31 Smithfield	7	5.75	6.65	12.40	10.97	12.4
32 S. Kingstown	2	4.65	--	4.65	4.67	4.8
33 Tiverton	9	6.16	9.41	15.57	14.18	15.3
34 Warren	6	4.96	5.96	10.92	12.62	11.8
36 Westerly	22	3.50	36.53	40.03	30.02	33.1
39 Woonsocket	7	4.62	7.94	12.56	12.99	12.6
51 Cranston Housing	13	4.89	--	4.89	5.29	5.5
52 E. Providence Housing	13	7.30	3.99	11.29	11.74	12.1
53 Pawtucket Housing	13	5.08	--	5.08	5.54	7.3
56 Cumberland Housing	14	3.51	0.99	4.50	5.03	4.8
57 Lincoln Housing	14	5.18	--	5.18	4.43	6.3
59 Bristol Housing	15	5.60	--	5.60	4.86	5.0
65 Burrillville Housing	22	8.45	4.28	12.73	13.13	12.0
66 N. Providence Housing	22	4.66	--	4.66	6.94	9.3
67 E. Smithfield Water	22	5.58	7.44	13.02	14.92	15.5
68 Greenville Water	22	4.41	8.15	12.56	15.42	17.5
71 Warren Housing	20	5.75	1.51	7.26	5.10	5.4
72 Johnston Housing	22	7.20	10.49	17.69	19.51	19.4
79 Coventry Housing	22	6.58	5.92	12.50	13.07	12.7
80 So. Kingstown Housing	22	6.25	--	6.25	6.84	6.8
<b>Police and Fire</b>						
50 E. Greenwich Fire	22	11.27	5.70	16.97	17.65	17.4
54 E. Greenwich Police	22	8.69	5.25	13.94	15.00	16.7
55 N. Kingstown P&F	18	8.37	4.59	12.96	13.76	13.9
58 N. Providence P&F	14	10.45	7.05	17.50	23.60	25.8
60 Barrington P&F	22	7.98	4.64	12.62	14.39	14.0
62 Warren Police	22	8.33	10.43	18.76	20.16	21.4
63 S. Kingstown P&F	9	7.59	5.20	12.79	14.00	14.5
64 Primrose Volunteer Fire	17	7.42	--	7.42	11.73	11.2
73 Scituate Police	21	7.82	--	7.82	7.80	8.30
76 No. Smithfield Police	22	7.27	1.79	9.06	9.50	10.3
77 Tiverton Fire	22	9.81	4.85	14.66	16.52	17.10

\*" 1 2/3% Plan" for 1981 and 1980 "2% Plan" for 1982  
RHODE ISLAND MUNICIPAL ERS

ATLANTA  
CHICAGO  
CLEVELAND  
DALLAS  
DENVER  
HARTFORD  
HOUSTON  
LOS ANGELES  
NEW ORLEANS  
NEW YORK  
PHOENIX  
SAN FRANCISCO  
WASHINGTON, D.C.  
TORONTO

April 24, 1981

MUNICIPAL EMPLOYEES' RETIREMENT SYSTEM OF THE STATE OF RHODE ISLAND  
CERTIFICATE OF ACTUARIAL VALUATION

This is to certify that we have prepared an actuarial valuation of the plan as of June 30, 1980.

The certificate contains the following attached exhibits:

EXHIBIT I - Actuarial Cost for Year Beginning July 1, 1980

- A. General employees
- B. Police and firemen

EXHIBIT II - Actuarial Assumptions and Cost Method

EXHIBIT III - Summary of Plan Provisions

To the best of my knowledge the information supplied in this actuarial valuation is complete and accurate (except as noted in Exhibit I) and in my opinion the assumptions used in the aggregate (a) are reasonably related to the experience of the plan and to reasonable expectations and (b) represent my best estimate of anticipated experience under the plan.

MARTIN E. SEGAL COMPANY

*Joseph C Denty*

By: Joseph C. Denty, A.S.A.  
Actuary

EXHIBIT I

ACTUARIAL COST FOR YEAR BEGINNING JULY 1, 1980

A. GENERAL EMPLOYEES

The valuation was made with respect to the following data supplied to us by the Retirement Board:

- a. 4,051 active participants (including 1,400 fully vested) with total annual salaries of \$38,009,500
- b. 1,166 pensioners (including 6 beneficiaries of deceased pensioners and active employees)

The cost factors as of the valuation date are as follows:

1. Total normal cost .....	\$ 3,960,100
2. Projected employee contributions .....	2,281,800
3. Employer normal cost .....	1,678,300
4. Actuarial liability - total .....	74,943,000
Active employees .....	\$48,035,700
Pensioners (including beneficiaries of deceased pensioners and active employees) .....	26,907,300
5. Assets .....	57,088,200
6. Unfunded actuarial liability .....	17,854,800

Liability for accrued vested benefits: \$75,832,300

Note: Included are 28 active employees unknown as to age, service or both. Status of beneficiaries was unclear. No data was provided on terminated vested employees.

EXHIBIT I  
 ACTUARIAL COST FOR YEAR BEGINNING JULY 1, 1980  
 B. POLICE AND FIREMEN

The valuation was made with respect to the following data supplied to us by the Retirement Board:

- a. 310 active participants (including 129 fully vested) with total annual salaries of \$4,200,600
- b. 52 pensioners (including 11 beneficiaries of deceased pensioners and active employees)

The cost factors as of the valuation date are as follows:

1. Total normal cost .....	\$ 640,300
2. Projected employee contributions .....	293,800
3. Employer normal cost .....	346,500
4. Actuarial liability - total .....	10,088,300
Active employees .....	\$7,620,700
Pensioners (including beneficiaries of deceased pensioners and active employees) .....	2,467,600
5. Assets .....	7,910,100
6. Unfunded actuarial liability .....	2,178,200

Liability for accrued vested benefits: \$7,651,500

Note: Included are 4 active employees unknown as to age, service or both. Status of beneficiaries was unclear. No data was provided on terminated vested employees.

EXHIBIT II  
 ACTUARIAL ASSUMPTIONS AND COST METHOD

Mortality rates -- 1971 Group Annuity Mortality Table

Disability mortality before age 65 -- Age 65 mortality under stipulated table.

Termination rates before retirement:

General Employees (Rate %)

<u>Age</u>	<u>Death*</u>	<u>Disability</u>	<u>Withdrawal</u>	<u>Total*</u>
20	.05	.06	21.20	21.31
25	.06	.09	15.80	15.95
30	.08	.11	11.60	11.79
35	.11	.15	8.40	8.66
40	.16	.22	6.20	6.58
45	.29	.36	4.20	4.85
50	.53	.61	2.60	3.73
55	.85	1.01	--	1.86
60	1.31	--	--	1.31

15% of the above disability rates are service-connected.

Optional Police and Fire (Rate %)

<u>Age</u>	<u>Death*</u>	<u>Disability</u>	<u>Withdrawal</u>	<u>Total*</u>
20	.05	.12	--	.17
25	.06	.17	--	.23
30	.08	.22	--	.30
35	.11	.29	--	.41
40	.16	.44	--	.60
45	.29	.72	--	1.01
50	.53	1.21	--	1.74
55	.85	--	--	.85

50% of the above disability rates are service-connected.

\*Rates shown are for men; rates for women are slightly lower.

NOTE: Detail figures may not add to totals shown because of rounding.

Salary scale:

Age	Present salary as a percent of salary at 65	Annual increase (Rate %)
	17.45	4.84
20	22.07	4.75
25	27.76	4.59
30	34.62	4.39
35	42.68	4.08
40	51.76	3.72
45	61.77	3.45
50	72.98	3.33
55	86.08	3.16
60		

Includes allowance for inflation of 3% per year.

Unknown characteristics of employees: Same as those exhibited by employees with known characteristics. Unknown salary is assumed to be \$8,000.  
 Retirement age -- General Employees: 65, or completion of service requirement if later. Optional Police and Fire: 60, or completion of service requirement if later  
 Percent married -- Social Security awards during 1972  
 Net investment return -- 6½%  
 Valuation of assets -- At amortized book value for bonds and at cost for stocks  
 Cost method -- Entry age normal cost

EXHIBIT III

SUMMARY OF PLAN PROVISIONS

Service pension

	<u>General Employees</u>		<u>Police and Firemen</u>	
Age requirement	58	None	55	None
	or		or	
Service requirement:	10 yrs.	30 yrs.	10 yrs.	25 yrs.

Amount: 2% of final average salary per year of service to a maximum of 75%. Final average salary is defined as the average of compensation earned during the highest 3 consecutive years prior to termination. Retirement is mandatory at age 70. For police and firemen, mandatory retirement is at age 65.

Early retirement (police and firemen only)

Age requirement: 50  
 Service requirement: 20 years  
 Amount: Regular pension accrued, reduced by 6% for each year of age less than 55.

Disability

Non-occupational:

Age requirement: None  
 Service requirement: 5 years  
 Amount: 2% of final average salary at disability per year of service (but not less than 20%), payable immediately.

Occupational:

Age requirement: None  
 Service requirement: None  
 Amount: 66 2/3% of final salary, payable immediately.

Vesting

Age requirement: None  
 Service requirement: 10 years  
 Amount: Regular pension accrued, payable at age 58

Pre-retirement death benefits

Lump sum benefit:

Age requirement: None  
 Service requirement: None  
 Amount: (a) \$400 per year of service to a maximum of \$8,000 and with a minimum of \$2,000.  
 (b) Refund of employee contributions.

Spouse's benefit (applicable only if elected by employee):

Age requirement: 60 or 55  
10 yrs. or 20 yrs.

Service requirement:  
Amount: Benefit employee would have received had he retired the day before he died and elected the joint and survivor option.

Police and firemen's survivor's benefit:

Age requirement: None  
Service requirement: None  
Amount: 30% of final average salary to the spouse plus 10% to each child under age 18

Occupational death benefit:

Age requirement: None  
Service requirement: None  
Amount: (a) 50% of salary to spouse or children under age 18, less workmen's compensation. Police and fire also receive 10% for each child under 18 to a maximum of 66 2/3%.  
(b) Refund of employee contributions.

#### Post-retirement death benefits

Lump sum benefit:

- (a) 100% of employee contributions, less benefits paid.
- (b) Pre-retirement death benefit, reduced 25% per year of retirement, but not less than \$2,000.

Police and firemen's survivors benefit:

Same as pre-retirement

#### Employee contribution rate:

6% for general employees, 7% for police and firemen, until 75% benefit is accrued.

#### Available options:

Joint and survivor with 50% or 100% continued to the beneficiary after the death of the employee.

## Financial Statements

Comparative Financial Balance Sheet

	<u>June 30</u>	
	<u>1980</u>	<u>1979</u>
<u>Assets</u>		
Cash	\$ 212,491	\$ 295,146
Cash	10	10
Accrued Interest Receivable	827,595	698,636
Investments (At Amortized Book Value for Bonds and Cost of Stocks)	<u>63,960,376</u>	<u>55,145,592</u>
Total Assets	<u>\$ 65,000,472</u>	<u>\$ 56,139,384</u>
<u>Liabilities &amp; Reserves</u>		
<u>Current Liabilities</u>		
Unclaimed Benefits	\$ 9,054	\$ 4,569
<u>Reserves-General Employees</u>		
Members Contribution	13,440,614	12,232,436
Employer's Accumulation	2,011,842	3,084,763
Retirement	<u>41,635,645</u>	<u>34,161,794</u>
Total Reserves-General Employees	<u>57,088,101</u>	<u>49,478,993</u>
<u>Reserves-Police and Fire</u>		
Members Contribution	2,026,410	1,770,141
Employer's Accumulation	1,145,940	635,843
Retirement	<u>4,730,967</u>	<u>4,249,838</u>
Total Reserves Police & Fire	<u>7,903,317</u>	<u>6,655,822</u>
Total Liabilities & Reserves	<u>\$ 65,000,472</u>	<u>\$ 56,139,384</u>

Analysis of Revenue & Expenditures  
Fiscal Year Ended - June 30, 1980

<u>REVENUES</u>	<u>General Employees</u>		<u>Police &amp; Fire</u>		<u>Total</u>
	<u>Amount</u>	<u>%</u>	<u>Amount</u>	<u>%</u>	
Member Contributions	\$ 2,482,907	22.30	\$ 311,813	20.24	\$ 2,794,720
Employer's Contributions	4,283,934	38.48	635,319	41.24	4,919,253
Investment Earnings	4,324,859	38.86	590,871	38.36	4,915,730
Other	39,977	00.36	2,445	00.16	42,422
Total Revenues	<u>\$ 11,131,677</u>	<u>100.00</u>	<u>\$ 1,540,448</u>	<u>100.00</u>	<u>\$ 12,672,125</u>
<u>EXPENDITURES</u>					
Monthly Pensions	\$ 2,862,101	25.71	219,240	14.23	3,081,341
Survivor Benefits			36,712	02.38	36,712
Death Benefits	198,025	01.78			198,025
Refunds of Contributions	430,243	03.87	31,214	02.03	461,457
Other	33,502	00.30			33,502
Total Expenditures	<u>\$ 3,523,871</u>	<u>31.66</u>	<u>\$ 287,166</u>	<u>18.64</u>	<u>\$ 3,811,037</u>
Excess Revenues Over Expenditures to Reserves	\$ 7,607,806	68.34	\$ 1,253,282	81.36	\$ 8,861,088

Distribution of Excess Revenue

UNCLAIMED BENEFITS	\$ 4,486
<u>GENERAL EMPLOYEES</u>	
Members' Contribution Reserve	\$ 2,074,068
Employees' Accumulated Reserve	4,175,463
Retirement Reserve	<u>1,353,790</u>
<u>POLICE &amp; FIRE</u>	
Member Contribution Reserve	286,611
Employers' Accumulated Reserve	630,844
Retirement Reserve	<u>335,826</u>
Total Distribution	<u>\$ 8,861,088</u>

Analysis of Investment Income  
Fiscal Year Ended - June 30, 1980

Investment Income - Interest

	\$ 827,595	
<u>Add:</u>	<u>698,636</u>	
Accrued Interest June 30, 1980		
Accrued Interest July 1, 1979	\$ 128,959	
	<u>49,345</u>	
Discounts Amortized		
<u>Total Additions</u>		<u>178,304</u>
<u>TOTAL</u>		<u>\$4,015,468</u>
<u>Less:</u>		<u>95,835</u>
Accrued Interest Purchased	90,714	
Premiums Amortized	<u>5,121</u>	
<u>Total Deductions</u>		
Net Interest Earned		<u>\$3,919,633</u>
Dividends	967,079	
Sale of Options - Net	<u>11,901</u>	
		<u>978,980</u>
Total Earned on Investments		<u>\$4,898,613</u>
Capital Gain		<u>17,138</u>
<u>TOTAL INVESTMENT INCOME</u>		<u>\$4,915,751</u>

\$3,837,164

RESERVE ACCOUNTS - ALLOCATION OF FUND BALANCES

	Code	JUNE 30, 1980 Members' Reserves	Employers' Reserves	Retirement Reserves
<u>General Employees</u>				
Barrington	01	\$ 507,918.58	\$ (453,092.27)	\$ 2,477,521.04
Bristol	02	418,417.15	403,893.98	1,403,288.97
Burrillville	03	234,421.75	237,835.99	380,541.16
Cranston	07	2,078,124.94	438,995.61	6,310,699.14
East Greenwich	09	309,927.18	427,724.81	937,707.68
East Providence	10	1,354,774.46	(7,618.71)	5,110,505.19
Hopkinton	14	46,015.62	49,031.78	82,932.13
Jamestown	15	100,778.93	112,010.52	304,074.34
Johnston	16	542,220.01	690,481.45	1,101,521.81
Newport	21	1,101,568.84	(864,019.17)	4,283,595.82
No. Kingstown	23	637,969.31	495,384.07	1,731,433.36
No. Providence	24	408,361.53	(97,009.84)	1,261,348.46
No. Smithfield	25	222,266.92	276,255.05	509,185.94
Pawtucket	26	2,528,570.21	(802,023.02)	6,681,068.28
Richmond	29	3,766.46	10,151.08	491.57
Scituate	30	168,479.65	72,489.53	393,574.09
Smithfield	31	276,174.49	863.61	1,031,537.73
So. Kingstown	32	373,129.26	282,302.81	1,349,933.44
Tiverton	33	193,473.90	10,977.69	459,669.82
Warren	34	223,172.09	200,013.97	650,198.28
Westerly	36	21,101.56	(436,260.08)	503,675.25
Woonsocket	39	1,281,587.01	314,771.16	3,949,411.40
Cranston Housing	51	45,605.66	81,816.92	85,884.84
E. Prov. Housing	52	49,185.49	74,147.66	69,387.25
Pawt. Housing	53	193,153.31	359,727.62	429,270.45
Cumb. Housing	56	22,328.21	20,338.23	14,490.58
Lincoln Housing	57	31,576.72	30,581.23	22,717.16
Bristol Housing	59	15,150.67	29,123.79	18,034.21
Burrill. Housing	65	8,044.54	11,953.55	5,737.78
No. Prov. Housing	66	6,723.05	13,420.61	5,226.72
E. Smith. Water	67	9,713.97	4,680.53	29,329.20
Greenville Water	68	5,985.04	(21,908.83)	31,612.16
Warren Housing	71	5,413.18	10,885.56	3,381.65
Johnston Housing	72	7,246.81	19,039.77	3,676.62
Coventry Housing	79	6,572.13	11,959.37	2,245.29
So. Kingst.Hous'g.	80	1,695.21	2,915.69	736.21
<u>TOTAL</u>		<u>\$13,440,613.84</u>	<u>\$ 2,011,841.72</u>	<u>\$41,635,645.02</u>
<u>Police and Fire</u>				
E.Green. Fire Dept.	50	105,491.42	201,892.42	112,949.43
E.Green. Pol. Dept.	54	153,050.15	100,090.85	281,590.41
N.King. Pol. Dept.	55	615,497.65	499,834.42	1,292,609.89
N.Prov. Pol. & Fire	58	87,372.46	(280,969.60)	473,422.07
Barr. Pol. Dept.	60	473,957.83	152,829.75	1,309,604.44
Smithf. Pol. & Fire	61	-0-	-0-	(7,032.12)
Warren Pol. Dept.	62	125,026.47	(130,800.14)	457,282.43
S.Kingst.Pol. & Fire	63	222,233.18	258,638.09	380,611.55
Primrose Vol. Fire	64	10,540.46	14,606.07	51,759.51
Scit. Pol. Dept.	73	73,673.64	164,000.55	70,375.67
N.Smithf.Pol. Dept.	76	68,653.45	75,958.96	129,228.83
Tiverton Fire Dept.	77	90,913.32	89,858.86	178,565.26
<u>P &amp; F TOTAL</u>		<u>\$ 2,026,410.03</u>	<u>\$ 1,145,940.23</u>	<u>\$ 4,730,967.37</u>
<u>GRAND TOTAL</u>		<u>\$15,467,023.87</u>	<u>\$ 3,157,781.95</u>	<u>\$46,366,612.39</u>



MUNICIPAL - District  
 Average Balance - Disbursed  
 Fiscal Year Ended - June 30, 1960

GENERAL EMPLOYEES	CODE	TOTAL ALL RESERVES	AVERAGE	%
Barrington	01	\$ 4,582,414.27	2,291,207.14	3.94
Bristol	02	4,010,139.06	2,005,069.54	3.45
Burrillville	03	1,492,732.45	746,366.22	1.28
Cranston	07	15,776,416.32	7,888,208.17	13.58
E. Green.	09	2,998,811.70	1,499,405.85	2.58
E. Prov.	10	11,663,178.45	5,831,589.23	10.05
Hopkinton	14	321,267.14	160,633.57	0.28
Jamestown	15	938,692.43	469,346.21	0.81
Johnston	16	4,155,229.53	2,077,614.77	3.58
Newport	21	8,171,496.65	4,085,748.33	7.04
No. Kingstown	23	5,148,687.66	2,574,343.84	4.44
No. Providence	24	2,790,319.71	1,395,159.85	2.40
No. Smithfield	25	1,794,551.03	897,275.51	1.54
Pawtucket	26	14,974,128.60	7,487,064.31	12.89
Richmond	29	13,917.54	6,958.77	0.01
Scituate	30	1,110,906.16	555,453.08	0.95
Smithfield	31	2,347,321.14	1,173,660.57	2.02
So. Kingstown	32	3,638,326.24	1,819,163.12	3.13
Tiverton	33	1,203,266.21	601,633.10	1.03
Warren	34	1,932,928.87	966,464.43	1.66
Westerly	36	152,322.49	76,161.24	0.13
Woonsocket	39	9,878,778.16	4,939,389.09	8.50
Cranston Hous'g.	51	383,195.86	191,597.93	0.33
E.Prov. Hous'g.	52	342,134.27	171,067.13	0.29
Pawt. Housing	53	1,761,267.99	880,633.99	1.51
Cumb. Housing	56	99,649.62	49,824.81	0.08
Lincoln Hous'g.	57	151,007.68	75,503.84	0.13
Bristol Hous'g.	59	109,540.18	54,770.09	0.09
Burrill. Hous'g.	65	41,845.01	20,922.50	0.04
N. Prov. Hous'g.	66	41,601.10	20,800.55	0.03
E. Smith. Water	67	69,789.00	34,894.50	0.06
Greenville Water	68	27,751.02	13,875.51	0.02
Warren Housing	71	33,886.55	16,943.27	0.03
Johnston Hous'g.	72	46,218.91	23,109.45	0.04
Coventry Hous'g.	79	30,426.49	15,213.24	0.03
S.Kingst.Hous'g.	80	8,089.17	4,044.58	0.01
<b>TOTAL</b>		<b>\$ 102,242,234.66</b>	<b>51,121,117.33</b>	<b>87.98</b>

POLICE & FIRE				
E.Green.Fire Dept.	50	726,229.97	363,114.98	0.62
E.Green.Pol. Dept.	54	935,588.47	467,794.23	0.80
N.King.Pol. Dept.	55	4,255,748.52	2,127,874.27	3.66
N.Prov. P & F	58	485,843.66	242,921.83	0.42
Barr. Pol. Dept.	60	3,451,163.31	1,725,581.66	2.97
Smithf. P & F	61	(7,032.12)	(3,516.06)	--
Warren Pol.Dept.	62	804,331.26	402,165.63	0.69
S.Kingst. P & F	63	1,517,770.76	758,885.38	1.31
Primrose Vol.Fire	64	138,488.24	69,244.12	0.12
Scit. Pol. Dept.	73	543,030.84	271,515.42	0.47
N.Smithf.Pol.Dept.	76	491,728.45	245,864.22	0.42
Tiverton Fire Dept.	77	625,377.97	312,688.98	0.54
<b>P &amp; F TOTAL</b>		<b>\$ 13,968,269.33</b>	<b>6,984,134.66</b>	<b>12.02</b>
<b>GRAND TOTAL -</b>		<b>\$ 116,210,503.99</b>	<b>58,105,251.99</b>	<b>100.00</b>

DIST. OF EARNINGS
193,679.71
169,592.69
62,921.38
667,556.13
126,825.84
494,030.86
13,764.08
39,817.42
175,983.14
346,067.39
218,258.41
117,977.52
75,702.25
633.637.60
491.57
46,699.44
99,297.75
153,862.35
50,632.01
81,601.12
6,390.44
417,837.05
16,221.90
14,255.61
74,227.53
3,932.58
6,390.44
4,424.15
1,966.29
1,474.71
2,949.43
983.14
1,474.71
1,966.29
1,474.71
491.57
4,324,859.21

# Investments