CITY OF MERIDEN EMPLOYEES' RETIREMENT SYSTEM

Actuarial Valuation and Review as of July 1, 1996

Submitted By: The Segal Company June, 1997

THE SEGAL COMPANY

22 Waterville Road Avon. Connecticut 06001-2078 860-678-3000 FAX: 860-678-3090

June 9, 1997

Mr. John F. Miniter Chairman, Pension Board City of Meriden 142 East Main Street Meriden, CT 06450

Dear Mr. Miniter:

We are pleased to present this report on the results of the Actuarial Valuation and Review of the City of Meriden Employees' Retirement System as of July 1, 1996. Our previous actuarial study was performed as of July 1, 1994.

This report analyzes the experience of the Retirement System during the two years ended June 30, 1996. Based on that experience, we have projected the City's contribution requirement for the 1997-98 and 1998-99 fiscal years.

Appendix 1 defines certain pension terms which you may find useful for reference as you review this report. Appendix 2 outlines the actuarial assumptions and funding method.

A Certificate of Actuarial Valuation, which includes a summary of the actuarial cost factors, the accounting disclosure amounts required by Governmental Accounting Standards Board Statement No. 5, the actuarial assumptions underlying our cost calculations, and summaries of the major benefit provisions, follows the appendices.

The actuarial calculations were made in accordance with generally accepted actuarial methods under the supervision of Kathleen A. Riley, F.S.A., M.A.A.A., Enrolled Actuary.

We look forward to meeting with you to review this report and any related matters.

Sincerely,

THE SEGAL COMPANY

John B. Murphy Vice Presiden

24207/sa



CITY OF MERIDEN EMPLOYEES' RETIREMENT SYSTEM

The City of Meriden's percent of payroll pension cost determined with this actuarial valuation, based on the present 30-year level dollar funding schedule with 24 years remaining from July 1, 1996, is 0.6% of payroll, payable monthly. In the prior valuation as of July 1, 1994, the scheduled contribution was 4.7%. Chart 1 details the components of the scheduled contribution. The decrease in the scheduled contribution as a percent of payroll since the July 1, 1994 actuarial valuation is due primarily to investment gains during the two-year period and a change in the salary scale assumption from 6.5% to 6.0% per year.

Since the City is in the process of formulating a budget for the fiscal year ending June 30, 1998, and because we do valuations every other year, we have projected the results of this valuation for the next two fiscal years. For fiscal 1997-98, the total City cost is \$181,700 or 0.9% of payroll. For fiscal 1998-99, the total City cost is \$245,900 or 1.2% of payroll. These amounts include an adjustment to reflect monthly payments.

Background

The last actuarial study was performed as of July 1, 1994. Since that date, there have been no changes in the plan of benefits. The major provisions of the plan are outlined in the attached Certificate of Actuarial Valuation.

Actuarial Assumptions

The actuarial assumptions are detailed in Exhibit III of the attached Certificate of Actuarial Valuation. Effective with this valuation, the salary scale assumption was decreased from 6.5% to 6.0% per year. Significant actuarial assumptions used in the valuation include:



Item	Assumption
Investment return	8%
Salary scale	6.0%
Mortality	1983 Group Annuity Mortality Table
Retirement age	The later of age 60 or completion of 30 years of service, but not later than age 65
Operating expenses	\$15,000

Employee and Pensioner Data

Shown on the following page are pertinent statistics for the active employees as of July 1, 1996 and 1994. The data was supplied by the City and included each employee's name, department, sex, date of birth, date of hire, annual salary or salary code and accumulated contributions. Also shown are the number of terminated vested employees and the number, average age and average monthly benefit of the pensioners and beneficiaries on the rolls as of July 1, 1996 and July 1, 1994.



	July	1, 1996	July	1, 1994
Active employees:				
Number		573		567
Average age		45		45½
Average service		10		91/2
Total salaries	\$18,	990,000	\$16,	,906,900
Average annual salary	\$	33,100	\$	29,800
Number eligible to retire on:				
Service pension		38		36
Early retirement pension		41		40
Number vested but not eligible for immediate retirement		194	2	139
Terminated vested employees eligible for a benefit at retirement and employees due a refund of contributions		101		112
Pensioners on the rolls:				
Number		340		310
Average age		71		701/2
Average monthly benefit	\$	712	\$	598
Beneficiaries:				
Number		12		9
Average age		691/2		681⁄2
Average monthly benefit	\$	637	\$	603

Charts 2 through 4 provide more detailed statistical data on the employees and pensioners.

The normal cost shown in Chart 1 is calculated as a level percent of payroll, not as a dollar amount. The payment on the unfunded/(overfunded) actuarial accrued liability is calculated to remain level as a dollar amount.

Shown below is the percent of the cost which should be allocated to each of the four budget areas - Board of Education, General, Sewage Authority and Water Authority. Costs are allocated based on projected payroll.

Budget Area	Projected Payroll	Percent	
Board of Education	\$ 5,464,400	28.8%	
General	11,205,100	59.0	
Sewage Authority	933,100	4.9	
Water Authority	1,387,400	_7.3	
Total	\$18,990,000	100.0%	

G.A.S.B. Disclosure Information

Currently, the plan is subject to the disclosure requirements of Statement No. 5 of the Governmental Accounting Standards Board (G.A.S.B.).

The Statement requires the calculation of a standardized measure called the "pension benefit obligation" using the pro-rata projected unit credit funding method. The pension benefit obligation is the actuarial present value of credited projected benefits prorated on service.

The total projected benefit obligation as of July 1, 1996 is \$54,864,200. Exhibit II of the attached Certificate of Actuarial Valuation provides additional detail regarding this disclosure amount.

As you are aware, beginning with the City's July 1, 1996 fiscal year, new G.A.S.B. disclosure rules will become applicable. Statement No. 25, "Financial Reporting for Defined Benefit Plans and Note Disclosures for Defined Contribution Plans," which is effective for the



City's fiscal year beginning July 1, 1996, supersedes GASB Statement No. 5. Statement No. 27, "Accounting for Pensions by State and Local Governmental Employers", which is effective for the fiscal year beginning July 1, 1997, establishes a standard measurement of pension expense. Finally, Statement No. 26, "Financial Reporting for Postemployment Healthcare Plans Administered by Defined Benefit Pension Plans," provides disclosure requirements for retiree health benefits.

These statements are intended to make the information in governmental pension plans' financial reports easier for boards of trustees, sponsoring employers, plan participants, public officials, voters, creditors and investors to understand and use.

It has been a pleasure to play a part in the growth and development of this pension fund and we look forward to a continuing relationship in the coming years.



July 1, 1996 Valuation Results and Projected Fiscal 1997-98 and 1998-99 Scheduled Contribution

			Percent of
	Item	Cost	payroll
1)	Total normal cost	\$2,216,700	11.7 %
2)	Projected employee contributions	924,400	4.9 %
3)	City normal cost: (1)-(2)	1,292,300	6.8 %
4)	Operating expenses	15,000	
5)	Actuarial accured liability (a) Active employees (b) Terminated vested employees eligible for a benefit at retirement and employees due a refund of contributions	28,689,900 1,803, 9 00	
	(c) Pensioners (d)Beneficiaries (e) Total	27,254,400 797,800 58,546,000	
6)	Actuarial value of assets	72,100,300	
7)	Unfunded (overfunded) actuarial accrued liability: (5)(e) - (6)	(13,554,300)	
8)	Amortization of unfunded (overfunded) actuarial accrued liability*	(1,192,000)	(6.3)%
9)	Scheduled City contribution, payable at beginning of year: (3)+(4)+(8)	115,300	0.6 %
10) Scheduled City contribution, payable monthly: (9) x 1.043333	120,300	0.6 %
11) Total projected payroll	18,990,000	
12) Projected City normal cost and operating expenses as of 7/1/97	1,366,200	6.9 %
13) Scheduled City contribution for fiscal 1997-98, payable monthly: [(12)+(8)]x1.043333	181,700	0.9 %
14) Total projected payroll for fiscal 1997–98	19,844,600	
15) Projected City normal cost and operating expenses as of 7/1/98	1,427,600	6.9 %
16) Scheduled City contribution for fiscal 1998-99, payable monthly: [(15)+(8)]x1.043333	245,900	1.2 %
17) Total projected payroll for fiscal 1998–99	20,737,600	

* 30 year amortization schedule with 24 years remaining from July 1, 1996.

					Years o	f service			
Age	Total	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 and over
Total	573 \$33,100	144 \$26,100	156 \$34,300	135 \$35,600	70 \$37,200	37 \$37,500	26 \$33,400	3 \$49,400	2 \$36,700
20 - 24	8 \$23,700	8 \$23,700							
25 - 29	34 32,000	19 28,400	13 \$37,100	2 \$33,000					
30 - 34	60 32,600	27 28,300	21 33,900	12 40,100					
35 - 39	83 33,700	25 27,300	36 33,700	18 40,500	3 \$45,900	1 \$33,200			
40 - 44	101 33,800	28 20,600	29 34,300	21 42,300	12 41,700	6 42,500	5 \$39,300		
45 - 49	112 37,300	21 28,500	23 37,300	34 33,000	17 45,700	11 48,600	6 47,100		
50 - 54	74 32,100	7 25,400	18 32,200	26 32,000	18 36,500	4 21,400	1 43,000		
55 - 59	55 29,600	6 26,600	11 33,2 00	13 28,700	13 28,000	4 25,200	5 30,500	2 \$35,800	1 \$39,500
60 - 64	33 34,100	3 22,800	3 33,300	8 37,100	5 25,100	9 36,000	3 32,700	1 76,500	1 34, 000
65 - 69	9 19,200		2 25,200		1 28,000	1 10,600	5 16,700		
70 and over	4 19,400			1 13,200	1 10,600	1 43,200	1 10,600		

Number and Average Salaries of Employees in Active Service as of July 1, 1996 by Age and by Years of Service

THE SEGAL COMPANY



Pensions in Payment Status on July 1, 1996 by Type and by Monthly Amount

	S	1 1	Type of pensic	n n
Monthly amount	Total	Service	Early	Disability
Total	340	254	77	9
Under \$ 99	9	7	1	1
\$ 100 - 199	38	18	20	
200 - 299	47	30	16	1
300 - 399	37	22	14	1
400 - 499	28	19	9	
500 - 599	31	22	6	3
600 - 699	14	9	5	
700 - 799	13	11	1	1
800 - 899	19	17	1	1
900 - 999	9	9		
1,000 - 1,099	16	15	1	
1,100 - 1,199	15	13	2	
1,200 - 1,299	14	13		1
1,300 - 1,399	9	9		
1,400 - 1,499	8	8		
1,500 - 1,599	5	5		
1,600 - 1,699	б	6		
1,700 - 1,799	8	7	1	
1,800 - 1,899	4	4		
1,900 - 1,999	2	2		
2,000 - 2,099	1	1		
2,100 - 2,199	2	2		
2,300 - 2,399	1	1		
2,400 - 2,499	1	1		
2,700 - 2,799	1	1		
2,800 - 2,899	1	1		
2,900 - 2,999	1	1		

CITY OF MERIDEN



Pensions in Payment Status on July 1, 1996 by Type and by Age

			Type of pensio	n
Age on July 1, 1996	Total	Service	Early	Disability
Total	340	254	77	9
45 - 49	1	1		
50 - 54	6	5		1
55 — 59	15	10	2	3
60 - 64	46	33	11	2
65 - 69	88	62	24	2
70 - 74	80	53	27	
75 - 79	66	52	13	1
80 - 84	30	30		
85 - 89	6	6		
90 and over	2	2		

CITY OF MERIDEN

Summary of Changes in the Actuarial Value of Assets During the Two Year Ended Period Ended June 30, 1996

Actuarial Value June 30, 1994	\$59,857,764
Contribution income for fiscal year ended June 30, 1995: City contributions Employee contributions Total contribution income	901,578 1,178,134 2,079,712
Investment income for fiscal year ended June 30, 1995: Assumed net investment income Adjustment toward market value Net income on actuarial basis	4,751,278 2,467,422 7,218,700
Retirement payments and pension refunds for fiscal year ended June 30, 1995	(3,013,296)
Addition to reserve for benefits to future pensioners	\$6,285,116
Actuarial Value June 30, 1995	\$66,142,880
Contribution income for fiscal year ended June 30, 1996: City contributions Employee contributions Total contribution income	897,658 1,210,756 2,108,414
Investment income for fiscal year ended June 30, 1996: Assumed net investment income Adjustment toward market value Net income on actuarial basis	5,240,841 3,339,074 8,579,915
Retirement payments and pension refunds for fiscal year ended June 30, 1996	(3,373,156)
Addition to reserve for benefits to future pensioners	\$7,315,173
Preliminary Actuarial Value June 30, 1996	\$73,458,053
Adjustment to reflect estimated value of assets designated to provide health plan benefits	1,357,781
Actuarial Value June 30, 1996	\$72,100,272

Actuarial accrued liability -- The value, at a given time, of the benefits based on years of service prior to that time. However, under the calculation method used, it is not exactly the value of the benefits attributable to the past years. More precisely, it is the fund which would theoretically now be on hand if the Plan had existed all along, had been meeting its normal costs, and the actual experience had matched the actuarial assumptions.

<u>Unfunded actuarial accrued liability</u> -- The extent to which the actuarial accrued liability of the Plan exceeds the assets of the Plan. There are several methods of paying off the unfunded actuarial accrued liability, ranging from meeting only the interest accrual to amortizing it over a specific period of time.

Actuarial accrued liability for pensioners -- The single sum value of lifetime benefits to existing pensioners. This sum takes account of life expectancies appropriate to the ages of the pensioners and of the interest which the sum will earn before it is entirely paid out in benefits.

<u>Amortization of the unfunded actuarial accrued liability</u> -- Payments made over a period of years to match the Plan's unfunded actuarial accrued liability.

<u>Investment return</u> -- The rate of earnings of the Plan from its investments, including interest, dividends and realized capital gains and losses, computed as a percentage of the average value of the fund. For actuarial purposes, the investment return often reflects a smoothing of the capital gains and losses to avoid significant swings in the value of assets from one year to the next.

Entry age normal actuarial cost method -- Under this cost method, the normal cost for an employee is the estimated level percent of salary cost to provide the employee's projected benefits. The calculation of this normal cost percentage assumes it will be paid from the date the employee enters the Plan to his or her date of retirement or termination of service, and that the Plan has always been in effect. Since the Plan has not always been in effect and benefits have increased from time to time, full normal costs prior to the effective date of the Plan or



prior to the date of a benefit improvement have not been accumulated, an additional liability exists which is referred to as the unfunded actuarial accrued liability. The unfunded actuarial accrued liability is also affected by actuarial gains and losses and changes in actuarial assumptions.

APPENDIX 2

ACTUARIAL ASSUMPTIONS AND FUNDING METHOD

The actual cost of any pension plan consists of the benefit payments to retirees and the administrative expense of operating the program less any investment earnings on the assets of the plan. An actuarial cost method aims to budget this true cost so as to establish a reasonable relationship between employer pension contributions and the employee services that give rise to the pension obligation. The result is a City cost which anticipates future benefit payments to future as well as existing pensioners. Additionally, a fund accumulates and earns investment income, thus reducing the ultimate cost of the pension plan.

ASSUMPTIONS

To calculate pension plan contribution requirements, assumptions are made about all of the future events that could affect the amount and timing of benefits to be paid and assets to be accumulated. Each year, actuarial experience is measured against the assumptions and, to the extent that there were differences since the prior valuation, the contribution requirement is adjusted. If assumptions are changed, contribution requirements are adjusted to take into account a change in experience in <u>all future years</u>.

There is a great difference between a single year's experience gains and losses and a change in assumptions for all future years. Taking account of one year's experience gains or losses without making a change in assumptions reflects the philosophy that the single year's experience was a short term anomaly and that, over the long run, experience will return to that originally assumed. Changing assumptions reflects a basic change in thinking about the future. Generally, it has a much greater effect on contribution requirements than a gain or loss for a single year.

For contribution requirements to be level, assumptions have to closely approximate actual experience. If they are too optimistic, contribution requirements will increase. If they are too



pessimistic, the opposite occurs. In the private sector, ERISA requires that the determination of legally mandated minimum and maximum contributions be based on assumptions that represent the actuary's best estimate of future experience. We have applied this same criteria in establishing actuarial assumptions for your Plan.

It will be useful to identify the assumptions used, particularly since broad questions of fiscal policy are implicit in certain of the assumptions. The actuarial assumptions that underlie our cost calculations are summarized on the following pages. These assumptions are based on the past experience and future expectations of this system as well as the systems of other municipalities.

MORTALITY RATES

In part, the cost of a benefit program is determined by the number of employees who survive to retirement and who ultimately retire and receive benefits. Consequently, a projection is made of the number of deaths prior to retirement. It is also necessary to take into account mortality after retirement in order to estimate the amount of reserves required at the time of retirement to pay each employee's pension for the remainder of his/her lifetime. For this purpose, we have used the 1983 Group Annuity Mortality Table. Other tables are available -- both more and less conservative than this table. However, we believe that this table provides a satisfactory basis for predicting mortality and longevity experience. This table has proven to be a reasonable basis for predicting the mortality of employee groups and is one of the tables in general use in valuing pension plans in the United States. At the end of this Section, we show the life expectancies which result from the application of this table.

TERMINATION RATES

Termination rates before normal retirement are used in actuarial calculations in order to forecast the future savings on account of employees who will leave the plan with no benefit rights (except for a refund of their own contributions with interest) and to discount in advance for the expected recapture of City contributions. City contributions made on behalf of those employees who leave the coverage of the plan with no retirement benefit rights become available for the payment



of pensions to other covered employees who remain in active employment until they acquire eligibility for pension benefits. We assume that terminations each year from all causes except retirement will be as follows:

		<u>Rate (%)</u>		
Age	Death	Disability	Withdrawal	Total
20	.04	.03	5.44	5.50
25	.05	.03	5.29	5.36
30	.06	.03	5.07	5.15
35	.09	.03	4.70	4.81
40	.12	.05	4.19	4.36
45	.22	.09	3.54	3.85
50	.39	.20	2.48	3.07
55	.61	.43		1.04
60	.92	.87		1.79

Notes: Mortality rates shown are for men; rates for women are slightly lower. 25% of disabilities are service connected. Detail figures may not add to totals shown because of rounding.

DISABILITY RATES

As can be seen in the preceding table, we have included disability rates in our calculations. The rates are used as estimates of the number of employees in various age brackets who will become disabled and, if eligible, will receive a disability benefit. The mortality rates of disabled participants younger than age 65 are based on the age 65 mortality under the 1983 Group Annuity Mortality Table.

SALARY SCALE

Since pension benefits are related to an employee's final average earnings prior to retirement, and since death and disability benefits are also related to these earnings, it is necessary to make an assumption with respect to increases in salary during the years of employment preceding retirement. To assume that each employee's salary for benefit purposes will be the same as it is today would seriously understate the plan's cost. Additionally, it is appropriate to compute pension costs as a level percentage of payroll rather than as a level dollar amount, and a salary

projection is also used for this purpose. If pension costs were calculated as a level dollar amount for an individual, the cost would be a high percent of the individual's salary during the early employment years and a lower percent of salary during later employment years. By use of a salary projection, the contribution for an individual, all other things remaining the same, tends to stay at the same percentage of pay over the years.

Effective with this valuation, we have changed the salary scale from 6.5% to 6.0%. The following chart shows, at various ages, an employee's current salary as a percent of the projected salary at age 65 based on the 6.0% salary increase assumption applied in this valuation:

	Present salary as a	Annual increase
Age	% of age 65 salary	Rate (%)
20	7 77	6.00
20	1.21	0.00
25	9.72	6.00
30	13.01	6.00
35	17.41	6.00
40	23.30	6.00
45	31.18	6.00
50	41.73	6.00
55	55.84	6.00
60	74.73	6.00

Includes allowance for inflation of 4.5%.

INTEREST EARNINGS

Funding a retirement program on an actuarial reserve basis necessarily involves the accumulation of large reserves in order to guarantee the fulfillment of benefits promised under the plan. These reserves are invested, whether the plan is self-funded or whether it is underwritten by an insurance carrier, and the rate of long-term investment earnings is an important factor in determining contributions required to meet the ultimate cost of the plan. In general, if a retirement system is well funded (its assets represent 75% or more of its actuarial accrued liability), then an investment yield of 8% -- in contrast to a 7% yield -- will reduce plan costs by 15%.



We have assumed that the plan will earn a net investment return of 8% on its assets over the long run. It should be recognized that an interest assumption should be meaningful and realistic over a 20 to 30-year time horizon consistent with the long term obligation of the pension plan. If the plan earns more than the 8% assumed in the next few years, this provides a buffer against the time when interest earnings are at a lower rate than the assumption. Excess earnings could also act as a cushion to offset cost increases resulting from increases in salaries, changes in the composition of the group over the long term, mortality experience that is less favorable than anticipated, and possible actuarial losses from other sources.

RETIREMENT AGE

For an actuarial valuation, it is necessary to make an assumption concerning the average age at which employees will, in fact, retire from service. While employees are expected to retire at various ages, it appears reasonable from our review of the ages of present active employees and the ages at which employees have retired in recent years to assume that employees will retire at age 60, or upon completion of 30 years of service if later, but not after age 65.

In any actuarial study, the age at which employees are expected to retire is important for two reasons: (a) it marks the end of the period of years over which contributions will be received on behalf of an employee, and (b) it initiates the beginning of the period of years for which benefits will be paid out of the plan assets. It should be clear that in a pension plan of this type, the later the actual age at retirement, the less costly is a given level of pension benefits, because income will be collected for such employee over a longer period of time and pension benefits will be paid out for a fewer number of years.

FUNDING METHOD

The funding method refers to the budgeting or payment program under which the plan is to be financed. There are a number of funding methods, or ways of financing a pension plan, each differing in terms of the rate at which reserves are built up to pay pensions in the future. For purposes of our actuarial valuation, it was assumed that the funding objective was a level pattern

of cost throughout an employee's working lifetime. This is a common objective, and one funding method which meets such an objective is the "entry age normal cost" method of funding.

In administering a retirement program, there must be a calculation of what the cost will be over the long-range future. For a program such as this, it is important that the City understand the future as well as the current obligation they are assuming by operating and/or changing the plan. The entry age normal cost method provides the City with this information.

The method of funding is a budgeting scheme or payment system under which benefits are to be financed. As previously mentioned, there are a number of ways by which a pension plan may be financed, each differing from the others in the rate at which assets are built up. Under the "entry age normal" method, there is set aside each year, with respect to each individual, an amount known as the normal cost. The normal cost represents the ultimate cost of the plan assuming assets equal the accrued liability and the actual experience of the plan conforms to the actuarial assumptions.

Roughly speaking, the normal cost is the cost of benefit rights accruing on the basis of current service. Technically, the normal cost is the level percentage of payroll required each year, with respect to each employee, to accumulate over his/her working lifetime the assets (reserves) needed to meet the cost of benefit rights earned.

Recognition is also given to the fact that the plan started out with a prior service or actuarial accrued liability; namely, the amount that would have been on hand if contributions had been collected on behalf of the persons under the plan from entry into employment up to the time of the valuation, including the cost of benefit improvements. It can also be viewed as the value of benefits accrued for service prior to the valuation date. Additional actuarial accrued liability amounts have been added as a result of additional benefits earned by active employees and as a result of improvements in the plan. If a plan has accumulated assets (reserves) equal to the actuarial accrued liability, the plan is referred to as being "fully funded." Today, the actuarial



accrued liability is exceeded by the assets of the plan so there is no unfunded actuarial accrued liability.

The annual contribution under the entry age normal method ordinarily comprises: (1) the normal cost, (2) an allowance for expenses, and (3) an amount to amortize the unfunded/(overfunded) actuarial accrued liability. The latter may comprise only an amount equivalent to interest on the unfunded/(overfunded) balance or may also include an amount intended to reduce the unfunded/(overfunded) balance. The City adopted a 30-year amortization schedule effective July 1, 1990. Twenty-four years are remaining on this schedule as of July 1, 1996.

OVERALL ACTUARIAL BASIS

Providing that the group remains stable and there are no major changes in the plan of benefits, we believe that our assumptions, taken as a whole, are reasonable. To the extent that actual experience is different from the assumptions, gains or losses will develop, with appropriate decreases or increases in future costs.

Expected Number of Years of Life Remaining at Specified Ages

Age	Male	Female
55	24.8	30.2
56	24.0	29.3
57	23.1	28.4
58	22.3	27.5
59	21.5	26.6
60	20.6	25.7
61	19.8	24.8
62	19.0	23.9
63	18.2	23.0
64	17.4	22.1
65	16.7	21.3
66	15.9	20.4
67	15.2	19.6
68	14.5	18.8
69	13.9	17.9
70	13.2	17.1
70	12.5	16.3
72	11.9	15.6
73	11.3	14.8
74	10.7	14.1
75	10.2	13.4

1983 Group Annuity Mortality Table



THE SEGAL COMPANY

116 Huntington Avenue Boston, Massachusetts 02116-5712 617-424-7300 FAX: 617-424-7390

June, 1997

CITY OF MERIDEN EMPLOYEES' RETIREMENT SYSTEM

CERTIFICATE OF ACTUARIAL VALUATION

This is to certify that we have prepared an actuarial valuation of the System as of July 1, 1996, in accordance with generally accepted actuarial principles and practices.

This certificate includes the following attached exhibits:

EXHIBIT I	- Actuarial Costs for Year Beginning July 1, 1996
Exhibit II	- Pension Benefit Obligation
Exhibit III	- Actuarial Assumptions and Cost Method
EXHIBIT IV	- Summary of Plan Provisions

To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate 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.

Kathleen A. Riley, F.S.A., M.A.A.A. Senior Vice President and Actuary

24207/sa

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EXHIBIT I

ACTUARIAL COSTS FOR YEAR BEGINNING JULY 1, 1996

The valuation was made with respect to the following data supplied by the City as of the valuation date:

- a. 573 active employees (including 273 fully vested) with total annual salaries of \$18,990,000
- b. 101 terminated vested employees eligible for a benefit at retirement and employees due a refund of contributions
- c. 340 pensioners
- d. 12 beneficiaries

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

1.	Total normal cost including operating expenses	\$2,231,700
2.	Projected employee contributions	924,400
3.	City normal cost: (1) - (2)	1,307,300
4.	Actuarial accrued liability - total	\$58,546,000
	a. Active employees	
	 b. Terminated vested employees eligible for a benefit at retirement and employees due a refund of contributions	
	c. Pensioners	
	d. Beneficiaries	
5.	Actuarial value of assets	72,100,300
6.	Unfunded/(overfunded) actuarial accrued liability: (4) - (5)	(13,554,300)



EXHIBIT I (Continued)

7.	Payment required to amortize unfunded/(overfunded) actuarial accrued liability over 24 years	\$ (1,192,000)
8.	City contribution payable July 1, 1996: $(3) + (7) \dots \dots \dots \dots$	115,300
9.	City contribution payable monthly: (8) x 1.043333	120,300
10.	Projected payroll	18,990,000
11.	City contribution as a percent of projected payroll: $(9) \div (10) \ldots$	0.6%
Projec	cted fiscal 1997-98 cost:	
12.	Projected City normal cost including operating expenses as of July 1, 1997	\$1,366,200
13.	City contribution payable monthly for fiscal 1997-98: $[(7) + (12)] \times 1.043333 \dots$	181,700
14.	Fiscal 1997-98 projected payroll	19,844,600
15.	City contribution as a percent of projected payroll: (13) \div (14)	0.9%
Projec	cted fiscal 1998-99 cost:	
16.	Projected City normal cost including operating expenses as of July 1, 1998	\$1,427,600
17.	City contribution payable monthly for fiscal 1998-99: [(7) + (16)] x 1.043333	245,900
18.	Fiscal 1998-99 projected payroll	20,737,600
19.	City contribution as a percent of projected payroll: $(17) \div (18) \ldots$	1.2%

EXHIBIT II

PENSION BENEFIT OBLIGATION

The value of the pension benefit obligation required for disclosure by Statement No. 5 of the Governmental Accounting Standards Board is shown below as of July 1, 1996 and, for comparison, as of July 1, 1995.

		Benefit information date	
		July 1, 1996	July 1, 1995
1.	Participants currently receiving benefits and terminated vested participants not yet receiving benefits	\$29,856,100	\$31,998,300
2.	Current employees Accumulated employee contributions Employer-financed vested Employer-financed nonvested	7,365,200 3,570,500 <u>14,072,400</u>	5,906,200 4,343,000 <u>11,075,400</u>
3.	Total pension benefit obligation	\$54,864,200	\$53,322,900
4.	Net assets for benefits at book value (Assets at market value are \$86,814,400 as of June 30, 1996 and \$76,012,600 as of June 30, 1995)	<u>76,804,900</u>	<u>67,706,700</u>
5.	Unfunded pension benefit obligation: (3) - (4), not less than zero.	\$0	\$0

THE SEGAL COMPANY



EXHIBIT III

ACTUARIAL ASSUMPTIONS AND COST METHOD

Mortality rates:

Healthy	1983	Group	Annuity	Mortality	Table

Disabled mortality before age 65

age 65 Age 65 mortality under stipulated table

Termination rates before retirement:

Rate (%)				
Age	Death	Disability	Withdrawal	Total
20	.04	.03	5.44	5.50
25	.05	.03	5.29	5.36
30	.06	.03	5.07	5.15
35	.09	.03	4.70	4.81
40	.12	.05	4.19	4.36
45	.22	.09	3.54	3.85
50	.39	.20	2.48	3.07
55	.61	.43		1.04
60	.92	.87		1.79

Notes: Mortality rates shown are for men; rates for women are slightly lower. Detail figures may not add to totals shown because of rounding. 25% of disabilities are service connected.

Age	Present salary as a percent of salary at 65	Annual increase Rate (%)
20	7.27	6.00
25	9.72	6.00
30	13.01	6.00
35	17.41	6.00
40	23.30	6.00
45	31.18	6.00
50	41.73	6.00
55	55.84	6.00
60	74.73	6.00

Salary scale:

Notes: Previously, the salary scale assumption was 6.5%. Includes allowance for inflation of 4.5% per year.

EXHIBIT III (Continued)

Percent married:	75% of male participants and $65%$ of female participants.
Retirement age:	60, or completion of 30 years of service, if later, but not after age 65.
Cost-of-living increases after retirement:	1½% per year
Net investment return:	8%
Operating expenses:	\$15,000
Actuarial value of assets:	Sum of actuarial value at beginning of year, contributions, and expected investment earnings based on the actuarial interest assumption less benefit payments plus 20% of market value at end of year in excess of that sum, plus additional adjustment toward market value as necessary so that final actuarial value is within 20% of market value. Actuarial value is reduced by amount allocated to retiree health benefits.
Cost method:	Entry age normal cost

EXHIBIT IV

SUMMARY OF PLAN PROVISIONS¹

SERVICE PENSION

Age and service	
requirement:	Age 65 with 10 years of service or Rule of 80
Amount:	2% of final average salary per year of service, to a maximum
	benefit of 60% of salary. Final average salary is defined as the
	average of the three highest consecutive years of salary during the
	10 years prior to retirement.

EARLY RETIREMENT

Age requirement:	55
Service requirement:	10 years
Amount:	Normal pension accrued, actuarially reduced.

DISABILITY

Non-service connected

Age requirement:	None	
Service requirement:	10 years	
Amount:	Normal pension accrued.	Minimum annual benefit of \$360.

Service connected

Age requirement:	None
Service requirement:	None
Amount:	50% of salary at disability (not less than Normal pension accrued).
	Minimum annual benefit of \$360.

VESTING

Age requirement:	None
Service requirement:	10 years
Amount:	Normal pension accrued payable at normal retirement date.

¹ This exhibit summarizes the major provisions of the plan as included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

PRE-RETIREMENT DEATH BENEFITS

If not eligible for spouse's benefit

Age requirement: None Service requirement: None Amount: Refund of employee contributions plus interest.

Spouse's benefit

Requirement: Eligible for Service Pension or Early RetirementAmount: 50 percent of the benefit the employee would have received had he retired the day before he died and elected the 50% joint and survivor option.

POST-RETIREMENT DEATH BENEFIT

Lump sum benefit

100% of employee contributions with interest, less benefits paid.

COST OF LIVING ADJUSTMENT

3% accumulated every other year deferred to the later of age 65 or 3 years after retirement, with a lifetime cap of 50% of the original pension amount (for employees retiring after July 1, 1989, not applicable to terminated vested employees or beneficiaries).

TERMINATION OF EMPLOYMENT (IN LIEU OF OTHER BENEFITS)

Refund of employee contributions with interest

EMPLOYEE CONTRIBUTION RATE

5% of salary plus an additional 1% to be allocated to retiree health benefits.

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