CONNECTICUT STATE EMPLOYEES
RETIREMENT SYSTEM

June 30, 1985 ACTUARIAL VALUATION

#### MILLIMAN & ROBERTSON, INC.

CONSULTING ACTUARIES

THREE CORPORATE PLACE BLOOMFIELD, CONNECTICUT 06002 203/243-1138

WENDELL MILLIMAN, F.S.A. (1976) STUART A. ROBERTSON, F.S.A. CHAIRMAN EMERITUS

November 22, 1985

State of Connecticut State Employees Retirement Commission 30 Trinity Street Hartford, CT 06106

Ladies and Gentlemen:

We are pleased to provide this actuarial report for the Connecticut State Employees Retirement System. The report shows the financial status of the system as of June 30, 1985 and presents cost figures for the fiscal year beginning July 1, 1986.

As summarized in Section I, the recommended contribution for the fiscal year beginning July 1, 1986 is \$318,816,449. This will also be the actual State contribution, including Federal reimbursements, since the total payment will be at the 100% level beginning in 1986.

The actuarial method and assumptions used in this valuation are described in Section II of the report; there has been no change in assumptions since the last valuation except that an estimated liability for outstanding purchases of service has been included for the first time in this valuation.

The membership data provided to us was as of June 30, 1985 and included actual compensation paid during fiscal year 1984-1985 (which has been reconciled to total State figures). Compensation figures were brought up to July 1, 1985 payroll levels by adjusting for negotiated increases, estimated merit increases, and for unreported Workers Compensation payments through that date. This data is summarized in Section III and a detailed analysis of the membership by age and service is attached as Exhibit B. Although we did not audit this data (nor the financial data referred to below), they are consistent with comparable data from the previous valuation.

Section IV outlines the status of the retirement fund as reported to us by the Retirement Division and describes the adjustment used to spread unrealized gains and losses.

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DENNIS J. GRAF, F. S.A.
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ATTERNAN F. C. A. S. PATRICK J. GRANNAN, F. C.A.S. DENNIS L. GRAVES, F. S.A. JANET S. GRAVES, F. C.A.S. CHARLES W. HABECK E.S.A. CHARLES W. HABECK, F.S.A.
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ANDREW B. WANG, E.S.A.

ANDREW B. WAING, F. S.A. RICHARD E. WHITE, F. S.A. RICHARD A. WINKENWERDER, F. S.A. BRUCE W. WINTERHOF, F. S.A. BRUCE L. WORKMAN, F. C.A.

The final section of the report outlines our understanding of the benefit provisions embodied in the Connecticut statutes, as ammended through 1984.

In our opinion this report fairly presents the financial and actuarial position of the Connecticut State Employees Retirement System as of June 30, 1985, in accordance with generally accepted actuarial principles applied on a basis consistent with the prior valuation. We also certify that, to the best of our knowledge and belief, this report is both complete and accurate; a copy of our separate certification is attached to the report as Exhibit A.

Respectfully submitted,

James A. Gobes, F.S.A. Consulting Actuary

JAG/sf

# CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM SECTION I

#### SUMMARY OF JUNE 30, 1985 VALUATION

#### A. Highlights

The recommended contribution for Fiscal Year 1986 is \$318,816,449. This is \$45.9 million and 16.8% higher than the 1985 contribution. Of the increase, \$13.7 million results from the final step in the scheduled increase to 100% of costs. We consider payment of full costs a true landmark for the State Employee System. Assets of the fund also surpassed the \$1 billion mark.

Covered earnings have increased from \$1,047.7 million as of July 1, 1984 to \$1,191.2 million as of July 1, 1985 and are projected to increase to \$1,299.6 million next year. Had costs remained at the 24.07% of earnings determined for 1985, this earnings increase by itself would have generated a cost increase of \$26.2 million. In fact, costs as a percentage of covered earnings went up about ½% to 24.53%. In addition to extensions of the Tier I option and inclusion of additional positions under the Hazardous Duty definition, these costs also for the first time include full recognition of outstanding purchases of service (completed purchases have been recognized for two years) and previously unreported Workers Compensation payments.

However, the transition from Tier I to Tier II is beginning to have a favorable impact on costs, the scheduled increases have been completed, and investment results continue to be favorable. These all point to more moderate cost increases in the future.

From a technical perspective, this valuation represents the first time payroll data was based on total paid compensation. Although this created many new problems for us and for the Retirement Division staff, we were able to reconcile the total compensation figures to those provided by the Controllers Department.

# <u>SECTION I</u> B. Actuarial Balance Sheet

Based on the membership and asset information provided to us (and summarized in Sections III and IV), the actuarial method and assumptions described in Section II, and our understanding of the benefit provisions embodied in Connecticut statutes as summarized in Section VI, we have prepared the following valuation of assets and liabilities as of June 30, 1985:

ASSETS	Tier I	Tier II	<u>Total</u>
Retirement Fund (Adjusted basis)	\$1,085,420,746	\$ 8,408,350	\$1,093,829,096
Present value of future Normal Cost contributions	1,161,824,036	98,010,925	1,259,834,961
Unfunded Accrued Liability	2,657,230,643	8,206,439	2,665,437,082
TOTAL ASSETS	\$4,904,475,425	\$114,625,714	\$5,019,101,139

### LIABILITIES

Present value of benefits

Active Members	\$3,464,634,014	\$114,625,714	\$3,579,259,728
Retired Members	1,431,142,322	0	1,431,142,322
Terminated Vested Members	8,699,089	0	8,699,089
TOTAL LIABILITIES	\$4,904,475,425	\$114,625,714	\$5,019,101,139

# SECTION I C. Projection of Normal Costs

The valuation calculated Normal Costs as of July 1, 1985 based on earnings as of that date, including adjustments for negotiated settlements and for July 1 increases. Earnings were projected to July 1, 1986 by assuming that 10% of the Tier I employees will terminate during the twelve month period and be replaced by Tier II employees at the same earnings level; remaining Tier I employees and all Tier II employees (including replacements of Tier II terminations) are assumed to receive earnings increases as of July 1, 1986 equal to 10%. This produced the following projected Normal Costs:

		Estimated	Normal Cost	Projected Earnings	Normal Cost
Tier	Plan	Earnings 7/1/85	Percentage	7/1/86	7/1/86
I	HD	\$ 101,894,605	12.5606%	\$100,875,659	\$12,670,588
I	В	843,424,671	9.2181	834,990,424	76,970,252
I	С	130,533,930	6.8601	129,228,591	8,865,211
Total	Tier I	\$1,075,853,206		\$1,065,094,674	\$98,506,051
II	HD	\$ 7,801,658	12.0066%	\$ 18,771,284	\$ 2,253,793
	Other	107,583,731	6.2762	215,737,964	13,540,146
Tota1	Tier II	\$115,385,389		\$ 234,509,248	\$15,793,939
Grand	Total	\$1,191,238,595		\$1,299,603,922	\$114,299,990

# D. Projection of Total Cost

The Unfunded Liability as of June 30, 1985 was brought forward to June 30, 1986 by adding interest and the July 1, 1985 Normal Cost, with interest, and subtracting expected contributions, also with interest:

		Tier I	Tier II		Total
Unfunded Accrued Liability, 6-30-85	<b>\$</b> 2	,657,230,643	\$ 8,206,439	\$2	,665,437,082
+ Interest		199,292,298	615,483		199,907,781
+ Normal Cost		91,052,088	11,497,071		102,549,159
+ Interest		3,089,033	390,050		3,479,083
- State Payments		223,603,716	10,720,115		234,323,831
- Federal Payments		36,820,437	1,765,263		38,585,700
- Employee Contributions		25,200,049	0		25,200,049
- Interest	_	9,690,087	423,579		10,113,666
Unfunded Accrued Liability, 6-30-86	\$2	,655,349,773	\$ 7,800,086	<b>\$</b> 2	,663,149,859
		*****	**		
Normal Cost	\$	98,506,051	\$15,793,939	\$	114,299,990
Amortization of Unfunded (over 40 years)		203,917,452	599,007		204,516,459
Total	\$	302,423,503	\$16,392,946	\$	318,816,449
Cost Percentage		100%	100%		
Adjusted Cost	\$	302,423,503	\$16,392,946	\$	318,816,449

# CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM SECTION II

#### ACTUARIAL METHOD AND ASSUMPTIONS

#### A. Funding Method

- 1. The actuarial valuation method used in the cost calculations is the Entry Age Normal Cost Method. Recommended annual contributions until the accrued liability is completely funded will consist of two pieces:

  Normal Cost plus a payment towards the Unfunded Accrued Liability.
- 2. The Normal Cost is determined by calculating the present value of future benefits for present active Members that will become payable as the result of death, disability, retirement or termination. This cost is then spread as a level percentage of earnings from entry age to termination as an Active Member.
- 3. If Normal Costs had been paid at this level for all prior years, a fund would have been accumulated. Because this fund represents the portion of benefits that would have been funded to date, it is termed the Accrued Liability. In fact, it is calculated by adding the present value of benefits for retired Members and Terminated Vested Members to the present value of benefits for active Members and subtracting the present value of future contributions.
- 4. The Unfunded Accrued Liability is the Accrued Liability less Current Assets.
- 5. Since the valuation was done as of June 30, 1985, costs have been projected to July 1, 1986 in order to correspond to the fiscal year as follows:

#### A. Funding Method (cont'd)

- A. Normal costs were determined as a percentage of earnings, by Tier, as of July 1, 1985. Earnings were projected to July 1, 1986, separately for each Tier because of the shifting Tier populations, and the projected earnings were then multiplied by the normal cost factors, by Tier.
- B. The Unfunded Accrued Liability was determined as of June 30, 1985, and brought forward to June 30,1986 by adding the Normal Cost plus interest and subtracting expected employee, State, and Federal contributions, also with interest. This amount was amortized over 40 years.
- C. Normal Cost and Past Service Amortization payments were adjusted to reflect payment in twelve equal installments at the end of each month.

#### B. Actuarial Assumptions

Mortality

1971 Group Annuity Mortality Table with ages set back 6 years for females.

Annual Rate of

Investment Return

7½% compounded annually.

Salary Scale

Age		Increase
20		6.34%
25		6.26
30		6.10
35		5.90
40		5.58
45		5.22
50	•	4.95
55		4.83
60		4.66

Turnover

Estimated by excluding participants with less than one year of service and assuming that all other employees terminate at the following rates.

	Annual Rate of
Age	Withdrawal
20	5.44%
25	5.29
30	5.07
35	4.70
40	4.19
45	3.54
50	2.47
55	•94
60	

#### B. Actuarial Assumptions (cont'd)

Retirement Ages

Hazardous Duty, Age 53 and 25 years of service.

All other, Tier I: Age 61 and 10 years of service.

Tier II: Age 65 and 10 years of service or age 70 and 5 years of service, or for Hazardous Duty Members, 25 years of service.

Social Security Wage Base Increases

3½% compounded annually.

Disability

of Disability

Age (Per 1000 lives 20 .06

Annual Rate

<u>Age</u>	(Per 1000 lives)
20	.06
25	.09
30	.11
35	.15
40	.22
45	.36
50	.61
55	1.01
60	

Service-connected are assumed to comprise 50% of total disabilities for Hazardous Duty and 20% for others.

#### B. Actuarial Assumptions (cont'd)

Cost-of-Living Increases

3% per year for retirees on or after 1-1-80.  $4\frac{1}{2}$ % per year for retirees prior to 1-1-80.

Asset Valuation

Adjusted cost value: assets are written up (or down) by 20% of the difference between market value and adjusted cost value, plus an additional write-up (or write-down) as necessary so that the resulting adjusted cost value is within 20% of market value.

# CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM SECTION III

#### MEMBERSHIP DATA

#### A. Active Members

We received data on a total of 49,418 members, including an estimated 1,750 Summer employees and including employees of State Aided Institutions. The following analysis compares the current distribution with the January 1, 1985 data (see Exhibit B for distribution by age and service).

	1-1-85	7-1-85*	Change	Per Cent <u>Change</u>
Total Employees	47,924	47,668	- 256	- 0.5%
Total Earnings (000's)	\$ 1,136.5	\$ 1,191.2	+\$ 54.7	+ 4.8%
Average Earnings	\$23,725	\$24,990	+\$1,265	+ 5.3%
Average Age**	42.4	42.5	+ 0.1	N/A
Average Service**	9.7	9.9	+ 0.2	N/A

<sup>\*</sup> Excluding Summer employees.

Of the active records submitted to us, 1,976 were rejected due to missing or invalid dates of birth and/or hire. Cost calculations were done using the valid records and then adjusted proportionately for the rejected records. For valuation purposes, an additional 2,376 Members were excluded because they had less than one year of service; thus the valuation was based on 45,066 Members.

Earnings figures as of January 1, 1985 were based on the annualized September 1984 payroll figures projected to year-end. Earnings figures as of July 1, 1985 are actual amounts paid during the period July 1, 1984 to June 30, 1985 adjusted for negotiated increases and merit adjustments effective through July 1, 1985.

<sup>\*\*</sup> Based on Members included in valuation.

#### B. Actives By Plan

The following analysis is based on the total of 49,418 active Members including employees not in the valuation because they had less than one year of service or had incorrect birth and/or hire dates. Hazardous Duty Members include 408 Tier II Members. To the extent they were identified in the data base, Summer Employees (1,750 members) are excluded from this analysis.

Number of Members	1-1-85	7-1-85	Change	Per Cent Change
Hazardous Duty	3,270	3,521	+ 251	+ 7.7%
Plan B	32,567	30,955	-1,612	- 4.9
Plan C	6,148	5,415	- 733	- 11.9
Tier II	5,939	7,777	+1,838	+ 30.9
Total Annual Formings	(milliona)			
Total Annual Earnings		4455 -		
Hazardous Duty	\$ 90.7	\$109.7	+\$19.0	+ 20.9%
Plan B	805.3	843.4	+ 38.1	+ 4.7
Plan C	141.8	130.5	- 11.3	- 8.0
Tier II	98.7	104.5	+ 5.8	+ 5.9
Average Earnings				
Hazardous Duty	\$ 27,727	\$31,155	+\$3,428	+ 12.4%
Plan B	24,727	27,247	+ 2,520	+ 10.2
Plan C	23,071	24,106	+ 1,035	+ 4.5
Tier II	16,622	13,437	- 3,185	- 19.2

Hazardous Duty Members continue to increase as a result of additional positions being considered Hazardous Duty. Plan C continues to decrease more rapidly than Plan B. Tier II average earnings reflects the diminishing effect of some initial pre-1973 employees who had declined participation; it also may reflect some summer employees who were not accurately identified.

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### B. Actives By Plan (cont'd)

This analysis of age and service is based on Active Members included in the valuation. Therefore it excludes 2,376 employees with less than one year of service and the 1,976 records with incorrect birth dates or hire dates.

	1-1-85	7-1-85	Change
Average Age			
Hazardous Duty	38.7	38.9	+ 0.2
Plan B	41.9	42.4	+ 0.5
Plan C	52.8	53.3	+ 0.5
Tier II	34.7	34.5	- 0.2
Average Years of Se	rvice		
Hazardous Duty	10.4	10.5	+ 0.1
Plan B	10.0	10.6	+ 0.6
Plan C	12.7	13.1	+ 0.4
Tier II	3.6	2.4	- 1.2

Tier I ages and years of service go up less than one year because of retirements. Tier II service appears to decrease because the initial Tier II block included a group of pre-1973 employees who had declined participation; this group is now outweighed by new entrants.

#### C. Retired and Terminated Vested Members

The following compares the current retired data with the January 1, 1985 data. [See Exhibit C for analysis of retirees by age, year of retirement and type of retirement].

1-1-85	7-1-85	Change	Per Cent Change
16,930	17,237	+ 307	+ 1.8%
\$121,087	\$127,521	+\$6,434	+ 5.3
<b>\$</b> 596	\$ 617	+\$ 21	+ 3.5
607 \$ 3,506	672 <b>\$ 4.</b> 050	+ 65 +\$500	+10.7% +14.3
\$ 481	\$ 502	+\$ 21	+ 4.4
476	536	+ 60	+12.6%
	16,930 \$121,087 \$ 596 607 \$ 3,506 \$ 481	16,930 17,237 \$121,087 \$127,521 \$ 596 \$ 617 607 672 \$ 3,506 \$ 4,050 \$ 481 \$ 502	16,930 17,237 + 307 \$121,087 \$127,521 +\$6,434 \$ 596 \$ 617 +\$ 21 607 672 + 65 \$ 3,506 \$ 4,050 +\$500 \$ 481 \$ 502 +\$ 21

<sup>\* (000</sup> omitted)

# CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM SECTION IV

#### RETIREMENT FUND

#### A. Summary of Fund

Market Value, July 1, 1984

\$896,764,505.27

#### Contributions

State

\$196,201,720.00

Federal

38,585,705.40

Employee

30,100,011.94

\$264,887,437.34

#### Investment Income

Interest and Dividends

\$ 78,052,143.93

Realized Gains

2,560,935.44

Change in Unrealized Gains

99,126,081.00

\$179,739,160.37

#### Disbursements

Benefit payments

\$126,748,627.30

Employee refunds

13,616,801.79

Expenses (Net)

117,185.19

\$140,482,614.28

Market Value, June 30, 1985

\$1,200,908,488.70

#### SECTION IV

#### B. June 30, 1985 Assets

The following is the Market Value of the State Employees Retirement Fund assets as reported to us by the Retirement Division:

Cash \$(10,332,863.42)

Accrued Interest 5,624,112.00

Investments

Short Term	\$ 83,571,448.00
Fixed Income	393,144,274.78
Equity	439,432,061.00
Contract	17,282,645.45
Mortgage	142,678,186.44
Real Estate	129,508,624.45

\$1,205,617,240.12

Total Market Value of Assets June 30, 1985 \$1,200,908,488.70

SECTION IV
C. Adjusted Cost Value

	Book Value	Market Value	Adjusted Cost Value
12-31-78	\$199,937,761	NA	\$200,036,795
12-31-79	271,219,899	\$260,210,421	269,097,231
12-31-80	363,951,995	362,983,337	362,060,129
12-31-81*	475,679,076	445,754,990	468,180,766
12-31-82	612,960,709	644,650,823	613,300,084
12-31-83	759,544,293	801,667,095	767,984,244
12-31-84	940,059,215	991,903,114	957,179,954
6-30-85	1,049,938,509	1,200,908,489	1,093,829,096

<sup>\*</sup> Including \$2,000,000 estimated interest accrued.

The derivation of the 1985 Adjusted Cost Value is shown below.

1.	Adjusted cost value, 12-31-84	\$957,179,954	
2.	Net new money, all sources	109,879,294	
3.	Preliminary value, 6-30-85, [(1) + (2)]	1,067,059,248	
4.	Market value, 6-30-85	1,200,908,489	
5.	Current adjustment, 20% [(4) - (3)]	26,769,848	
6.	Adjusted Cost Value, 6-30-85, [(3) + (5)] [Must be within + 20% of (4)]	\$1,093,829,096	

#### CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM

#### SECTION V

#### SUMMARY OF PLAN PROVISIONS

Effective Date

September 1, 1939

System Eligibility

Tier 0 and Tier I [Sec. 5-160]

Each state employee appointed to classified service shall become a member on the first day of the pay period following permanent appointment.

Each officer elected by the people and each appointee of such officer exempt from classified service may elect to become a member, effective on the first day of the pay period following receipt of such election.

Each other state employee exempt from classified service shall become a member on the first day of the pay period following six months of employment.

Tier II [Sec. 23]

Each state employee becomes a member on the first day of employment.

#### Plan Eligibility

Tier I [Sec. 6]

Except as noted below employees hired prior to January 1, 1984 may elect (no later than January 2, 1984) to be covered under either Plan B or Plan C. Employees under contracts with Union Independent and CSEA unions hired prior to October 1, 1982 have until October 1, 1984 to make such election.

Tier II [Sec. 23]

Employees hired on or after July 1, 1982 (or October 1, 1982 for Union Independent and CSE union members who are not in any other plan, and any other employees who have not previously been covered under any plan.

#### Normal Retirement Date

State Police [Sec. 5-173 as amended by Sec. 17]

Age 47 and 20 years of service.

Tier 0 and Tier I [Sec. 5-162]

Age 55 and 25 years of service, age 60 and 10 years of service, or age 70.

Tier II [Sec. 28 & 30]

Age 65 and 10 years of service or age 70 and 5 years of service, except hazardous duty members may retire after 25 years.

#### Normal Retirement Benefit

State Police [Sec. 5-173 as amended by Sec. 17]

50% of Final Average Earnings plus 2% for each year in excess of 20.

Tier 0 and Tier I, Plan B
Benefit [Sec. 5-162]
Minimum [Sec. 10]

Same as Plan C up to age 65; thereafter 1% of Final Average Earnings up to \$4,800 plus 2% of Final Average Earnings in excess of \$4,800 times years, reduced for retirement prior to age 65 with less than 25 years. Minimum benefit with 25 years, \$300 per month.

Tier 0 and Tier I, Plan C Benefit [Sec. 5-162] Minimum [Sec. 10] 2% of Final Average Earnings times years of service, reduced for retirement prior to age 65 with less than 25 years. Minimum with 25 years, \$300 per month.

Tier II

Hazardous Duty Members
[Sec. 30]

2% of Final Average Earnings times years of service. Minimum with 25 years, \$300 per month (or less if retirement before 7-1-87).

All Other [Sec. 28]

1 1/3% of Final Average Earnings plus ½% of Final Average Earnings in excess of the year's breakpoint\*, times years of service from 10-1-82. Minimum with 25 years, \$300 per month ( or less if retirement before 7-1-87).

<sup>\* \$10,700</sup> increased by 6% each year after 1982, rounded to the nearest \$100.

#### Early Retirement

State Police

None.

Tier 0 and Tier I [Sec. 5-162]

Age 55 and 10 years of service; Normal Retirement Benefit reduced additionally for retirement prior to age 60.

Tier II [Sec. 29]

Age 55 and 10 years of service; Normal Retirement Benefit reduced  $\frac{1}{2}\%$  for each month prior to age 65; Minimum benefit with 25 years, \$300 per month (or less if retirement prior to 7-1-87).

#### Deferred Retirement

Tier 0 and Tier I [Sec. 5-162]

May be deferred but not beyond age 70.

Tier II [Sec. 28 (b) and (e)]

May be deferred but not beyond age 70.

Benefit is based on salary and service to actual retirement.

#### Vesting

Tier 0 and Tier I [Sec. 5-166 as amended in part by Sec. 13] Ten years of service; actuarially reduced benefit payable at age 55; in addition employees are always fully vested in their own contributions (after 1-1-83, Tier I, contributions with 5% interest from 1-1-82).

Tier I, Hazardous Duty
[Sec. 17]

As above, but may receive full benefits at age 47 if 20 years of service at termination.

Tier II [Sec. 31]

Ten years of service or age 70 and 5 years; benefit payable at age 65 or early retirement benefit payable at age 55; minimum benefit with 25 years, payable after age 55, \$300 per month (or less if retirement before 7-1-87).

#### Employee Contributions

State Police, Hazardous Duty [Sec. 5-161]

5% of earnings.

Plan C [Sec. 5-161]

5% of earnings.

Plan B [Sec. 5-161]

2% of earnings up to Social Security
Taxable Wage Base plus 5% above that
level.

Tier II [Sec. 37]

None.

#### Cost of Living

[Sec. 5-162b, 5-162d, Sec. 9 & Sec. 35] Annual adjustment each July 1 of up to 5% for retirements prior to 7-1-80; 3% for retirements after 7-1-80. For members (or beneficiaries) not covered by Social Security and age 62 and over, the maximum increase is 6%. If an actuarial surplus (as defined in the law) exists, the commission may further increase retired benefits.

#### Death Benefits

State Police [Sec. 5-146]

Survivor benefits to spouse of \$550 per month plus \$250 to a surviving dependent child (or \$575 to surviving dependent children).

Tier 0 and Tier I
[Sec. 5-165a as amended by Sec. 12]

If eligible for early or normal retirement, spouse benefit equal to 50% of average of Life Benefit and 50% J&S benefit member would have received. If not eligible to retire but 25 years, same benefit calculated as though age 55 using service and earnings at death.

[Sec. 5-168 as amended by Sec. 13]

If not eligible for retirement, return of contributions (after 10-1-82, Tier I, with interest from 1-1-82 at 5%).

Tier II [Sec. 34]

If eligible for early or normal retirement, spouse benefit equal to 50% of member's benefit under a 50% J&S. If not eligible to retire but 25 years, same benefit calculated as though age 55 using service and earnings at death.

[Sec. 36]

If death is due to employment, a spouse with dependent child(ren) under 18 will be paid \$7,500 in not less than 60 installments while living and not remarried; also \$20 per month per child under 18. If no children under 18, spouse [or dependent parent(s), if no spouse] will be paid \$4,000 in not less than 60 installments.

### CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM

EXHIBIT A

CERTIFICATION

### MILLIMAN & ROBERTSON, INC.

CONSULTING ACTUARIES

THREE CORPORATE PLACE
BLOOMFIELD, CONNECTICUT 06002
203/243-1138

WENDELL MILLIMAN, E.S.A. 11976 STUART A. ROBERTSON, F.S.A. CHAIRMAN EMERITUS

November 22, 1985

#### CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM

#### Actuarial Valuation

This is to certify that we have prepared an actuarial valuation of the Connecticut State Employees Retirement System as of June 30, 1985.

The valuation was made with respect to the following Members:

- a. 17,909 pensioners (including 672 beneficiaries of deceased Members).
- b. 49,418 active Members with total annual payroll as of July 1,1985 of \$1,191,238,595.
- c. 536 inactive employees with vested rights.

Based on the above data and the attached actuarial method and assumptions, we determined the following assets and liabilities as of the valuation date:

1. Accrued liability:

	<ul><li>a. Active Members</li><li>b. Retired Members and Beneficiaries</li><li>c. Vested former Members</li><li>d. Total</li></ul>	\$2,319,424,767 1,431,142,322 8,699,089 \$3,759,266,178
2.	Assets in fund (at adjusted cost value)	\$1,093,829,096
3.	Unfunded liability (Item 1d less Item 2)	\$2,665,437,082
4.	Present Value of Vested Benefits	\$2,592,886,827

Based on the valuation as of June 30, 1985, projected costs were developed for the fiscal year beginning July 1, 1986, as follows:

1. Employer Normal Cost

 Tier I
 \$98,506,051

 Tier II
 15,793,939

 Total
 \$114,299,990

ALLAN D. AFFLECK, F.S.A., F.C.I.A.
DAVID V. AXENE, F.S.A.
LARRY D. BABER, F.S.A.
JAMES R. BEROUIST, F.C.A.S.
GEORGE L. BERRY, F.S.A.
DAVID, R. BICKERSTAFF, F.C.A.S.
THOMAS P. BLEAKNEY, F.S.A.
FRINKING, PODIL F.S.A.
FRINKING, PODIL F.S.A. THOMAS P. BLEAKNEY, F.S.A. BRUNO V. BOIN, F.S.A. STEPHEN D. BRINK, F.S.A. ROBERT M. CHANDLER, F.S.A. ROBERT M. CHANDLER, F.S.A. ROBERT L. COLLETT, F.S.A. JAMES A. CURTIS, F.S.A. THOMAS K. CUSTIS, F.S.A. THOMAS K. CUSTIS, F.S.A. DREW S. DAVIDOFF, F.S.A. CHREW S. DAVIDOFF, F.S.A. CHRISTIAN J. DERROCHERS. CHRISTIAN J. DESROCHERS, F.S.A. CMRISTIAN J. DESROCHERS, F.
PHYLLIS A. DORAN, F.S.A.
ROBERT J. DYMOWSKI, F.S.A.
JOHN S. ECKERT, F.S.A.
JOHN S. EDWARDS, F.C.A
CARY B. EKLOF, F.S.A.
DANIELJ, FLAHERTY, F.C.A.S.
JAMES A. GOBES, F.S.A. DENNIS J. GRAE ES.A PATRICK J. GRANNAN, F.C.A.S. PATRICK J. GRANNAN, F. C.A.S.
DENNIS L. GRAVES, F. S.A.
JANET S. GRAVES, F. C.A.S.
CHARLES W. HABECK, F. S.A.
DALE S. HAGSTROM, F. S.A.
RONALD G. HARRIS, F. S.A.
RONALD G. HARRIS, F. S.A.
DOUGLAS C. HOLDEN, F. S.A. SILVIO INGUI, E.S.A. FENTON R. ISAACSON. F.S.A. HOWARD M. ITO, F.C.A. GREGORY D. JACOBS, F.S.A. MARK O. JOHNSON, F.S.A. DUGLAS R. KALWARSKI, F.S.A. DOUGLAS F. KLINE. F.C.A.S. GERALD T. KOGER. F.C.A. JOHN M. LENSER. F.S.A. JOHN M. LENSER. F.S.A. JEONARD P. J. LEONG, F.S.A. FREDERICT, LHAMON, F.S.A. MARK E. LITUM F.S.A. FENTON R. ISAACSON: F. S.A. FREDERICT, LHAMON, F.S.A.
MARKE, LITOW, F.S.A.
D. ALAN LITTLE, F.S.A.
MICHAEL J. MAHONEY, F.S.A.
BRIAN J. MATTSON, F.S.A.
ROBERT G. MAULE, F.S.A.
DANIEL J. MCCARTHY, F.S.A.
MICHAEL A. MCMURRAY, F.C.A.S. DOUGLAS MENKES E.S.A. STEVEN J. MIKKALO, F. S.A DWARD P. MOHORIC. F.S.A.
DAVID F. OGDEN. F.S.A.
BRUCE T. OGG. F.S.A.
PAULJ. PATTERSON. F.S.A.
J. LYNN PEABODY. F.S.A.
MARGARET E. PEARSON. F.S.A.
MARGARET E. PEARSON. F.S.A.
ROBERT E. PEARSON. F.S.A.
ROBERT A. PRYOR F.S.A.
ROBERT A. PRYOR F.S.A.
DONALD A. RHOLL, F.C.A.
STANLEY A. ROBERTS, F.S.A.
JOHN P. SCHREINER, F.S.A.
JULIAM D. SMITH, F.S.A.
JOHN B. SRYDER, II. F.S.A.
STEVEN D. SOMMER, F.S.A.
DENIS J. SULLIVAN. F.S.A.
STANLEY B. TULLIN, F.S.A.
STANLEY B. TULLIN, F.S.A.
STANLEY B. TULLIN, F.S.A.
STANLEY B. TULLIN, F.S.A. EDWARD P. MOHORIC, F.S.A. DENIS J. SULLIVAN. F.S.A.
STANLEY B. TULIN. F.S.A.
JAMES R. TYLER. F.S.A.
ANDREW B. WANG, F.S.A.
RICHARD E. WHITE, F.S.A.
RICHARD A. WINKENWERDER, F.S.A.
BRUCEW, WINTERHOF, F.S.A.
BRUCEL WORKMAN, F.C.A.

JOHN C. ANTLIFF F.S.A.
WILLIAM F. BLUHM, F.S.A.
MARK A. CHESNER, F.S.A.
JOSEPH E. CROWNE, F.S.A.
JOSEPH E. CROWNE, F.S.A.
JOSEPH E. CROWNE, F.S.A.
JOHN W. EIDNISON, F.S.A.
JEFFERY T. DUKES, F.S.A.
JOHN W. EHRHARDT, F.S.A.
STEVEN A. EISENBERG, F.S.A.
MARIN FELDMAN, F.S.A.
JOHN E. FOLEY, F.S.A.
DOUGLAS M. GEUDER, F.S.A.
MARCIA S. GREENSTEIN, F.S.A.
JALON HERRINGTON, F.S.A.
GREGORY N. HERRIE, F.S.A.
STEPHEN G. HILDENBRAND, F.S.A.
STEPHEN G. HILDENBRAND, F.S.A.
STEPHEN G. HILDENBRAND, F.S.A.
TIMOTHY D. LEE, F.S.A.
MICHAEL A. MCGRATH, F.S.A.
JOHN L. MOLINAR, F.S.A.
THOMAS G. NELSON, F.S.A.
RICHARD E. OSTUW, F.S.A.
WILLIAM A. REIMERT, F.S.A.
MARCIA S. SANDER, F.S.A.
ARRICA S. SANDER, F.S.A.
LEE H. STRAATE, F.S.A.
BRUCE N. VANDER ELS, F.S.A.
BRUCE N. WANDER, F.S.A.
EARL L. WHITNEY, F.S.A.
ELAINE M. WINNT, F.S.A.

2. Payment on Unfunded Liability\*

Tier I	\$203,917,452
Tier II	599,007
Total	\$ <mark>204,516,45</mark> 9

3. Total Employer Cost

Tier I	\$302,423,503
Tier II	16,392,946
Total	\$318,816,449

\* Based on forty year amortization of the Unfunded Accrued Liability as of June 30, 1986.

In accordance with Connecticut statutes, the actual contribution will be increased to 100% for fiscal year 1986-87 and thereafter.

MILLIMAN & ROBERTSON, INC.

James A. Gobes, F.S.A. Consulting Actuary

#### Actuarial Method and Assumptions

Funding Method

Mortality

Investment Return

Salary Scale

Entry Age Normal.

1971 Group Annuity Mortality Table with ages set back 6 years for females.

7½% compounded annually.

	Annual Rate of
Age	Increase
20	6.34%
25	6.26
30	6.10
35	5.90
40	5.58
45	5.22
50	4.95
55	4.83
60	4.66

Estimated by excluding participants with less than one year of service and assuming that all other employees terminate at the following rates.

Age	Annual Rate o <u>Withdrawal</u>
20	5.44%
25	5.29
30	5.07
35	4.70
40	4.19
45	3.54
50	2.47
55	.94
60	

Hazardous Duty, Tier O and Tier I: Age 53 and 25 years of service.

All other, Tier O and Tier I: Age 61 and 10 years of service.

Tier II: Age 65 and 10 years of service or age 70 and 5 years of service, or for Hazardous Duty Members, 25 years of service.

Social Security Wage Base Increases

Retirement Ages

3½% compounded annually.

Turnover

MILLIMAN & ROBERTSON, INC.————CONSULTING ACTUARIES—

Disabil	lity
---------	------

	Annual Rate
	of Disability
Age	(Per 1000)
20	.06
25	.09
30	.11
35	.15
40	.22
45	.36
50	<b>.</b> 61
55	1.01
60	

Service-connected are assumed to comprise 50% of total disabilities for Hazardous Duty and 20% for others.

3% per year for retirees on or after 1-1-80.  $4\frac{1}{2}\%$  per year for retirees prior to 1-1-80.

Adjusted cost value: assets are written up (or down) by 20% of the difference between market value and adjusted cost value, plus an additional write-up (or write-down) as necessary so that the resulting adjusted cost value is within 20% of market value.

Cost-of-Living Increases

Asset Valuation

### CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM

EXHIBIT B

ANALYSIS BY AGE AND SERVICE

## ANALYSIS BY AGE AND SERVICE - HAZARDOUS DUTY - TIER I ACTIVE MEMBERS\*

5 to 10 10 to 15 15 to 20 20 to 25

AGE

UNDER 5

----YEARS OF SERVICE----

25 to 30 30 to 35 35 to 40 40 & Up

ALL YEARS

Under 20										
20 to <b>24</b>	60	2						•		62
25 to 29	288	110	3							401
30 to 34	170	286	121	2						579
35 to <b>39</b>	89	159	290	93	6		•			637
40 to 44	59	61	121	186	80	6				513
45 to <b>49</b>	37	33	48	101	124	34	2			379
50 to 54	16	23	39	74	54	34	13	1		254
55 to <b>59</b>	7	19	26	40	35	22	24	1		174
60 to 64	6	13	11	19	12	12	11	4		88
65 & Up	1	2	5	4	1	3	2	2	1	21
TOTALS	733	708	664	519	312	111	52	8	. 1	3,108
				<u>/A</u>	ERAGE SALA	RIES*				
Under 20						_				
20 to <b>24</b>	\$23,302	\$23,988								\$23,324
25 to 29	24,667	28,277	\$29,445							25,693
30 to 34	24,794	28,314	29,525	\$32,905						27,549
35 to <b>39</b>	23,632	28,397	31,890	31,846	\$32,051					29,859
40 to <b>44</b>	24,377	28,623	31,220	32,678	33,346	\$30,672				30,978
45 to 4 <b>9</b>	25,677	29,538	31,430	30,708	34,782	33,640	\$30,848			31,803
50 to <b>54</b>	25,879	28,111	30,851	30,779	30,612	32,547	37,614	\$26,143		30,772
55 to <b>59</b>	25,465	26,641	28,139	30,247	29,094	32,023	39,035	31,629		30,559
60 to 64	24,944	27,815	28,039	28,929	30,470	31,823	36,021	27,549		29,810
65 & Up	28,042	23,044	32,777	30,334	34,137	32,453	33,947	33,701	35,039	31,485
TOTALS	\$24,528	\$28,323	\$31,028	\$31,533	\$32,833	\$32,596	\$37,532	\$29,421	\$35,039	\$29,306
* Base	d on Members	and salarie	s input to	Valuation.						

## ANALYSIS BY AGE AND SERVICE - HAZARDOUS DUTY - TIER II ACTIVE MEMBERS\*

					YEARS O	F SERVICE				
AGE	UNDER 5	5 to 10	10 to 1	5 15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	ALL YEARS
Under 20	1 .		•							1
20 to 24	96	1								97
25 to 29	146	2								148
30 to <b>34</b>	82	1								83
35 to <b>39</b>	35	1		1						37
40 to 44	17		1							18
45 to 49	9	1								10
50 to <b>54</b>	5									5
55 to 59	3									3
60 to 64					•			1		1
65 & Up										
TOTALS	394	6	. 1	1				1		403
							•	v - v		
				AVER	AGE SALARIES	<u>5</u> *			4	
Under 20	\$22,635									\$22,635
20 to 24	14,727	\$26,167								14,845
25 to 2 <b>9</b>	17,416	24,974								17,518
30 to 34	17,112	28,280								17,246
35 to <b>39</b>	16,737	18,112		\$28,184						17,084
40 to 44	18,126		\$25,431							18,532
45 to 49	20,976	33,024								22,181
50 to 54	19,334									19,334
55 to <b>59</b>	13,626									13,626
60 to <b>6</b> 4	•							<b>\$5,957</b>		5,957
65 & Up										
TOTALS	\$16,758	\$25,922	\$25,431	\$28,184				\$5,957		\$16,917
* Base	d on Members	and salarie	es input to	valuation.						

## ANALYSIS BY AGE AND SERVICE - PLAN B ACTIVE MEMBERS\*

					YEARS	OF SERVICE				
AGE	UNDER 5	5 to 10	10 to 15	15 to 2				35 to 40	40 & Up	ALL YEARS
Under 20	5									5
20 to 24	724	156						•		880
25 to 29	1,543	1,787	75							3,405
30 to <b>34</b>	1,162	2,490	913	68				1		4,633
35 to <b>39</b>	926	1,961	1,151	717	55		•			4,810
40 to 44	708	1,395	750	890	493	42				4,278
45 to 49	500	1,119	578	636	457	365	53			3,708
50 to 54	369	978	490	623	398	375	236	28		3,497
55 to <b>59</b>	267	798	471	624	387	283	181	83	8	3,102
60 to <b>64</b>	137	399	257	408	272	168	85	56	24	1,806
65 & Up	24	144	100	103	100	48	28	19	7	573
TOTALS	6,365	11,227	4,785	4,069	2,162	1,281	583	186	39	30,697
Under 20	\$11,292			AV	ERAGE SALARI	ES*				\$11,292
20 to <b>24</b>	15,835	\$16,385								15,932
25 to <b>29</b>	18,911	19,673	\$20,988							19,357
30 to 34	20,379	23,167	24,357	\$22,697						22,696
35 to <b>39</b>	21,211	25,403	28,189	27,603	\$26,511					25,603
40 to <b>44</b>	20,861	25,653	28,058	30,400	29,447	\$25,034		•		26,700
45 to <b>49</b>	21,046	27,058	27,103	30,006	31,282	31,327	\$31,067			27,758
50 to 54	20,616	26,875	26,368	29,055	31,185	32,138	30,855	\$27,199		27,858
55 to <b>59</b>	20,727	28,085	26,534	27,503	29,415	32,751	35,806	30,361	\$31,433	28,211
60 to <b>64</b>	20,034	29,402	25,850	26,410	31,078	30,442	36,766	39,595	37,507	28,629
65 & <b>Up</b>	25,988	32,060	27,882	26,380	30,240	31,126	33,622	40,256	26,367	29,938
TOTALS	\$19,768	\$24,612	\$26,712	\$28,565	\$30,316	\$31,549	\$33,406	\$33,676	\$34,262	\$25,384

 $<sup>^{*}</sup>$  Based on Members and salaries input to valuation.

## ANALYSIS BY AGE AND SERVICE - PLAN C ACTIVE MEMBERS\*

YEARS OF SERVICE									
UNDER 5	5 to 10	<u>10 to 15</u>	15 to 2	20 20 to 2	5 <u>25 to 3</u>	30 to 35	35 to 40	40 & Up	ALL YEARS
18	15				•				33
65	103	5							173
50	159	63	7			•			279
60	99	69	57	3					288
61	129	64	66	16	1				337
69	174	84	62	19	18	12			438
81	254	154	126	39	61	56	10		781
99	358	236	243	79	50	51	33	10	1,159
52	297	307	315	115	62	47	44	25	1,264
15	116	127	155	68	30	36	21	30	598
570	1,704	1,109	1,031	339	222	202	108	65	5,350
			A	VERAGE SALA	RIES*				
\$17,320	\$18,366								17,795
17,907	19,177	\$16,935							18,635
18,447	20,919	21,442	\$20,783						20,590
18,565	22,448	22,186	21,709	\$22,589					21,431
19,507	22,400	22,002	25,570	22,446	\$30,841				22,449
17,818	20,598	22,880	25,429	24,957	27,456	\$22,780			21,812
18,870	22,361	22,176	22,008	26,965	25,966	27,412	\$23,699		22,796
19,164	21,536	21,223	23,839	24,834	26,570	29,639	27,465	\$24,660	22,747
18,886	21,670	22,037	23,191	23,090	28,000	31,680	29,231	29,046	23,245
22,061	22,523	22,745	24,949	25,811	29,582	27,932	31,314	30,241	24,937
\$18,719	\$21,544	\$21,978	\$23,652	\$24,558	\$27,301	\$28,785	\$28,584	\$28,923	\$22,674
	\$17,320 17,907 18,447 18,565 19,507 17,818 18,870 19,164 18,886 22,061	18 15 65 103 50 159 60 99 61 129 69 174 81 254 99 358 52 297 15 116 570 1,704  \$17,320 \$18,366 17,907 19,177 18,447 20,919 18,565 22,448 19,507 22,400 17,818 20,598 18,870 22,361 19,164 21,536 18,886 21,670 22,061 22,523	\$17,320 \$18,366 17,907 19,177 \$16,935 18,447 20,919 21,442 18,565 22,448 22,186 19,507 22,400 22,002 17,818 20,598 22,880 18,886 21,670 22,037 22,061 22,523 22,745	\$17,320 \$18,366 \$17,907 \$19,177 \$16,935 \$18,447 \$20,919 \$21,442 \$20,783 \$18,565 \$22,448 \$22,186 \$21,709 \$19,507 \$22,400 \$22,002 \$25,570 \$17,818 \$20,598 \$22,880 \$25,429 \$18,886 \$21,670 \$22,037 \$23,191 \$22,061 \$22,523 \$22,745 \$24,949	UNDER 5 5 to 10 10 to 15 15 to 20 20 to 2  18 15 65 103 5 50 159 63 7 60 99 69 57 3 61 129 64 66 16 69 174 84 62 19 81 254 154 126 39 99 358 236 243 79 52 297 307 315 115 15 116 127 155 68 570 1,704 1,109 1,031 339  AVERAGE SALAN \$17,320 \$18,366 17,907 19,177 \$16,935 18,447 20,919 21,442 \$20,783 18,565 22,448 22,186 21,709 \$22,589 19,507 22,400 22,002 25,570 22,446 17,818 20,598 22,880 25,429 24,957 18,870 22,361 22,176 22,008 26,965 19,164 21,536 21,223 23,839 24,834 18,886 21,670 22,037 23,191 23,090 22,061 22,523 22,745 24,949 25,811	UNDER 5 5 to 10 10 to 15 15 to 20 20 to 25 25 to 3  18 15 65 103 5 50 159 63 7 60 99 69 57 3 61 129 64 66 16 1 69 174 84 62 19 18 81 254 154 126 39 61 99 358 236 243 79 50 52 297 307 315 115 62 15 116 127 155 68 30 570 1,704 1,109 1,031 339 222   ***AVERAGE SALARIES***  \$17,320 \$18,366 17,907 19,177 \$16,935 18,447 20,919 21,442 \$20,783 18,565 22,448 22,186 21,709 \$22,589 19,507 22,400 22,002 25,570 22,446 \$30,841 17,818 20,598 22,880 25,429 24,957 27,456 18,870 22,361 22,176 22,008 26,965 25,966 19,164 21,536 21,223 23,839 24,834 26,570 18,886 21,670 22,037 23,191 23,090 28,000 22,061 22,523 22,745 24,949 25,811 29,582	UNDER 5 5 to 10 10 to 15 15 to 20 20 to 25 25 to 30 30 to 39  18 15 65 103 5 50 159 63 7 60 99 69 57 3 61 129 64 66 16 1 69 174 84 62 19 18 12 81 254 154 126 39 61 56 99 358 236 243 79 50 51 52 297 307 315 115 62 47 15 116 127 155 68 30 36 570 1,704 1,109 1,031 339 222 202  ***SYERAGE SALARIES***  \$17,320 \$18,366 17,907 19,177 \$16,935 18,447 20,919 21,442 \$20,783 18,565 22,448 22,186 21,709 \$22,589 19,507 22,400 22,002 25,570 22,446 \$30,841 17,818 20,598 22,880 25,429 24,957 27,456 \$22,780 18,870 22,361 22,176 22,008 26,965 25,966 27,412 19,164 21,536 21,223 23,839 24,834 26,570 29,639 18,886 21,670 22,037 23,191 23,090 28,000 31,680 22,061 22,523 22,745 24,949 25,811 29,582 27,932	TNDER 5	UNDER 5 5 to 10 10 to 15 15 to 20 20 to 25 25 to 30 30 to 35 35 to 40 40 & Up  18 15 65 103 5

<sup>\*</sup> Based on Members and salaries input to Valuation.

## ANALYSIS BY AGE AND SERVICE - TIER II - ALL OTHERS ACTIVE MEMBERS\*

						OF SERVICE		,		
AGE	UNDER 5	5 to 10	10 to 15	15 to 20	20 to 25	25 to 30	30 to 35	35 to 40	40 & Up	ALL YEARS
Under 20	87									87
20 to 24	1,282	3								1,285
25 to 29	1,490	37								1,527
30 to 34	1,083	53	12	7						1,155
35 to 39	790	47	48	30						915
40 to 44	532	41	22	18	•					613
45 to 49	355	23	11	13						402
50 to 54	267	14	12	14	3		1			311
55 to 59	198	8	2	8.			2			218
60 to 64	116	5	8	6	1					136
65 & Up	44	15	5	5	4	3	1	1		78
TOTALS	6,244	246	120	101	8	3	4	1		6,727
Under 20	\$ 6,478 AVERAGE SALARIES*									\$ 6,478
20 to 24	10,679	\$10,540								10,679
25 to 29	13,083	14,910								13,127
30 to 34	14,107	17,158	\$21,614	\$21,194						14,368
35 to 39	13,942	17,884	27,320	26,288						15,251
40 to 44	13,447	18,931	26,432	35,487						14,927
45 to 49	13,269	22,607	26,753	23,283						14,496
50 to 54	13,952	26,354	21,160	22,361	\$8,842		\$40,321			15,202
55 to 59	13,559	14,089	18,868	23,199			20,411			14,044
60 to 64	14,985	17,392	20,024	21,018	2,774					15,546
65, & Up	7,510	14,545	12,896	9,688	12,654	\$4,343	1,787	\$4,814		9,382
TOTALS	\$12,874	\$17,952	\$24,690	\$25,264	\$ 9,990	\$4,343	\$20,733	\$4,814		\$13,452

<sup>\*</sup> Based on Members and salaries input to valuation; may include some summer employees.

### CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM

EXHIBIT C

RETIRED BENEFIT ANALYSIS

## ANALYSIS OF RETIRED MEMBERS BY YEAR OF RETIREMENT

		NUMBER OF	RETIREES		AVERAGE BENEFIT				
YEAR OF RETIREMENT	SERVICE	DISABILITY	1 2	HAZARDOUS DUTY	SERVICE	DISABILITY 1	DISABILITY <sup>2</sup>	HAZARDOUS DUTY	
Pre-1956	124	12	34	5	<b>\$5,</b> 309	\$3,243	<b>\$3,</b> 346	\$5,107	
1956	34	1	7	4	4,810	4,679	4,727	5,329	
1957	46	5	6	4	5,293	5,140	4,869	5,469	
1958	50	4	4	1	4,555	4,272	4,146	6,724	
1959	79	4	6	6	4,881	4,210	4,654	7,077	
1960	64	7	5	5	4,767	3,430	3,852	7,257	
1961	84	3	9	3	5,173	5,218	4,028	6,534	
1962	130	11	6	0	5,406	4,198	3,876	0	
1963	142	8	13	2	5,527	4,577	4,565	6,349	
1964	132	13	15	1	4,803	6,083	4,387	6,855	
1965	155	6	6	1	5,528	5,245	4,751	9,556	
1966	176	10	22	0	5,383	4,604	4,368	0	
1967	186	8	27	1	5,218	4,127	4,932	9,470	
1968	251	13	31	2	5,884	5,304	4,309	6,268	
1969	398	14	33	1	6,523	5,820	5,725	5,943	
1970	392	12	61	3	7,108	5,314	5,842	7,063	
1971	560	18	84	6	7,429	6,807	5,904	10,011	
1972	662	31	87	26	7,728	6,974	6,459	11,470	
1973	738	29	90	23	7,901	8,435	6,758	12,435	
1974	577	27	65	24	7,169	8,593	6,935	13,941	
1975	894	50	86	21	7,950	7,910	7,098	15,184	
1976	970	16	64	27	7,103	7,048	6,478	13,040	
1977	794	13	31	15	6,819	5,425	5 <b>,</b> 872	12,243	
1978	822	10	47	27	6,759	6,074	4,959	14,187	
1979	1,531	14	49	45	7,056	7,504	5,112	13,747	
1980	1,014	17	41	35	6,653	5,337	4,983	13,460	
1981	813	22	38	53	7,320	6,572	5,264	13,820	
1982	706	16	38	37	7,603	7,553	6,297	14,744	
1983	719	14	48	48	8,855	8,044	7,208	15,734	
1984	915	33	46	64	9,509	8,961	7,401	18,502	
1985 (to July	y) 590	11	16	49	10,216	12,393	10,170	17,251	

<sup>1</sup> 2 Service Connected Non-Service Connected

## ANALYSIS OF RETIRED MEMBERS BY CURRENT AGE

		NUMBER DIS	OF RETIREES SABILITY		gan and may your 1000, and may day 499 to	AVERAG DISA	,	
AGE	SERVICE	SERVICE CONNECTED	NON-SERVICE CONNECTED	HAZARDOUS DUTY	SERVICE	SERVICE CONNECTED	NON-SERVICE CONNECTED	HAZARDOUS DUTY
less than 40		24	6			\$9,983	\$6,145	
40-44		37	24			8,081	6,184	
45-49		45	41	34		8,618	6,906	\$16,456
50-54	5	61	97	101	<b>\$</b> 12 <b>,</b> 868	6,914	7,857	16,821
55-59	1,050	66	169	134	9,229	6,563	6,249	14,470
60-64	2,371	54	210	130	8,769	6,014	5,648	14,265
65-69	3,609	63	161	78	7,328	5,932	5,478	12,475
70-74	3,384	48	156	34	7,034	6,585	6,391	10,400
75–79	2,268	32	143	23	7,023	6,284	5,657	8,923
80-84	1,277	14	82	5	6,235	4,229	4,769	7,435
85-89	561	5	20		5,077	5,690	4,107	
90-94	191	3	3		3,497	1,881	4,463	
95 <b>-99</b>	32		3		4,544		4,726	
TOTALS	14,748	452	1,115	539	\$7,347	<b>\$6,</b> 837	\$5,974	\$14,139