CONNECTICUT STATE EMPLOYEES
RETIREMENT SYSTEM
June 30, 1985
ACTUARIAL VALUATION

THREE CORPORATE PLACE<br>BLOOMFIELD, CONNECTICUT 06002

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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.

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, 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 $\frac{1}{2} \%$ 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.

## SECTION I

## 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 <br> Retirement Fund <br> (Adjusted basis) | Tier I | Tier II | Total |
| :--- | :---: | :---: | :---: | :---: |
| Present value of future Normal |  |  |  |
| Cost contributions | $\$ 1,085,420,746$ | $\$ 8,408,350$ | $\$ 1,093,829,096$ |
| Unfunded Accrued Liability | $\underline{2,657,230,643}$ | $\underline{8,206,439}$ | $\underline{2,665,437,082}$ |
| 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 |
| LIABILITIES | \$4,904,475,425 | \$114,625,714 | \$5,019,101,139 |

TOTAL LIABILITIES
$\$ 4,904,475,425 \quad \$ 114,625,714 \quad \$ 5,019,101,139$

## SECTION I <br> 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:

| Tier | Plan | Estimated <br> Earnings $7 / 1 / 85$ | Normal Cost Percentage | Projected Earnings $7 / 1 / 86$ | Normal Cost $7 / 1 / 86$ |
| :---: | :---: | :---: | :---: | :---: | :---: |
| I | HD | \$ 101,894,605 | 12.5606\% | \$100,875,659 | \$12,670,588 |
| I | B | 843,424,671 | 9.2181 | 834,990,424 | 76,970,252 |
| I | C | 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 |
| Total | Tier II | \$115,385,389 |  | \$ 234,509,248 | \$15,793,939 |
| Grand | Total | \$1,191,238,595 |  | \$1,299,603,922 | \$114,299,990 |

## SECTION I

## 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 | \$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 | \$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 |

## 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:

## SECTION II

## 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.

## SECTION II

## B. Actuarial Assumptions

| Mortality | 1971 Group Annuity Mortality Table with ages set back 6 years for females. |
| :---: | :---: |
| Investment Return | 712\% compounded annually. |
| Salary Scale | Annual Rate of |
|  | Age Increase |
|  | 20 6.34\% |
|  | 25 6.26 |
|  | $30 \quad 6.10$ |
|  |  |
|  |  |
|  | 45 5.22 |
|  | $50 \quad 4.95$ |
|  | 55 4.83 |
|  | $60 \quad 4.66$ |
| 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 |
|  | $35 \quad 4.70$ |
|  | $40 \quad 4.19$ |
|  | 45 3.54 |
|  | $50 \quad 2.47$ |
|  | $55 \times .94$ |
|  | 60 -- |

## B. Actuarial Assumptions (cont'd)

| Retirement Ages | Hazardous Duty, Age 53 and 25 years of service. <br> All other, Tier I: Age 61 and 10 years of service. <br> 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 |  |
| Disability |  Annual Rate <br> of Disability  <br> Age (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 |
| 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 Change |
| :---: | :---: | :---: | :---: | :---: |
| 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 | $+\quad 0.2$ | N/A |
| * Excluding Summer employees. <br> ** Based on Members included in valuati |  |  |  |  |

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.

## SECTION III

## 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.

|  | 1-1-85 | 7-1-85 | Change | Per Cent Change |
| :---: | :---: | :---: | :---: | :---: |
| Number of Members |  |  |  |  |
| 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 Earnings (millions)

| Hazardous Duty | $\$ 90.7$ | $\$ 109.7$ | $+\$ 19.0$ | $+20.9 \%$ |
| :--- | ---: | :---: | ---: | :---: |
| Plan B | 805.3 | 843.4 | +38.1 | +8.7 |
| Plan C | 141.8 | 130.5 | -11.3 | -8.0 |
| Tier II | 98.7 | 104.5 | +5.8 | +8.9 |
|  |  |  |  |  |
| Average Earnings | $\$ 27,727$ | $\$ 31,155$ | $+\$ 3,428$ | $+12.4 \%$ |
| Hazardous Duty | 24,727 | 27,247 | $+2,520$ | +10.2 |
| Plan B | 23,071 | 24,106 | $+1,035$ | +4.5 |
| Plan C | 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.

SECTION III
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 $\quad$ 7-1-85 $\quad$ 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 Service

| 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.

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C. Retired and Terminated Vested Members
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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 |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pensioners |  |  |  |  |  |  |  |  |
| Number |  | 930 |  | 237 | $+$ | 307 |  | 1.8\% |
| Total Annual Benefit* |  | 087 |  | 521 |  | 434 |  | 5.3 |
| Average Monthly Benefit | \$ | 596 | \$ | 617 | +\$ | 21 |  | 3.5 |

## Beneficiaries

| Number | 607 |  | 672 | +65 | $+10.7 \%$ |
| :--- | ---: | ---: | ---: | ---: | :--- |
| Total Annual Benefit* | $\$ 3,506$ | $\$ 4,050$ | $+\$ 500$ | +14.3 |  |
| Average Monthly Benefit | $\$ 481$ | $\$$ | 502 | $+\$ 21$ | +4.4 |

Terminated Vested

476
536
$+60$
$+12.6 \%$

* (000 omitted)


## 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

\$78,052,143.93

$$
2,560,935.44
$$

Realized Gains
Change in Unrealized Gains

$$
\$ 179,739,160.37
$$

Disbursements

Benefit payments
Employee refunds
Expenses (Net)
\$126,748,627.30
13,616,801.79
117,185.19
$\$ 140,482,614.28$
$\$ 1,200,908,488.70$

## 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
Fixed Income
Equity
Contract
Mortgage
Real Estate
\$83,571,448.00
393,144,274.78
$439,432,061.00$
17,282,645.45
$142,678,186.44$
129,508,624.45
$\$ 1,205,617,240.12$

Total Market Value of Assets June 30, 1985

## SECTION IV <br> C. Adjusted Cost Value

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

* 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, $6-30-85,[(1)+(2)] \quad 1,067,059,248$
4. Market value, 6-30-85 1,200,908,489
5. Current adjustment, $20 \%[(4)-(3)] \quad 26,769,848$
6. Ađjusted Cost Value, 6-30-85, $[(3)+(5)] \$ 1,093,829,096$ [Must be within $\pm 20 \%$ of (4)]

## SECTION V

SUMMARY OF PLAN PROVISIONS

Effective Date

System Eligibility

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

Tier II [Sec. 23]

September 1, 1939

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 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.

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

## Plan Eligibility

Tier I [Sec. 6]

Tier II [Sec. 23]

Norma1 Retirement Date

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

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

Tier II [Sec. $28 \& 30$ ]

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.

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.

Age 47 and 20 years of service.

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

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

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

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

Tier 0 and Tier I, Plan C
Benefit [Sec. 5-162]
Minimum [Sec. 10]
$50 \%$ of Final Average Earnings plus 2\% for each year in excess of 20 .

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.

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.
$2 \%$ of Final Average Earnings times years of service. Minimum with 25 years, $\$ 300$ per month (or less if retirement before 7-1-87).
$11 / 3 \%$ of Final Average Earnings plus $\frac{1}{2} \%$ 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).

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

State Police

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

Tier II [Sec. 29]

Deferred Retirement

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

Tier II [Sec. 28 (b) and (e)] May be deferred but not beyond age 70.

## Vesting

```
Tier 0 and Tier I
    [Sec. 5-166 as amended in
    part by Sec. 13]
```

Benefit is based on salary and service to actual retirement.
None.

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

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).

May be deferred but not beyond age 70 .

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]

Tier II [Sec. 31]

## Employee Contributions

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

Plan C [Sec. 5-161]

P1an B [Sec. 5-161]

Tier II [Sec. 37]

Cost of Living
[Sec. 5-162b, 5-162d,
Sec. $9 \&$ Sec. 35]

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

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).
$5 \%$ of earnings.
$5 \%$ of earnings.

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

None .

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.

State Police
[Sec. 5-146]

Tier 0 and Tier $I$
[Sec. 5-165a as amended
by Sec. 12]
[Sec. 5-168 as amended
by Sec. 13]

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

If eligible for early or normal retirement, spouse benefit equal to $50 \%$ of average of Life Benefit and $50 \% \mathrm{~J} \& \mathrm{~S}$ 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.

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

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

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.

## EXHIBIT A

CERTIFICATION

# MILLIMAN \& ROBERTSON, inc. 

aLLAND.AFFLECK.FS.A.F.C.E.A
DAVIDV. AXENE,FSA. JAMESR BEROUST, FC.A.S. GEORGEL. BERRY.F.S.A. DAVIDR. ALCKERSTAFF, F.C.AS. HOMAS P. BLEAKNEY. F.S.A. BRUNOV BOIN FS.A STEPHEND. BRINK F.S.A ROBERTM. CHANDLER,FSA ROBERT L COLLETT. FSA. JOMNP COOKSON.FSA. JAMES A CURTIS.F.S.A. THOMASK CUSTIS. FSA GARY E. DAHLMAN.F.S.A. OREW S. DAVIDOFF. F.SA CHRISTIAN J. OESROCHERS. F. S.A ROBERT J. DYMOWSKI F JOHN S. ECKERT, F.S.A JOHN S. EDWAROS.F C CARY E EKLOF, FSA. OANEL J. FLAHERTY, F.CASS. JAMESA GOBES, F.S.A. DENNIS JGRAF FSA.
PATRICKJ. GRANNAN. F.CAS PATRICK GRANNAN. FICA OENNISL. GRAVES.FSA JANETS.GRAVES, F.C.A.S. DALE S. HAGSTROM. F. SA RONALDG. HARRIS. FIS.A REX D. HEMME. F.S.A. DOUGLASC. HOLDEN. F. S.A SILVIO INGUI. F. SA. FENTON R. ISRACSON. F.S.A. HOWAROM. ITO.FCA GREGORY D. JACOBS, F. SEUGENE M. KALWARSKI, FISA DOUGLAS FI KLINE. FEGA.S. GERALDT. KOGER.F.CA DAVID W. KRUEGER.FS.A JOHN M. LENSER. F.S.A. LEONARDP J.LEONG, FSA FREDERIC T. LHAMON. FSA MARKE. LITOW. ESA MICHAEL J. MAHONEY. F.SA. BRIANJ. MATTSON. F. $5 . A$. ROBERT G. MAULE. FSA DANIEL I MECARTHY. FS.A. MICHAEL A. MC MURRAY. F.C.AS DOUGLAS MENKES F.S.A. STEVEN I MIKKALO.F. S.A.
EDWARD P. MOHORIC. F. S.A EDWARD P. MOHORIC. F.S QRUCE T OGG, FS.A. PAULJ.PATTERSON.F.S.A. J. LYNN PEAEOOY, F.S.A. MAREARETE PEARSON, FSA KRIS E. PETERSON. F. SA RAYMONDE. PINCZKOWSKI, FS. SA ROBERT A. PRYOR, F.S.A STANLEY A. ROBERTS.F.S.A WALTERS. RUGLAND, FSA JOHNP SCHREINER, FSA T. THOMAS SIMESTER, 厂 S.A WILLIAM D. SMTTH,F.S.A. JOKN B SHYDER, II. F. SA STEVEND. SOMMERE, F.S.A DENIS J. SULLIVAN. FS. SA JAMESR TYLER ESA ANOREW E. WANG, FS. S.A. RICHARD E. WHITE. F S.A. RICHARD A. WINKENWERDER, FISA BRUCE W. WINFERHOF FS.A BRUCEL WORKMAN. EC.A.
JOHN C. ANTLIFE. F.S.A. WHARAM CHESNER FSA JOSEPH E. CROWNE. ES.A SCOTT L. DENNISON, FSA JEFFERY T. DUKES. ES.A JOHN W. EMRHARDT. FIS.A. STEVEN A EISENBERG. ESA. MARTIN FELOMAN. F.S.A JOHN E. FOLEY, FSA. DOUGLAS M. GEUDER, FS.A MARCIA S. GREENSTEIN. FS.A J. ALAN HERRINGTON, F.S.A STEPHEN G HILDENBRANO. FS.A. GARY R. JOSEPHSON. F.C.A.S. JaCQUELINE M. KEATING. FS.A LESLIE E. KORPER, I. FSA TMMOTHY D. LEE, F S.A MICHAEL A MEGRATH. F.S.A TOHN $L$ MOLINAR. F. S.A. RICMARD E. OSTUW F. S.A. WILLIAM A REIMERT, FS.A MARCIA S. SANDER, FIS.A PAULA S. SEDLACEK, ESAA LEEH. STRAATE. FS.A MARKA TRIEE, ESA. BRUCE N. VANDERELS. FSA RONALD R. WEGNER, F.S.A. EARL L. WHITTNEY. F.S.A. ELAINE M. WIANT, FS,A.

THPEE CORPORATE PLACE
BLOOMFIELD, CONNECTICUT OGOO2

## 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:
a. Active Members
b. Retired Members and Beneficiaries

$$
\$ 2,319,424,767
$$

c. Vested former Members
d. Total
$1,431,142,322$
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 | $\$ 114,299,990$ |

\$98,506,051
15,793,939
2. Payment on Unfunded Liability*

```
Tier I
$203,917,452
Tier II
    Total
$204,516,459
```

3. Total Employer Cost

| Tier I | $\$ 302,423,503$ |
| :--- | ---: |
| Tier II | $\frac{16,392,946}{}$ |
| 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. Gobs, F.S.A. Consulting Actuary

| Funding Method | Entry Age Normal. |
| :---: | :---: |
| Mortality | 1971 Group Annuity Mortality Table with ages set back 6 years for females. |
| Investment Return | $7 \frac{1}{2} \%$ compounded annually. |
| Salary Scale | AgeAnnual Rate of <br> Increase |
|  | 20 $6.34 \%$ <br> 25 6.26 <br> 30 6.10 <br> 35 5.90 <br> 40 5.58 <br> 45 5.22 <br> 50 4.95 <br> 55 4.83 <br> 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. <br> Annual Rate of <br> Age <br> Withdrawal |
|  | 20 $5.44 \%$ <br> 25 5.29 <br> 30 5.07 <br> 35 4.70 <br> 40 4.19 <br> 45 3.54 <br> 50 2.47 <br> 55 .94 <br> 60 .- |
| Retirement Ages | Hazardous Duty, Tier 0 and Tier I: Age 53 and 25 years of service. <br> All other, Tier 0 and Tier I: Age 61 and 10 years of service. <br> 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 | $3 \frac{1}{2} \%$ compounded annually. |


| Disability | $\begin{aligned} & \frac{\text { Age }}{20} \\ & \hline 25 \\ & 30 \\ & 35 \\ & 40 \\ & 45 \\ & 50 \\ & 55 \\ & 60 \end{aligned}$ | Annual Rate of Disability |
| :---: | :---: | :---: |
|  | Service-connected comprise $50 \%$ of $t$ Hazardous Duty and | are assumed to tal disabilities for $20 \%$ for others. |
| Cost-of-Living Increases | $3 \%$ per year for re 1-1-80. $4 \frac{1}{2} \%$ per prior to 1-1-80. | irees on or after year for retirees |
| Asset Valuation | Adjusted cost valu written up (or difference betwee adjusted cost valu write-up (or writ so that the res value is within $20 \%$ | : assets are <br> own) by $20 \%$ of the market value and <br> , plus an additional <br> -down) as necessary lting adjusted cost \% of market value. |

EXHIBIT B

ANALYSIS BY AGE AND SERVICE

## AGE



Under 20

| 20 to 24 | 60 | 2 |  |  |  |  |  |  |  | 62 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 2') to 29 | 288 | 110 | 3 |  |  |  |  |  |  | 401 |
| 30 to 34 | 170 | 286 | 121 | 2 |  |  |  |  |  | 579 |
| 35 to 39 | 89 | 159 | 290 | 93 | 6 |  |  |  |  | 637 |
| 40 to 44 | 59 | 61 | 121 | 186 | 80 | 6 |  |  |  | 513 |
| 4.5 to 49 | 37 | 33 | 48 | 101 | 124 | 34 | 2 |  |  | 379 |
| 50 to 54 | 16 | 23 | 39 | 74 | 54 | 34 | 13 | 1 |  | 254 |
| 55 to 59 | 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 |

AVERAGE SALARIES*

| 20 to 24 | \$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 39 | 23,632 | 28,397 | 31,890 | 31,846 | \$32,051 |  |  |  |  | 29,859 |
| 40 to 44 | 24,377 | 28,623 | 31,220 | 32,678 | 33,346 | \$30,672 |  |  |  | 30,978 |
| 45 to 49 | 25,677 | 29,538 | 31,430 | 30,708 | 34,782 | 33,640 | \$30,848 |  |  | 31,803 |
| 50 to 54 | 25,879 | 28,111 | 30,851 | 30,779 | 30,612 | 32,547 | 37,614 | \$26,143 |  | 30,772 |
| 55 to 59 | 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 |
| $65 \& \mathrm{Up}$ | 28,042 | 23,044 | 32,777 | 30,334 | 34,137 | 32,453 | 33,947 | 33,701 | 35,039 | 31,485 |
| TOTAT, S | \$24,528 | \$28,323 | \$31,028 | \$31,533 | \$32,833 | \$32,596 | \$37,532. | \$29,421 | \$35,039 | \$29,306 |

* Based on Members and salaries input to Valuation.

| 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 | 1 |  |  |  |  |  |  |  |  | 1 |
| 20 to 24 | 96 | 1 |  |  |  |  |  |  |  | 97 |
| 25 to 29 | 146 | 2 |  |  |  |  |  |  |  | 148 |
| 30) to 34 | 82 | 1 |  |  |  |  |  |  |  | 83 |
| 35 to 39 | 35 | 1 |  | 1 |  |  |  |  |  | 37 |
| 40 to 44 | 17 |  | 1 |  |  |  |  |  |  | 18 |
| 45 to 49 | 9 | 1 |  |  |  |  |  |  |  | 10 |
| 50 to 54 | 5 |  |  |  |  |  |  |  |  | 5 |
| 55 to 59 | 3 |  |  |  |  |  |  |  |  | 3 |
| 60 to 64 |  |  |  |  |  |  |  | 1 |  | 1 |
| $65 \% \mathrm{Up}$ |  |  |  |  |  |  |  |  |  |  |
| -OTTALS | 394 | 6 | 1. | 1 |  |  |  | 1 |  | 403 |

AVERAGE SALARIES*

| Under 20 | \$22,635 |  |  |  |  | \$22,635 |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| 20 to 24 | 14,727 | \$26,167 |  |  |  | 14,845 |
| 25 to 29 | 17,416 | 24,974 |  |  |  | 17,518 |
| 30 to 34 | 17,112 | 28,280 |  |  |  | 17,246 |
| 35 to 39 | 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 59 | 13,626 |  |  |  |  | 13,626 |
| 60 to 64 |  |  |  |  | \$5,957 | 5,957 |
| 65 \& Up |  |  |  |  |  |  |
| TOTALS | \$16,758 | \$25,922 | \$25,431 | \$28,184 | \$5,957 | \$16,917 |

* Based on Members and salaries input to valuation.


| 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
20 to 24

| 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 |
| 52 | 297 | 307 | 315 | 115 | 62 | 47 | 44 | 25 |
| 15 | 116 | 127 | 155 | 68 | 30 | 36 | 21 | 30 |
| 570 | 1,704 | 1,109 | 1,031 | 339 | 222 | 202 | 108 | 65 |

25 to 29
30 to 34
35 to 39
40 to 44
45 to 49
50 to 54
55 to 59 60 to 64 $65 \& \mathrm{Up}$ TOTALS

Under 20
20 to 24
25 to 29
30 to 34
35 to 39
40 to 44
45 to 49
50 to 54
55 to 59
60 to 64
$65 \& \mathrm{up}$
TOTALS


[^0]CONNECTICUT STATE EMPLOYEES RETIREMENT SYSTEM
EXHIBIT C
RETIRED BENEFIT ANALYSIS

| YEAR OF RETIREMENT | SERVICE | DISABILITY ${ }^{1}$ | DISABILITY ${ }^{2}$ | HAZARDOUS DUTY | SERVICE | DISABILITY ${ }^{1}$ | DISABILITY ${ }^{2}$ | HAZARDOUS DUTY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| Pre-1956 | 124 | 12 | 34 | 5 | \$5,309 | \$3,243 | \$3,346 | \$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 |
| 1.960 | 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 | 5,872 | 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) | 590 | 11 | 16 | 49 | 10,216 | 12,393 | 10,170 | 17,251 |

[^1]ANALYSIS OF RETIRED MEMBERS
BY CURRENT AGE

| AGE | SERVICE | DISABILITY |  | HAZARDOUS DUTY | SERVICE | DISABILITY |  | HAZARDOUS DUTY |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
|  |  | SERVICE CONNECTED | $\begin{aligned} & \text { NON-SERVICE } \\ & \text { CONNECTED } \end{aligned}$ |  |  | SERVICE CONNECTED | $\begin{aligned} & \text { NON-SERVICE } \\ & \text { CONNECTED } \end{aligned}$ |  |
| 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 | \$12,868 | 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 |  |
| 95-99 | 32 |  | 3 |  | 4,544 |  | 4,726 |  |
| TOTALS | 14,748 | 452 | 1,115 | 539 | \$7,347 | \$6,837 | \$5,974 | \$14,139 |


[^0]:    * Based on Members and salaries input to valuation; may include some summer employees.

[^1]:    ${ }_{2}^{1}$ Service Connected
    Non-Service Connected

