

STATE EMPLOYES' RETIREMENT SYSTEM

Actuarial Valuation  
as of  
December 31, 1980

HUGGINS & COMPANY, INC.  
MEMBER—THE HAY GROUP

*Consulting Actuaries*

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June 26, 1981

Mr. Robert L. Cusma, Secretary  
State Employees' Retirement System  
204 Labor & Industry Building  
Harrisburg, Pennsylvania 17120

STATE EMPLOYES' RETIREMENT SYSTEM

Actuarial Valuation as of December 31, 1980

Dear Mr. Cusma:

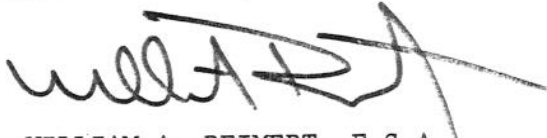
Herewith please find the valuation report showing statements of assets, account balances and actuarial liabilities of the State Employees' Retirement System as of December 31, 1980, together with an actuarial balance sheet in which these statements are consolidated. Reserve liabilities and statistical tables were determined based upon the data submitted by the Commonwealth.

There are attached supporting schedules from A to O, inclusive.

Respectfully submitted,

HUGGINS & COMPANY, INC.

By

  
WILLIAM A. REIMERT, F.S.A.  
Member American Academy of Actuaries

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PART I - VALUATION AS OF DECEMBER 31, 1980

A complete actuarial valuation of the State Employees' Retirement System was made as of December 31, 1980 in which the actuarial liabilities were calculated, based on the contributions and benefits in effect on that date. These results were compared with the account balances as of that date and, after adjusting the account balances for deficiencies or surpluses, an actuarial balance sheet was prepared.

This Part I consists of the following three statements:

1. Assets of the Retirement Fund as of December 31, 1980.
2. Liabilities of the Retirement Fund as of December 31, 1980, showing the various account balances.
3. Actuarial liabilities as of December 31, 1980.

In the statement of the assets, it will be noted that the total book value of investments, after adjustment for amortization, amounted to \$2,910,468,861. In addition to the other items, it will be noted that there was an amount of \$85,532,713 of Accounts Receivable which represents amounts due from the Commonwealth. The total assets amount to \$3,169,525,909.

The account balances total \$3,169,525,909, matching the assets of the Retirement Fund, and are allocated as shown in the statement. The account balance in the State Annuity Accumulation Account of \$489,725,261 is before any transfers to adjust account balances.

Comments on the statement of actuarial liabilities are made following the statements. It will be noted that the total actuarial liabilities amount to \$9,380,792,694.

STATE EMPLOYES' RETIREMENT FUND

STATEMENT OF ASSETS AS OF DECEMBER 31, 1980

Cash or equivalent .....	\$	128,240,091
<u>Investments</u>		
Unmatured (Par Value) of investments ....	\$2,867,630,766	
Net Accrual on Investments after amortization .....	<u>42,838,095</u>	2,910,468,861
Interest due and accrued .....		41,033,081
Members contribution in transit .....		4,251,163
Accounts Receivable (Due from Commonwealth) .....		<u>85,532,713</u>
TOTAL ASSETS .....		<u>\$3,169,525,909</u>

STATE EMPLOYES' RETIREMENT FUND

STATEMENT OF ACCOUNT BALANCES AS OF DECEMBER 31, 1980

Members' Savings Account .....	\$ 936,100,211
Annuity Reserve Account .....	1,853,274,387
State Police Benefit Account .....	178,230,443
Enforcement Officers Benefit Account .....	11,825,229
State Accumulation Account .....	489,725,261
Supplemental Annuity Account .....	(301,648,714)
Accounts payable (Miscellaneous Liability) .....	<u>2,019,092</u>
 TOTAL ACCOUNT BALANCES AND MISCELLANEOUS LIABILITIES .....	 <u>\$3,169,525,909</u>

STATE EMPLOYES' RETIREMENT FUND

STATEMENT OF ACTUARIAL LIABILITIES AS OF DECEMBER 31, 1980

Present value of benefits payable on account of annuitants and beneficiaries  
from -

Annuity Reserve Account:

Superannuation .....	\$1,202,384,860	
Disability .....	81,270,496	
Withdrawal .....	197,098,319	
Death (beneficiaries) .....	<u>101,765,104</u>	
Sub-total .....		\$1,582,518,779
Supplemental Annuities .....		<u>264,511,590</u>
Total .....		\$1,847,030,369
<u>State Police Benefit Account</u> .....		116,942,478
<u>Enforcement Officers Benefit Account</u> .....		<u>8,263,581</u>
Total for annuitants and beneficiaries .....		\$1,972,236,428

Present value of benefits to active and inactive members for -

Superannuation and withdrawal ....	\$6,085,213,686	
Disability .....	496,366,691	
Death .....	728,507,365	
Refunds .....	<u>96,449,432</u>	
Total for active and inactive members .....		\$7,406,537,174
Miscellaneous .....		<u>2,019,092</u>
TOTAL ACTUARIAL LIABILITIES .....		<u>\$9,380,792,694</u>

Liability related to present annuitants and beneficiaries .. \$1,972,236,428

A breakdown of the liability of \$1,972,236,428 related to present annuitants and beneficiaries according to the type of benefit payment is shown in the following table.

<u>Category of Annuitants or Beneficiaries</u>	<u>Liability as of December 31, 1980 Total Annuity Reserve</u>
<u>Other Than State Police or Enforcement Officers</u>	
Superannuation .....	\$1,202,384,860
Disability .....	81,270,496
Withdrawal .....	197,098,319
Death .....	<u>101,765,104</u>
Sub-total .....	\$1,582,518,779
Supplemental Annuities .....	<u>264,511,590</u>
Total .....	\$1,847,030,369
<u>State Police</u> .....	116,942,478
<u>Enforcement Officers</u> .....	<u>8,263,581</u>
Total Liabilities .....	<u>\$1,972,236,428</u>

It is interesting to compare the above liabilities with the corresponding amounts shown in the statement of account balance on page 3. The liabilities of \$1,847,030,369 must be compared with the Annuity Reserve Account balance of \$1,853,274,387 indicating a balance of assets over liabilities of \$6,244,018 in the Annuity Reserve Account. A transfer of this surplus amount should be made from the Annuity Reserve Account as of December 31, 1980 in order to bring the account into balance with the corresponding liability.

The required reserves for benefits payable to retired State Police or their beneficiaries amount to \$116,942,478. The corresponding account balance in the State Police Benefit Account is \$178,230,443 which produces a balance of assets over liabilities of \$61,287,965. Reserves for annuitants are transferred to this account upon a member's retirement. Special contributions for active members are also credited to this account. The balance of \$61,287,965 previously referred to is not a surplus but is a reserve for benefits payable to State Police members who are currently active or inactive.

The required reserves for benefits payable to retired Enforcement Officers and their beneficiaries amount to \$8,263,581. This reflects the reserves for both the members' portion and the State's portion as noted earlier in this report. The corresponding account balance in the Enforcement Officers Benefit Account is \$11,825,229 which produces a balance of assets over liabilities of \$3,561,648.

Liabilities for supplemental retirement allowances were created by Act 230, approved in 1968, which also made provision for a Supplemental Retirement Allowance Account to receive the Commonwealth appropriations for supplemental and cost-of-living allowances. Act 31, approved in 1974, and Act 130, approved in 1979, made provision for additional supplemental allowances. When the liabilities for supplemental retirement allowances are created, corresponding funds are transferred to the Annuity Reserve Account. The transfer to the Annuity Reserve Account was charged to the Supplemental Annuity Account creating a deficiency in this account. As the Commonwealth appropriates moneys to fund supplemental retirement allowances, these amounts are credited to the Supplemental Annuity Account. The Supplemental Annuity



Account shows a negative balance of \$301,648,714 as of December 31, 1980. The actuarial liabilities as of December 31, 1980 for Supplemental Annuities payable amount to \$264,511,590. This latter amount represents the value as of December 31, 1980 of all supplemental annuities payable in the future as a result of Act 230, Act 31 and Act 130 and is part of the total liability to be offset by the Annuity Reserve Account. The deficiency of \$301,648,714 in the Supplemental Annuity Account represents the unfunded portion of the deficiency that existed in this account. Of the total liability of \$301,648,714 for supplemental annuities, \$4,470,033 represents the liability for supplemental annuities which became effective in 1968, \$72,810,578 represents the liability for supplemental annuities which became effective in 1974 and \$224,368,103 represents the liabilities for supplemental annuities effective in 1979.

The number of present annuitants and beneficiaries and their annual annuities as of December 31, 1980 are shown in the following table. This information reflects the data supplied us by the Commonwealth.

Category of Annuitants or Beneficiaries	Annual Annuities as of December 31, 1980			Total Annuity
	Number	Basic	Supplemental	
<u>Other Than State Police or Enforcement Officers</u>				
Superannuation .....	34,950	\$126,512,725	\$25,600,611	\$152,113,336
Disability .....	2,906	9,683,332	1,372,859	11,056,191
Withdrawal .....	6,162	16,252,672	2,121,699	18,374,371
Death Benefit .....	<u>3,968</u>	<u>11,432,342</u>	<u>416,720</u>	<u>11,849,062</u>
Sub-total .....	47,986	\$163,881,071	\$29,511,889	\$193,392,960
<u>State Police</u> .....	1,585	10,329,183	2,499,800	12,828,983
<u>Enforcement Officers</u> .....	<u>122</u>	<u>893,545</u>	<u>226,575</u>	<u>1,120,120</u>
Totals .....	<u>49,693</u>	<u>\$175,103,799</u>	<u>\$32,238,264</u>	<u>\$207,342,063</u>

The age distributions of the annuitants and beneficiaries in the various kinds of retirement as supplied by the Commonwealth are shown in schedules at the end of this report, as listed in the Appendix.

Liability related to present active and inactive members .. \$7,406,537,174

The data related to the active and inactive members of the system as supplied by the Commonwealth are summarized briefly in the table below.

Active members:

	<u>Male</u>	<u>Female</u>	<u>Total</u>
Number .....	68,351	53,410	121,761
Salaries .....	\$1,274,060,936	\$777,630,673	\$2,051,691,609

Inactive Members:

There were 2,568 inactive members for whom a liability was calculated and included in the valuation results.

Miscellaneous ..... \$ 2,019,092

This item is the total of the reserve for outstanding checks, member withdrawals payable, annuities payable and payroll deduction payable.

Total actuarial liabilities ..... \$ 9,380,792,694

The total actuarial liability represents the present value of all obligations of the System for all expected future benefits, both those related to service prior to December 31, 1980 and those related to subsequent service.

A summary of the major benefit provisions and the provisions related to member contributions are shown in Schedule N at the end of this report.

The actuarial assumptions used in this valuation are summarized in Schedule O at the end of this report. These are based on the experience of the Retirement System in 1976-1980 with interest assumed at 5-1/2% per annum.

PART II - REQUIRED TRANSFERS TO ADJUST ACCOUNT BALANCE

In discussing the various account balances in Part I, reference was made to a reserve transfer that should be made as of December 31, 1980 in order to bring the accounts into balance. A summary of the account balances and actuarial liabilities, along with the corresponding surplus or deficiency, is as follows:

<u>Fund</u>	<u>Account Balance</u>	<u>Actuarial Liability</u>	<u>Surplus (+) or Deficiency (-)</u>
Annuity Reserve Account .	\$1,853,274,387	\$1,847,030,369	(+) \$ 6,244,018

As previously mentioned in Part I, the adjustments to be made to the books to accord with the requirements of Act 31 of 1974 lead to the following transfer:

<u>From</u>	<u>To</u>	<u>Amount</u>
Annuity Reserve Account ...	State Accumulation Account ...	\$ 6,244,018

As result of this transfer the various account balances are as follows after adjustment:

	<u>Adjusted Account Balance</u>
Members' Annuity Savings Account .....	\$ 936,100,211
Annuity Reserve Account .....	1,847,030,369
State Police Benefit Account .....	178,230,443
Enforcement Officers Benefit Account ..	11,825,229
State Accumulation Account .....	495,969,279
Supplemental Annuity Account .....	(-)301,648,714
Miscellaneous .....	<u>2,019,092</u>
Total Account Balances .....	<u>\$3,169,525,909</u>

These account balances are now ready for use in our actuarial balance sheet where they appear as "Present Assets" when compared with the actuarial liabilities. The actuarial balance sheet is presented on the following page.

ACTUARIAL BALANCE SHEET SHOWING PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES  
of STATE EMPLOYEES' RETIREMENT SYSTEM as of DECEMBER 31, 1980

A S S E T S

Present assets:

Members' Annuity Savings Account .....	\$ 936,100,211
Annuity Reserve Account .....	1,847,030,369
State Police Benefit Account .....	178,230,443
Enforcement Officers Benefit Account ...	11,825,229
State Accumulation Account .....	495,969,279
Supplemental Annuity Account .....	(-)301,648,714
Miscellaneous .....	<u>2,019,092</u>
Total present assets (book value) .....	\$3,169,525,909*

Present value of future contributions

Members' Savings Account (Employee) .....	\$1,205,370,137
State Accumulation Account (Employer) ...	4,704,247,934
Supplemental Annuity Account (Employer) ...	<u>301,648,714</u>

Total future assets .....	<u>6,211,266,785</u>
TOTAL ASSETS .....	<u>\$9,380,792,694</u>

\*Total present assets (book value)

distributed as follows:

Cash or equivalent .....	\$ 128,240,091
Investments (net of amortization) ...	2,910,468,861
Accrued Interest and Dividends .....	41,033,081
Members contribution in transit .....	4,251,163
Due from Commonwealth .....	<u>85,532,713</u>

Total present assets .....	<u>\$3,169,525,909</u>
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L I A B I L I T I E S

Present value of benefits payable on account  
of annuitants and beneficiaries from

<u>Annuity Reserve Account:</u>	
Superannuation .....	\$ 1,202,384,860
Disability .....	81,270,496
Withdrawal .....	197,098,319
Death .....	101,765,104
Sub-total .....	\$1,582,518,779
Supplemental Annuities .....	<u>264,511,590</u>

Total .....	\$1,847,030,369
State Police Benefit Account .....	116,942,478
Enforcement Officers Benefit Account .....	<u>8,263,581</u>

Total for annuitants and beneficiaries ..	\$1,972,236,428
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Present value of benefits to active  
and inactive members for -

<u>Superannuation and withdrawal .....</u>	<u>\$ 6,085,213,686</u>
Disability .....	496,366,691
Death .....	728,507,365
Refunds .....	96,449,432

Total for active and inactive members ..	\$7,406,537,174
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Miscellaneous .....	<u>2,019,092</u>
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TOTAL LIABILITIES .....	<u>\$9,380,792,694</u>
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PART III - CONTRIBUTION RATES

In the actuarial balance sheet submitted on page 10, the present assets of \$3,169,525,909, represented by the various account balances, are compared with the total liabilities of \$9,380,792,694. The difference of \$6,211,266,785 represents the future assets representing the present value of expected future member and employer contributions.

It will be noted that the present value of future employee contributions appears as \$1,205,370,137. In addition, the present value of the employer contributions to the State Accumulation Account is \$4,704,247,934 and to the Supplemental Annuity Account is \$301,648,714.

Section 5508(b) of the State Employees' Retirement Code states:

"The employer normal contribution rate shall be determined after each actuarial valuation on the basis of an annual five and one-half percent (5-1/2%) interest rate and such mortality and other tables as shall be adopted by the board. Until all accrued liability contributions have been completed, the employer normal contribution rate shall be determined as a level percentage of the compensation of the average new active member, which percentage, if contributed on the basis of his prospective compensation throughout his entire period of active State service, would be sufficient to fund the liability for any prospective benefit payable to him, except a supplemental benefit as provided in Section 5708, in excess of that portion funded by his prospective member contributions. After all accrued liability contributions have been completed, the employer normal contribution rate shall be determined by deduct-

ing from the present value of the liabilities for all prospective benefits, except supplemental benefits as provided in Section 5708, the sum of the total assets in the fund on the valuation date, excluding the balance in the supplemental annuity account, and the present value of prospective member contributions, and dividing the remainder by the present value of the future compensation of all active members."

Since accrued liability contributions have not been completed, we determined the employer normal contribution rate in accordance with the above provisions. We first obtained the normal contribution rate, as a level percentage of compensation, which would be required for new active members to fund the liability for any prospective benefit payable to such new members. In making this contribution we used data for all active members who had not yet completed one year of credited service. Using the entry age normal cost method, the normal cost contribution, expressed as a level percentage of future compensation of new employees, was determined as follows:

<u>Benefit</u>	<u>Normal Cost as a Percent of Payroll for Active Members</u>
Superannuation and Withdrawal .....	9.30%
Disability .....	1.02
Death .....	1.06
Refunds .....	<u>1.04</u>
Total normal cost percentage .....	12.42%

Section 5508(b) made reference to the normal contribution rate for prospective benefits in excess of that portion funded by the members' contributions. Hence the employer normal cost is determined as follows:

Total normal cost .....	12.42%
Employee contribution .....	<u>5.00</u>
Employer normal cost .....	7.42%

As shown in the balance sheet on page 10, the present value of future employer contributions (i.e., future contributions to the State Accumulation Account) is \$4,704,247,934. Part of this represents the present value of future employer normal cost contributions, and part of this represents the value of future contributions to fund the unfunded accrued liability. This breakdown is shown below:

Present value of future employer contributions other than for Supplemental Retirement Allowances .....	\$4,704,247,934
Present value of future normal cost contributions (7.42% of future payroll) ...	<u>1,812,273,839</u>
Present value of future contributions to fund the Unfunded Accrued Liability ....	\$2,891,974,095

The present value of future contributions to fund the unfunded accrued liability of \$2,891,974,095 is the present unfunded accrued liability since the present value of all future contributions for this purpose must be equal to this liability.

The unfunded accrued liability of \$2,891,974,095 is composed of two parts: one part is to be funded over 30 years from July 1, 1969 and other part over 30 years from July 1, 1974. The two parts and the amount required to fund each over the applicable period allowing for annual salary increases of 4% are as follows:

Funding Period: 30 Years from July 1	Amount of Liability	Annual Payment to Fund	
		Amount	Percent*
1969	\$2,049,841,729	\$132,128,512	6.20%
1974	<u>842,132,366</u>	<u>44,208,744</u>	<u>2.08</u>
	\$2,891,974,095	\$176,337,256	8.28%

\*Payment for 1981 expressed as a percentage of the estimated total payroll for active members in 1981 of \$2,130,261,252.



The accrued liability for supplemental allowances is composed of three parts: one part is to be funded over 20 years from July 1, 1969, the second part over 20 years from July 1, 1974, and the third over 20 years from July 1, 1979 on the basis of level payments for each part. This may be summarized as follows:

<u>Funding Period:</u> <u>20 Years from July 1</u>	<u>Amount of</u> <u>Liability</u>	<u>Annual Payment to Fund</u>	
		<u>Amount</u>	<u>Percent*</u>
1969	\$ 4,470,033	\$ 672,792	0.03%
1974	72,810,578	7,783,898	0.38
1979	<u>224,368,103</u>	<u>19,634,909</u>	<u>0.96</u>
	\$301,648,714	\$28,091,599	1.37%

\*Payment for 1981 expressed as a percentage of the estimated total payroll for active members in 1981.

Section 5508(d) provides in part that, in addition to determining the contributions required for other members of the Retirement System "...The actuary shall determine the Commonwealth or other employer contributions required for active members of Class C and officers of the Pennsylvania State Police and enforcement officers and investigators of the Pennsylvania Liquor Control Board who are members of Class A to finance their benefits in excess of those to which other members of Class A are entitled. Such additional contributions shall be determined separately for officers and employees of the Pennsylvania State Police and for enforcement officers and investigators of the Pennsylvania Liquor Control Board."

As noted earlier in this report, the amounts currently carried in the State Police Benefit Account and the Enforcement Officers' Benefit Account exceed the liability for pensioners and beneficiaries corresponding to these two accounts. Thus, assets are currently on hand to meet at least part of the liability for the special benefit payable to these two categories of participants. The liability for the special benefit in excess of the assets on



hand was expressed as a percentage of the future compensation of the two groups involved in order to determine the extra contribution to be made. In view of the assets held in the Enforcement Officers' Benefit Account in comparison to liabilities, it is recommended that no special contribution be made for enforcement officers. For State Police, the liability for special benefits in excess of assets currently on hand was expressed as a percent of payroll for State Police. This percent was found to be 1.49%. The percentage contribution previously mentioned is to be applied to the total payroll for State Police only and not the total payroll of all covered participants under the plan.

The cost discussed above, excluding the special contribution to be made for State Police, expressed as a percentage of the total payroll of all active covered participants may be summarized as follows:

	<u>Contribution Payable January 1, 1981</u>	<u>Contribution Payable Quarterly</u>
Total Normal Cost .....	12.42%	N/A
Member Deductions .....	5.00	N/A
Employer portion of Normal Costs ...	<u>7.42</u>	<u>7.83%</u>
Payment on Unfunded Accrued Liability other than for Supplemental Allowances .....	8.28	8.74
Payment on Unfunded Accrued Liability for Supplemental Allowances .....	<u>1.37</u>	<u>1.45</u>
Total Employer Contribution Rate ...	<u>17.07%</u>	<u>18.02%</u>

It should be noted that the 18.02% of payroll employer contribution rate will serve as a basis for the 1982-83 fiscal year appropriation. This figure includes appropriate adjustments to reflect the anticipated timing of the contributions.

PART IV - SUMMARY

In Part I of the report, we presented the statements of assets, account balances and actuarial liabilities as of December 31, 1980. The actuarial liabilities were discussed in some detail.

In Part II, we discussed the surplus or deficiency in each account and recommended a transfer as of December 31, 1980 in order to bring the Annuity Reserve Account into balance with the actuarial liability. This transfer is as follows:

<u>From</u>	<u>To</u>
Annuity Reserve Account	State Accumulation Account .... \$ 6,244,018

Using this adjusted account balance we developed an actuarial balance sheet in which we compared the present assets and the future assets with the total actuarial liability, with the future assets serving as the balancing item.

In Part III, we developed the following rates of employer contribution to the Retirement Fund:

Normal contribution rate-State Accumulation Account .....	7.83%
Accrued liability contribution rate-State Accumulation Account .....	<u>8.74</u>
Total contribution rate-State Accumulation Account .....	16.57%
Accrued liability contribution rate-Supplemental Annuity Account .....	<u>1.45</u>
Total employer contribution rate .....	<u>18.02%</u>

The total unfunded accrued liability as of December 31, 1980 is \$2,871,974,195.

The special contribution for State Police was found to be 1.49% of the total payroll for State Police.

Shown below is a summary of the number of active participants together with their total salaries that have been used in the last four valuations. The average salary is also shown for each of these four years.

	As of December 31,			
	<u>1980</u>	<u>1979</u>	<u>1978</u>	<u>1977</u>
Number .....	121,761	124,812	127,417	126,831
Total salaries .	\$2,051,691,609	\$1,930,814,169	\$1,790,017,545	\$1,729,237,182
Average salary . \$	16,850	\$ 15,470	\$ 14,048	\$ 13,634

APPENDIX - SCHEDULES OF MEMBERSHIP as of DECEMBER 31, 1980

The following schedules of the membership as of December 31, 1980 are supporting schedules to the valuation because it was upon this membership that the liabilities were calculated. The schedules show the distribution of the membership by age nearest birthday as of December 31, 1980, separated according to whether or not they are contributors or annuitants. The schedules also show the annual salaries in the case of active members and the total amounts of annuities in the case of annuitants.

In Schedule A are shown, according to age nearest birthday and class of membership, the total number and annual salary of the male members still remaining in active membership. At the end of the schedule, their average age and average annual salary is shown.

In Schedule B are shown, according to age nearest birthday and class of membership, the total number and annual salary of the female members still remaining in active membership. At the end of the schedule, their average age and average salary is shown.

In Schedule C is shown a summary of the two preceding schedules, including the total number of active members and the total annual salaries both by sex and by class. Due to two new changes, a summary is given of Class A by category. One change is that all recently hired members will be put into Class A. Second, the categories take over the function of the old classes.

In Schedule D are shown, according to age nearest birthday, the number of male members who are receiving superannuation annuities and the total amounts of the basic monthly benefits and supplemental monthly benefits.

In Schedule E are shown, according to age nearest birthday, the number of female members who are receiving superannuation annuities and the total amounts of the basic monthly benefits and supplemental monthly benefits.

In Schedule F are shown, according to age nearest birthday, the number of male members who are receiving disability annuities and the total amounts of members' basic monthly benefits and supplemental monthly benefits.

In Schedule G are shown, according to age nearest birthday, the number of female members who are receiving disability annuities and the total amounts of members' basic monthly benefits and supplemental monthly benefits.

In Schedule H are shown, according to age nearest birthday, the number of male members who are receiving withdrawal annuities and the total amount of the basic monthly benefit and supplemental monthly benefit.

In Schedule I are shown, according to age nearest birthday, the number of female members who are receiving withdrawal annuities and the total amount of the basic monthly benefit and supplemental monthly benefit.

In Schedule J are shown, according to age nearest birthday, the number and amount of the basic monthly benefit and supplemental monthly benefit being paid to surviving male beneficiaries of annuitants and members who died in active service.

In Schedule K are shown, according to age nearest birthday, the number and amount of the basic monthly benefit and supplemental monthly benefits paid to surviving female beneficiaries of annuitants and members who died in active service.

In Schedule L is shown the summary of all annuities outstanding as of December 31, 1980 whether superannuation, disability, withdrawal or supplemental and whether being paid to members or their survivors.

In Schedule M is shown, for comparison, the outstanding membership both active and annuitant as of December 31, 1977, December 31, 1978, December 31, 1979 and December 31, 1980.

In Schedule N, the benefits and member contributions and provisions of the plan as of December 31, 1980 are summarized.

The actuarial assumptions used in this valuation are shown in Schedule O.

ACTIVE MEMBERSHIP as of December 31, 1980

M A L E

CLASS	A & B		C		D		E		GRAND TOTAL	
	Age	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.
17	19	19	\$ 298,136					19	\$ 298,136	
18	19	19	302,138					19	302,138	
19	113	113	1,615,337					113	1,615,337	
20	203	203	2,856,603					203	2,856,603	
21	283	283	3,835,277					283	3,835,277	
22	395	395	5,315,515					395	5,315,515	
23	547	547	7,617,340					547	7,617,340	
24	697	697	9,657,663					697	9,657,663	
25	875	875	12,236,871					875	12,236,871	
26	1,050	1,050	14,927,677					1,050	14,927,677	
27	1,362	1,362	19,822,432					1,362	19,822,432	
28	1,540	1,540	23,020,835					1,540	23,020,835	
29	1,638	1,638	25,484,038					1,638	25,484,038	
30	2,546	2,546	42,558,265	21	\$ 460,290	1	\$ 25,000	6	\$ 110,075	2,574
31	2,001	2,001	32,989,972	54	1,200,373					2,055
32	2,147	2,147	36,426,830	129	2,860,815					2,276
33	2,284	2,284	39,541,208	214	4,715,298	3	75,000			2,501
34	2,491	2,491	44,501,384	359	8,072,603			3	44,035	2,853
35	1,711	1,711	30,877,958	252	5,636,781	2	50,000			1,965
36	1,547	1,547	28,803,458	238	5,349,192			2	39,960	1,787
37	1,700	1,700	32,062,818	264	5,937,042			2	66,441	1,966
38	1,874	1,874	36,520,567	247	5,629,772	1	25,000	5	91,469	2,127
39	1,551	1,551	30,075,532	183	4,164,373	3	75,000	2	39,960	1,739
40	1,469	1,469	28,992,857	164	3,773,541	4	100,000			1,637
41	1,425	1,425	28,798,526	148	3,431,035	3	75,000	3	59,881	1,579
42	1,429	1,429	28,873,197	110	2,569,975	1	25,000	4	69,715	1,544
43	1,402	1,402	28,362,410	86	2,012,015	2	50,000	2	65,941	1,492
44	1,329	1,329	26,666,278	86	2,054,090			7	168,685	1,422

ACTIVE MEMBERSHIP as of December 31, 1980

M A L E

CLASS Age	A & B		C		D		E		GRAND TOTAL	
	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary
45	1,369	\$ 27,923,632	66	\$ 1,598,115	3	\$ 75,000	7	\$ 190,204	1,445	\$ 29,786,951
46	1,439	29,255,518	67	1,637,759	1	25,000	7	147,402	1,514	31,065,679
47	1,418	28,537,543	50	1,227,080	1	25,000	4	140,686	1,473	29,930,309
48	1,467	29,713,349	39	989,946	3	75,659	10	392,845	1,519	31,171,799
49	1,553	31,390,370	50	1,243,529	4	100,000	9	315,325	1,616	33,049,224
50	1,628	33,082,316	71	1,801,183	3	75,000	15	429,746	1,717	35,388,245
51	17	369,778	5	138,744					22	508,522
52	1,521	30,178,260	36	924,354	4	100,000	16	535,497	1,577	31,738,111
53	1,692	33,252,253	53	1,405,986	1	25,000	25	818,698	1,771	35,501,937
54	1,585	30,789,258	60	1,543,206	2	50,000	16	378,897	1,663	32,761,361
55	1,690	33,223,818	44	1,139,438	3	75,000	12	407,844	1,749	34,846,100
56	1,671	32,435,034	41	1,109,369	5	125,659	34	922,028	1,751	34,592,090
57	1,680	32,192,409	32	839,733	2	50,000	20	634,836	1,734	33,716,978
58	1,657	31,560,304	27	692,229	5	125,000	20	569,490	1,709	32,947,023
59	1,588	30,115,574	9	228,050	6	150,000	11	423,492	1,614	30,917,116
60	1,497	28,234,238	8	184,372	2	50,000	31	925,915	1,538	29,394,525
61	1,352	24,617,169	2	42,252	5	125,000	19	661,486	1,378	25,445,907
62	1,040	18,423,773	1	21,126	2	50,000	15	440,542	1,058	18,935,441
63	786	14,573,965			3	75,000	14	361,986	803	15,010,951
64	649	11,730,634	1	21,126	3	75,000	18	521,080	671	12,347,840
65	510	9,054,777			2	50,000	11	444,302	523	9,549,079
66	265	4,762,461			2	50,000	21	645,343	288	5,457,804
67	221	3,977,540			1	25,000	9	226,247	231	4,228,787
68	155	2,819,927					13	492,383	168	3,312,310
69	129	2,376,016			2	50,000	4	141,334	135	2,567,350
70	96	1,640,091					6	142,181	102	1,782,272
71	68	1,113,320			3	75,000			71	1,188,320
72	53	1,011,121			3	77,660			56	1,088,781
73	53	961,785							53	961,785
74	36	645,620					1	46,123	37	691,743



ACTIVE MEMBERSHIP as of December 31, 1980

M A L E

CLASS	A & B		C		D		E		GRAND TOTAL		
	Age	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	
75	33	\$	582,869					33	\$	582,869	
76	26		543,618					26		543,618	
77	16		309,221			1	\$ 55,913	17		365,134	
78	7		96,186					7		96,186	
79	12		232,621					12		232,621	
80	9		134,757					9		134,757	
81	3		56,932					3		56,932	
Totals	64,638	\$1,184,959,179		3,217	\$74,654,792	91	\$2,278,978	405	\$12,167,987	68,351	\$1,274,060,936
Average Age		43.21			39.76		53.64		56.37		43.14
Average Salary		\$18,332			\$23,206		\$25,044		\$30,044		\$18,640

ACTIVE MEMBERSHIP as of December 31, 1980

F E M A L E

CLASS Age	A & B		C		D		E		GRAND TOTAL	
	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary
17	10	\$ 163,089					10	\$ 163,089		
18	1	12,571					1	12,571		
19	418	6,157,594					418	6,157,594		
20	410	5,227,896					410	5,227,896		
21	561	6,966,669					561	6,966,669		
22	763	9,608,394					763	9,608,394		
23	1,012	12,791,904					1,012	12,791,904		
24	1,236	15,855,188					1,236	15,855,188		
25	1,325	17,120,483					1,325	17,120,483		
26	1,613	21,075,161					1,613	21,075,161		
27	1,804	24,224,113					1,804	24,224,113		
28	1,911	26,228,972					1,911	26,228,972		
29	1,815	25,212,451					1,815	25,212,451		
30	2,432	34,659,705			2	\$ 36,090	2,434	34,695,795		
31	1,590	22,853,920		61,461			1,593	22,915,381		
32	1,585	23,138,121		88,010			1,589	23,226,131		
33	1,501	22,370,588		43,368			1,503	22,413,956		
34	1,557	23,220,537		21,652			1,558	23,242,189		
35	1,082	16,247,667		43,539			1,084	16,291,206		
36	988	14,977,586					988	14,977,586		
37	1,089	16,417,062					1,089	16,417,062		
38	1,172	17,777,992					1,172	17,777,992		
39	1,010	15,085,629					1,010	15,085,629		
40	973	14,946,464					973	14,946,464		
41	1,010	15,350,177			2	35,027	1,012	15,385,204		
42	1,043	15,815,563		63,386			1,046	15,878,949		
43	980	15,121,132		16,868			982	15,149,158		
44	989	15,035,684			1	12,634	990	15,048,318		

SCHEDULE B(1)

ACTIVE MEMBERSHIP as of December 31, 1980

F E M A L E

CLASS	A & B		C		D		E		GRAND TOTAL	
	Age	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	Annual Salary
45	975	\$	14,784,104	1	\$	18,042	976	\$	14,802,146	
46	1,068		16,122,391	1	15,532	39,960	1,071		16,177,883	
47	965		14,501,667	1	14,553	19,980	967		14,536,200	
48	1,076		16,296,593	1		19,980	1,077		16,316,573	
49	1,088		16,556,496	4		68,744	1,092		16,625,240	
50	1,153		17,345,115	1	22,377	35,723	1,156		17,403,215	
51	13		218,308				13		218,308	
52	1,159		17,271,600	4		67,961	1,163		17,339,561	
53	1,280		19,125,302	1	15,439	39,540	1,283		19,180,281	
54	1,307		19,902,113	5		83,546	1,312		19,985,659	
55	1,267		19,142,811	3		55,429	1,270		19,198,240	
56	1,250		18,793,301	2	37,935	200,821	1,263		19,032,057	
57	1,357		20,330,039	5		150,925	1,362		20,480,964	
58	1,224		18,280,487	1		13,954	1,225		18,294,441	
59	1,202		17,969,353	1		19,980	1,203		17,989,333	
60	1,171		17,736,320	1	\$ 25,000	35,123	1,174		17,796,443	
61	975		14,521,039	1	15,911	31,131	978		14,568,081	
62	747		10,839,518	1	15,601	149,390	753		11,004,509	
63	538		7,948,562	1		12,651	539		7,961,213	
64	399		5,937,337	1	16,017		400		5,953,354	
65	365		5,507,193	1		19,166	366		5,526,359	
66	232		3,403,316				232		3,403,316	
67	168		2,519,651	2		57,374	170		2,577,025	
68	115		1,686,959	3		81,352	118		1,768,311	
69	72		1,181,023	4		67,205	76		1,248,228	
70	66		1,014,471				66		1,014,471	
71	41		643,591				41		643,591	
72	31		475,496				31		475,496	
73	34		513,744				34		513,744	
74	26		428,217				26		428,217	

ACTIVE MEMBERSHIP as of December 31, 1980

F E M A L E

CLASS	A & B		C		D		E		GRAND TOTAL	
	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary	No.	Annual Salary
75	15	\$ 246,300					15	\$ 246,300	15	\$ 246,300
76	15	203,582					15	203,582	15	203,582
77	8	124,390					8	124,390	8	124,390
78	12	196,202					12	196,202	12	196,202
79	9	132,733					9	132,733	9	132,733
80	8	115,807					8	115,807	8	115,807
81	3	39,931					3	39,931	3	39,931
91	1	13,764					1	13,764	1	13,764
Totals	53,315	\$ 775,731,138	25	\$ 491,649	1	\$ 25,000	69	\$ 1,382,886	53,410	\$ 777,630,673

Average

Age

41.04

Average

Salary

\$14,550

42.20

\$19,666

60.00

\$25,000

55.33

\$20,042

41.06

\$14,560

SUMMARY OF ACTIVE MEMBERS as of DECEMBER 31, 1980

	<u>Number</u>	<u>Annual Salary</u>	<u>Average Age</u>	<u>Average Annual Salary</u>
<u>By Sex</u>				
Male .....	68,351	\$1,274,060,936	43.14	\$18,640
Female .....	<u>53,410</u>	<u>777,630,673</u>	<u>41.06</u>	<u>14,560</u>
Total .....	<u>121,761</u>	<u>\$2,051,691,609</u>	<u>42.23</u>	<u>\$16,850</u>
<u>By Class</u>				
A & B .....	117,953	\$1,960,690,317	42.23	\$16,623
C .....	3,242	75,146,441	39.78	23,179
D .....	92	2,303,978	53.71	25,043
E .....	<u>474</u>	<u>13,550,873</u>	<u>56.22</u>	<u>28,588</u>
Total .....	<u>121,761</u>	<u>\$2,051,691,609</u>	<u>42.23</u>	<u>\$16,850</u>
<u>Classes A &amp; B by Category</u>				
0 .....	114,055	\$1,878,692,075	42.28	\$16,472
1, 5, 6 .....	3,422	68,676,499	39.81	20,069
2 .....	115	2,875,000	42.40	25,000
3, 4 .....	<u>361</u>	<u>10,446,743</u>	<u>48.80</u>	<u>28,938</u>
Total .....	<u>117,953</u>	<u>\$1,960,690,317</u>	<u>42.23</u>	<u>\$16,623</u>

SCHEDULE C

SUPERANNUATION ANNUITIES AS OF DECEMBER 31, 1980

MALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
37	1	\$ 35.20		
46	1	33.34		
47	1	64.70		
50	1	23.52		
51	11	7,273.93		
52	22	17,720.69		
53	41	37,364.82		\$ 639.96
54	46	35,740.21		1,332.10
55	64	61,042.21		2,427.38
56	73	60,075.62		3,185.19
57	87	69,145.25		5,483.47
58	100	80,953.87		7,796.15
59	105	83,946.06		6,651.05
60	125	105,244.81		6,054.50
61	278	189,944.50		10,840.34
62	418	225,916.56		6,670.94
63	765	358,993.81		10,824.87
64	1,081	476,794.50		18,658.24
65	1,096	453,489.25	\$ 45.49	30,115.65
66	1,402	553,464.25	359.50	47,638.52
67	1,508	552,346.19	614.74	55,262.27
68	1,518	520,467.31	714.01	73,927.44
69	1,324	456,969.94	759.97	78,622.00
70	1,360	411,985.94	1,025.64	86,267.06
71	1,475	459,710.25	764.86	110,859.81
72	1,134	342,029.25	871.56	94,180.37
73	1,141	346,441.00	506.34	110,234.44
74	1,027	280,488.37	595.42	95,143.94
75	930	247,526.25	1,174.52	91,729.12
76	795	205,013.06	1,805.99	82,870.87
77	679	162,612.62	1,860.74	70,942.50
78	605	145,394.50	2,603.81	63,368.79
79	493	114,594.00	3,402.28	54,997.44
80	404	113,908.56	2,906.55	47,758.69
81	293	61,044.87	2,829.10	31,558.54
82	45	9,996.97	540.83	5,458.37
83	322	73,161.62	4,283.91	38,885.08
84	224	44,276.29	3,463.11	24,519.06
85	172	37,188.02	3,516.22	19,964.39
86	162	35,098.55	3,798.91	19,777.21
87	131	28,165.87	3,815.94	14,515.70
88	112	22,391.15	3,614.24	13,406.34
89	84	16,875.12	2,373.59	9,558.79
90	65	19,016.46	2,575.20	8,486.87
91	34	7,832.92	1,755.45	4,987.11

SCHEDULE D(1)

SUPERANNUATION ANNUITIES AS OF DECEMBER 31, 1980

MALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
92	29	\$ 4,980.11	\$ 967.00	\$ 3,172.58
93	18	3,772.39	526.68	1,987.27
94	25	6,506.06	855.47	2,718.16
95	11	1,625.99	746.18	1,143.11
96	8	957.74	521.63	673.28
97	3	553.04	173.77	388.80
98	5	1,073.86	152.87	428.97
100	1	222.46	29.45	156.39
101	1	2,083.90	212.20	935.17
105	1	732.09	92.35	514.66
108	1	133.92	36.24	94.15
<b>Total</b>	<b><u>21,858</u></b>	<b><u>\$7,554,443.74</u></b>	<b><u>\$56,891.76</u></b>	<b><u>\$1,477,813.10</u></b>

SCHEDULE D(2)

SUPERANNUATION ANNUITIES AS OF DECEMBER 31, 1980

FEMALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
52	1	\$ 45.34		
53	2	521.58		
54	4	3,230.24		
55	4	1,087.98		
56	13	7,903.79		\$ 37.21
57	13	7,060.76		112.85
58	20	13,504.99		381.93
59	13	8,840.75		67.24
60	33	25,236.89		710.41
61	165	75,054.50		892.70
62	380	148,492.00		1,490.80
63	553	193,836.25		2,851.97
64	668	214,563.19		5,357.32
65	820	253,429.50	\$ 5.39	11,102.66
66	940	298,220.50		22,035.21
67	991	316,365.94	16.86	27,663.93
68	1,026	294,395.37		38,011.24
69	933	257,324.19	13.65	43,552.66
70	869	229,759.12	12.70	46,133.71
71	853	225,686.62		54,137.86
72	712	181,273.62	1.29	53,026.60
73	671	155,204.69	42.93	51,446.94
74	671	153,985.06	2.10	53,976.61
75	559	122,259.81	116.82	50,510.04
76	493	96,449.06	510.90	44,184.09
77	428	80,308.06	700.59	35,984.26
78	396	73,157.87	1,243.79	34,787.93
79	302	55,933.37	1,578.52	29,806.79
80	253	49,729.07	1,957.75	26,204.68
81	250	46,192.23	2,159.27	24,865.69
82	8	1,061.83	25.50	169.46
83	181	29,177.03	2,629.92	17,098.73
84	179	28,235.56	3,001.97	17,422.70
85	149	22,192.16	2,405.07	13,474.98
86	157	23,683.41	3,514.02	13,835.02
87	100	12,019.71	2,416.93	7,826.57
88	101	13,880.51	2,593.06	8,662.45
89	70	10,361.31	2,174.85	6,199.71
90	65	8,201.31	1,546.82	5,188.62
91	39	5,839.78	1,537.57	3,944.18

SCHEDULE E(1)



SUPERANNUATION ANNUITIES AS OF DECEMBER 31, 1980

FEMALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
92	43	\$ 4,779.64	\$ 1,374.82	\$ 3,232.30
93	23	2,460.43	823.58	1,670.47
94	18	1,656.40	465.57	1,126.89
95	13	1,549.18	638.59	1,089.09
96	12	1,016.76	353.17	714.78
97	7	835.59	385.96	587.43
98	3	196.62	108.34	138.22
99	1	155.63	42.40	109.41
100	2	79.88	36.30	56.16
101	4	710.98	69.08	266.80
<b>Total</b>	<b><u>14,211</u></b>	<b><u>\$3,757,146.06</u></b>	<b><u>\$34,506.08</u></b>	<b><u>\$762,147.30</u></b>

WITHDRAWAL ANNUITIES AS OF DECEMBER 31, 1980

MALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
30	9	\$ 360.09		
31	12	459.99		
32	25	1,052.15		
33	38	1,585.05		
34	94	5,269.47		
35	69	3,732.29		
36	61	3,672.00		
37	65	4,020.24		
38	97	6,797.60		
39	73	4,942.06		
40	68	6,391.04		
41	68	7,337.21		
42	67	8,777.70		
43	62	7,422.49		
44	67	8,395.63		
45	41	7,045.55		
46	57	8,666.19		
47	60	8,000.87		
48	70	13,875.14		
49	76	16,387.21		
50	84	20,750.32		
51	81	20,337.12		\$ 71.91
52	70	18,191.56		289.61
53	91	24,193.31		494.20
54	77	24,090.52		487.14
55	88	34,327.92		739.14
56	112	38,596.15		809.77
57	120	44,889.49		634.93
58	126	54,321.79		947.54
59	155	65,098.88		904.31
60	151	63,878.39		895.61
61	157	57,401.38		1,135.08
62	104	43,975.26		4,816.31
63	87	30,436.85		5,659.45
64	88	28,518.86		8,381.83
65	84	25,732.97		8,953.00
66	94	28,296.80		11,527.30
67	80	23,065.96		10,497.02
68	77	18,368.73		8,200.93
69	72	19,697.02		9,681.61
70	58	10,237.97		5,827.19
71	61	9,828.12		5,928.98
72	56	8,080.55		5,373.87
73	46	5,648.05		3,899.32
74	37	3,780.34		2,657.66

SCHEDULE F(1)

WITHDRAWAL ANNUITIES AS OF DECEMBER 31, 1980

MALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
75	43	\$ 5,543.68		\$ 3,897.31
76	24	1,897.42		1,296.74
77	29	3,763.64		2,645.85
78	28	2,615.41		1,838.65
79	25	1,708.61		1,186.79
80	27	1,835.89		1,290.74
81	20	1,427.33		1,003.39
82	7	943.75		663.46
83	25	1,399.35		960.04
84	21	1,981.09		1,392.68
85	20	1,335.07		938.62
86	21	2,357.06		1,657.05
87	10	480.58		337.87
88	3	541.05		380.36
90	1	102.89		72.32
91	2	102.01		71.71
92	2	380.87		267.77
93	1	88.34		62.11
94	1	36.91		25.96
95	1	87.26		61.35
Total	<u>3,746</u>	<u>\$874,562.49</u>		<u>\$118,864.48</u>

SCHEDULE F(2)

WITHDRAWAL ANNUITIES AS OF DECEMBER 31, 1980

FEMALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
29	10	\$ 384.48		
30	29	1,191.32		
31	24	1,019.76		
32	37	1,580.39		
33	35	1,532.72		
34	60	3,039.57		
35	46	2,540.47		
36	25	1,401.79		
37	33	1,831.89		
38	39	2,427.69		
39	31	2,368.61		
40	35	2,425.09		
41	23	2,044.50		
42	13	1,159.13		
43	30	3,003.45		
44	17	1,554.93		
45	22	2,927.77		
46	28	3,206.27		
47	28	3,069.72		
48	35	4,091.11		
49	40	5,638.61		
50	41	6,813.05		
51	43	7,060.70		
52	57	11,034.02		
53	52	10,555.50		
54	69	16,034.22		
55	85	17,583.73		
56	89	21,920.46		
57	115	25,170.29		\$ 62.37
58	127	33,536.73		30.20
59	125	36,842.64		
60	146	44,889.69		62.36
61	149	46,460.44		1,488.99
62	114	34,290.37		3,803.45
63	103	31,231.66		4,867.14
64	86	22,965.85		4,587.29
65	83	23,980.28		7,078.54
66	52	21,069.70		6,100.08
67	56	18,121.88		7,193.56
68	42	9,950.11		4,663.60
69	55	14,410.14		7,063.68
70	54	12,841.81		7,099.09
71	37	7,431.17		4,372.51
72	38	5,044.09		3,282.10
73	32	5,355.72		3,713.55

SCHEDULE G(1)

WITHDRAWAL ANNUITIES AS OF DECEMBER 31, 1980

FEMALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
74	27	\$ 4,032.07		\$ 2,829.11
75	32	3,908.24	\$57.51	2,690.02
76	23	2,074.06		1,458.08
77	19	1,406.52		988.77
78	18	2,542.12		1,787.11
79	15	1,203.59		818.61
80	10	568.66		399.77
81	16	793.91		558.17
83	14	1,319.43		927.58
84	9	731.81		514.46
85	3	233.36		164.05
86	6	374.78		263.48
87	4	93.69		65.86
88	3	103.26		72.60
89	3	157.67		110.84
90	2	249.50		175.39
91	1	225.23		158.34
93	1	70.07		49.26
94	3	80.30		56.45
95	1	25.10		17.65
96	1	15.42		10.85
97	2	75.00		52.72
99	1	48.35		34.00
<b>Total</b>	<b><u>2,704</u></b>	<b><u>\$553,365.66</u></b>	<b><u>\$57.51</u></b>	<b><u>\$79,671.68</u></b>

SCHEDULE G(2)

DISABILITY ANNUITIES AS OF DECEMBER 31, 1980

MALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
30	2	\$ 661.22		
31	2	470.66		
32	7	1,787.69		\$ 122.20
33	5	1,825.93		
34	11	3,367.55		171.31
35	5	1,638.46		13.55
36	9	3,233.97		109.34
37	9	2,607.95		100.66
38	13	4,595.55		192.04
39	8	2,470.70		78.60
40	11	3,492.96		310.50
41	14	4,515.82		291.17
42	10	2,756.41		203.27
43	10	3,552.71		139.53
44	21	6,785.08		339.94
45	14	5,842.91		144.99
46	21	7,192.74		365.91
47	19	6,912.46		351.39
48	28	9,834.20	\$ 22.60	813.49
49	31	11,346.48	1.65	658.55
50	30	10,677.87		651.48
51	44	18,675.74	16.34	1,115.56
52	47	19,296.91	35.87	1,071.06
53	62	25,011.21		1,560.78
54	71	27,493.86		1,520.16
55	76	30,725.74		2,134.37
56	78	28,322.21		2,273.93
57	79	28,500.89		2,190.09
58	102	38,077.63	42.20	3,767.84
59	94	31,247.66		2,616.69
60	124	41,384.40		3,271.10
61	105	31,629.38	15.31	3,355.77
62	96	28,970.77	17.02	4,314.03
63	103	29,023.21	67.51	4,751.50
64	78	21,666.64	26.33	4,916.70
65	46	10,601.79		2,802.53
66	47	9,814.98	59.75	3,536.13
67	30	5,647.59	71.02	2,380.93
68	40	6,245.25	126.81	3,130.98
69	27	4,122.73	70.36	2,002.95
70	27	2,998.49	102.53	1,672.36
71	10	1,005.66	124.10	658.97
72	8	712.16	138.53	489.93
73	9	865.09	157.93	596.26
74	8	633.21	148.87	445.18

SCHEDULE H(1)

DISABILITY ANNUITIES AS OF DECEMBER 31, 1980

MALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
75	13	\$ 1,190.96	\$ 256.17	\$ 837.25
76	5	302.07	263.68	212.39
77	12	859.82	268.27	604.44
78	2	307.24	61.31	216.00
79	1	57.18	15.57	40.19
80	3	296.08	280.67	208.14
81	1	73.33	82.72	51.55
86	1	57.36	146.52	40.33
88	1	84.36	33.04	59.31
<b>Total</b>	<b><u>1,730</u></b>	<b><u>\$541,470.92</u></b>	<b><u>\$2,652.68</u></b>	<b><u>\$63,903.32</u></b>

SCHEDULE H(2)

DISABILITY ANNUITIES AS OF DECEMBER 31, 1980

FEMALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
27	1	\$ 377.50		
30	3	776.23		
31	3	855.58		\$ 72.73
32	3	882.53		
33	5	1,447.44		40.99
34	7	1,792.61		57.47
35	1	273.91		27.39
36	4	1,139.09		52.00
37	4	1,073.82		92.62
38	7	1,677.59		256.43
39	4	1,261.94		15.04
40	8	2,045.99		164.02
41	8	2,127.76		86.32
42	6	2,316.58		39.81
43	6	1,252.79	\$ 1.75	233.89
44	8	2,824.89		56.96
45	10	2,612.83		272.57
46	11	2,854.62		223.33
47	11	3,562.71		234.50
48	7	2,002.50		190.59
49	17	4,159.42		365.19
50	26	7,769.91	6.01	506.43
51	26	6,988.95		576.30
52	21	6,046.55	6.47	364.60
53	25	6,752.84	6.80	888.98
54	28	8,015.77	27.04	439.24
55	43	12,088.70		1,152.48
56	69	20,966.11		2,116.73
57	46	13,037.27	12.52	1,440.85
58	66	19,851.96	50.20	2,268.56
59	76	20,661.28	38.44	2,792.70
60	73	18,373.64	31.74	1,594.64
61	84	20,938.14	27.02	2,538.18
62	62	13,590.75	27.87	2,691.42
63	60	13,017.98	30.42	3,049.35
64	61	12,653.41	50.40	3,167.64
65	38	7,309.21	23.61	2,416.14
66	42	7,008.70	67.70	2,758.30
67	40	6,011.66	117.84	2,723.95
68	36	4,914.91	116.99	2,459.03
69	32	3,622.02	197.21	1,906.64
70	22	2,049.65	176.05	1,280.41
71	20	2,037.20	230.62	1,355.06
72	13	1,197.78	89.10	816.61
73	11	985.69	257.95	690.86

SCHEDULE I(1)



DISABILITY ANNUITIES AS OF DECEMBER 31, 1980

FEMALE MEMBERS

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
74	9	\$ 608.16	\$ 288.65	\$ 427.56
75	6	402.90	101.55	283.26
76	5	339.74	133.02	238.83
77	7	495.95	84.74	348.67
78	3	151.87	90.12	106.77
79	3	167.37	106.97	117.66
80	6	395.90	175.96	278.30
81	3	200.79	97.53	141.16
84	6	421.75	261.66	294.27
85	4	210.21	215.28	147.77
86	1	73.23	75.16	51.48
90	2	139.17	145.02	97.84
91	1	46.33	27.94	32.57
<b>Total</b>	<b><u>1,210</u></b>	<b><u>\$276,861.78</u></b>	<b><u>\$3,397.35</u></b>	<b><u>\$47,043.09</u></b>

BENEFICIARIES RECEIVING PAYMENTS  
AS OF DECEMBER 31, 1980

MALES

Age	Number	Basic Monthly Benefit	Supplemental Monthly Benefits	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
14	1	\$ 198.34		
16	1	1,540.39		
18	1	184.66		
21	3	957.92		
22	4	707.13		
24	1	480.95		
25	2	333.15		
27	3	635.07		
28	3	993.92		
29	1	495.20		
30	3	783.92		
31	3	1,345.24		
32	4	1,250.61		
33	2	391.02		
34	1	303.05		
35	1	631.23		\$ 31.56
36	3	382.98		
37	5	1,600.52		
38	3	909.62		
39	5	1,373.06		
40	7	866.77		70.20
41	3	1,320.70		25.00
42	5	857.96		23.45
43	4	619.21		27.03
44	2	307.23		
45	1	100.11		
46	3	1,113.66		8.33
48	3	768.06		
49	4	1,062.99		
50	2	1,108.81		
51	2	1,592.65		
52	4	734.92		
53	1	228.39		
54	4	1,563.90		
55	2	503.28		21.66
56	6	1,212.45		32.38
57	2	215.87		
58	4	1,446.78		14.07
59	8	2,189.87		22.83
60	6	2,298.22		
61	4	3,315.25		
62	9	4,408.20		28.09
63	8	3,159.74		
64	9	3,374.15		30.01
65	7	2,100.29		9.31

SCHEDULE J(1)

BENEFICIARIES RECEIVING PAYMENTS  
AS OF DECEMBER 31, 1980

MALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
66	5	\$ 1,921.90		\$ 27.47
67	4	2,105.07		
68	9	3,531.82		22.11
69	8	2,313.44		
70	12	6,109.35		
71	10	3,355.86		
72	9	3,570.78		25.16
73	9	3,000.67		80.46
74	3	932.34		30.57
75	5	507.86		109.39
76	3	640.76		141.92
77	3	1,294.79		
78	4	836.22		77.02
81	1	235.83		
82	1	188.20		
83	3	609.50		
84	3	738.09		
85	1	32.36		9.71
86	4	1,150.98		236.12
87	1	86.31		
89	1	157.13		47.13
107	1	192.31		
108	1	402.56		
109	2	813.97		
<b>Total</b>	<b><u>263</u></b>	<b><u>\$86,695.54</u></b>		<b><u>\$1,150.98</u></b>

BENEFICIARIES RECEIVING PAYMENTS  
AS OF DECEMBER 31, 1980

FEMALES

Age	Number	Basic Monthly Benefit	Supplemental Monthly Benefits	
			Not Continuing to Beneficiary	Continuing to Beneficiary
13	1	\$ 1,137.42		
14	6	923.05		
15	4	2,021.25		
17	3	663.08		
18	1	48.88		
19	1	131.10		
21	1	567.55		
22	2	432.59		
23	1	673.74		
24	1	99.52		
26	3	784.62		
28	2	1,596.83		
29	2	547.88		
30	3	454.09		\$ 6.18
31	6	1,461.46		
32	5	1,454.54		
33	4	735.31		
34	5	1,201.67		
35	1	31.14		
36	3	503.39		
37	2	415.53		
38	3	777.89		
39	4	396.73		10.91
40	4	1,021.40		
41	8	3,263.93		
42	7	1,544.62		6.88
43	6	829.50		
44	7	4,670.37		7.61
45	7	731.16		
46	6	906.62		
47	10	4,307.16		
48	12	4,266.36		62.15
49	11	3,447.61		
50	19	7,556.62		
51	22	7,721.75		21.26
52	25	7,343.34		294.86
53	34	13,379.65		87.61
54	45	12,603.70		264.61
55	30	11,266.53		80.24
56	55	20,180.68		159.52
57	54	21,431.23		100.49
58	44	16,558.44		210.82
59	79	23,750.04		334.22
60	89	24,234.37		415.50
61	98	29,149.55		1,038.84

SCHEDULE K(1)

BENEFICIARIES RECEIVING PAYMENTS  
AS OF DECEMBER 31, 1980

FEMALES

<u>Age</u>	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Supplemental Monthly Benefits</u>	
			<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>
62	98	\$ 28,352.79		\$ 705.80
63	121	38,927.71		705.59
64	116	26,829.04		566.33
65	160	46,672.90		867.06
66	140	42,244.43		679.61
67	154	38,804.00		1,583.39
68	172	47,828.98		1,989.83
69	162	41,127.56		1,808.18
70	149	35,366.39		1,493.04
71	176	43,566.09		2,813.10
72	154	36,911.66		1,940.56
73	159	35,443.52		2,111.71
74	151	26,075.43		1,583.72
75	144	31,027.79		2,096.49
76	123	23,304.92		2,103.22
77	120	20,690.52		1,657.07
78	121	24,001.65		1,760.54
79	106	18,778.89		1,536.24
80	123	19,614.65		1,610.19
81	46	7,142.46		537.81
82	42	5,581.12		634.49
83	71	10,447.08		562.06
84	71	12,507.75		1,144.21
85	74	11,055.02		610.30
86	55	9,608.09		612.48
87	50	7,035.35		313.96
88	35	4,628.87		346.24
89	29	4,127.95		504.36
90	17	1,206.41		68.12
91	25	2,605.20		36.45
92	17	1,847.45		15.89
93	11	1,049.68		21.69
94	11	960.41		24.49
95	6	711.46		126.99
96	5	713.21		74.98
97	9	835.60		
98	1	44.93		
99	1	91.31		
101	2	130.80		43.46
103	1	104.16		31.25
105	1	238.50		
107	2	382.48		
108	1	932.73		
109	1	153.37		
110	2	502.97		
Total	<u>3,971</u>	<u>\$947,437.17</u>		<u>\$38,422.60</u>

SUMMARY OF ANNUITIES AS OF DECEMBER 31, 1980

	<u>Number</u>	<u>Basic Monthly Benefit</u>	<u>Not Continuing to Beneficiary</u>	<u>Continuing to Beneficiary</u>	<u>Total</u>	<u>Average Monthly Benefit</u>
<u>Superannuation</u>						
Male .....	21,858	\$ 7,554,443.74	\$ 56,891.76	\$ 1,477,813.10	\$ 9,089,148.60	\$ 415.83
Female .....	14,211	3,757,146.06	34,506.08	762,147.30	4,553,799.44	320.44
Total .....	36,069	11,311,589.80	91,397.84	2,239,960.40	13,642,948.04	378.25
<u>Withdrawal</u>						
Male .....	3,746	\$ 874,562.49	\$ 0.00	\$ 118,864.48	\$ 993,426.97	\$ 265.20
Female .....	2,704	553,365.66	57.51	79,671.68	633,094.85	234.13
Total .....	6,450	1,427,928.15	57.51	198,536.16	1,626,521.82	252.17
<u>Disability</u>						
Male .....	1,730	\$ 541,470.92	\$ 2,652.68	\$ 63,903.32	\$ 608,026.92	\$ 351.46
Female .....	1,210	276,861.78	3,397.35	47,043.09	327,302.22	270.50
Total .....	2,940	818,332.70	6,050.03	110,946.41	935,329.14	318.14
<u>Beneficiaries</u>						
Male .....	263	\$ 86,695.54	\$ 0.00	\$ 1,150.98	\$ 87,846.52	\$ 334.02
Female .....	3,971	947,437.17	0.00	38,422.60	985,859.77	248.26
Total .....	4,234	1,034,132.71	0.00	39,573.58	1,073,706.29	253.59



BENEFIT AND CONTRIBUTION PROVISIONS as of DECEMBER 31, 1974  
(as embodied in Act 31, approved March 1, 1974)

The State Employees' Retirement System of Pennsylvania makes provision for retirement, disability, and death benefits for all State employees and certain other eligible groups. The major provisions may be summarized as follows:

Eligibility Employees

- Class A - All regular State employees as well as employees of certain Commissions and Authorities and all employees of state-owned educational institutions and the Pennsylvania State University (unless such employees have joined the Public School Employees' Retirement System of Pennsylvania). All employees who become members (or who rejoin the Retirement System) on and after March 1, 1974.
- Class C - Officers and employees of the Pennsylvania State Police and enforcement officers of the Pennsylvania Liquor Control Board who were members prior to March 1, 1974.
- Class D-3 - Members of the General Assembly who were members prior to March 1, 1974.
- Class E-1 - Members of the Judiciary who were members prior to March 1, 1974.
- Class E-2 - Justices of the Peace paid by the Commonwealth who were members prior to March 1, 1974.

Age Requirements for Superannuation Retirement (with full formula benefits)

- Class A\* - Age 60, except for members of the General Assembly, enforcement officers, correction officers, psychiatric security aides and officers of the Pennsylvania State Police for whom the requirement is age 50.

\*Members of Class A with 35 or more years of credited service are entitled to at least full formula benefits regardless of age.



Classes C and D-3 - Age 50.

Class E-1 - Age 60.

Class E-2 - Age 60.

Formula for Superannuation Retirement Annuity

The standard single-life annuity applicable to members of Class A, is equal to 2% of the final 3-year average salary ("F.A.S.") of the member multiplied by the years and fractions of credited service.

The annuity for other classes of members is obtained by multiplying the standard single-life annuity by a class multiplier as follows:

<u>Class</u>	<u>Class of Service Multiplier</u>	
	<u>Prior to 1/1/73</u>	<u>On and After 1/1/73</u>
C	1	1
D-3	3.75	1.731
E-1	2. for each of the first 10 years of judicial service plus 1.5 for each subsequent year.	1.50 for each of the first 10 years of judicial service plus 1.125 for each subsequent year.
E-2	1.5	1.125

NOTE: There are conditions under which long-service members or members retiring at advanced ages may receive somewhat larger benefits than those described above.

In addition to the standard single-life annuity as determined above, a member of Class C receives a "member's annuity" actuarially equivalent to the regular accumulated member contributions and interest at retirement but not less than such annuity determined as if the member were age 60 at retirement.

In addition to the above benefits, a member who, prior to March 1, 1974, has elected "Social Security Integration Credits" is entitled to a single-life annuity of 2% of his "Average Non-Covered Salary" for each year

SCHEDULE N(2)

of Social Security Integration credits. "Average Non-Covered Salary" is the average annual salary received while covered by the Retirement System since January 1, 1956 in excess of the maximum covered wages under Social Security. In effect, the years of Social Security Integration Credit are the same as total credited service unless the member did not elect coverage when first eligible.

#### Age and Service Requirements for Early Retirement

In the case of withdrawal, a member of Class D-3 is eligible for early retirement after 6 years of legislative service and members of other classes are eligible after 10 years of service.

#### Adjustment for Early Retirement Benefit

A member receives the actuarial equivalent of the annuity payable at superannuation retirement age earned to the date of early retirement.

#### Age and Service Requirements for Disability Retirement

A member is eligible for disability retirement if he is totally and permanently disabled prior to superannuation retirement age and has at least 5 years of service, except an officer of the State Police or an enforcement officer for whom there is no service requirement.

#### Formula for Disability Benefit

The disability benefit is equal to the benefit calculated as for superannuation retirement, based on years of credited service at disability, if the result is greater than or equal to 33-1/3% of F.A.S. at time of disability. If the benefit so calculated is less than 33-1/3% of F.A.S., the disability benefit is equal to the smaller of:

- (a) the benefit calculated as for superannuation retirement based on service to superannuation, or
- (b) 33-1/3% of F.A.S. at time of disability.

SCHEDULE N (3)

### Eligibility for Vested Benefit

A member is eligible for a vested benefit after 10 years of service, except for members of Class D-3 who are eligible after 6 years of credited service.

### Vested Benefit

The vested benefit is calculated as for superannuation retirement but deferred until superannuation retirement age.

### Eligibility for Death Benefit Prior to Retirement

A member is eligible if he has 10 years of credited service, except for a member of Class D-3 who is eligible after 6 years of credited service, or attainment of superannuation age.

### Amount of Death Benefit Prior to Retirement

An eligible beneficiary receives the full reserve value of the benefits to which the member would have been entitled had he retired the day before he dies, assuming he had elected Option 1 if no other option had been elected.

### Death Benefits After Retirement

A member may elect one of several typical optional reduced pensions in lieu of his maximum single-life annuity provided by the formula. However, if he elects the single-life annuity, there is a provision for a modified cash refund without actuarial reduction of the unpaid balance of the member accumulated contributions and interest at time of retirement.

### Supplemental Allowances

Any superannuation or disability annuitant is entitled to a supplemental allowance sufficient to build the amount of his total single life allowance including any cost of living supplements up to not less than at the rate of \$84.50 for each year of credited service.

Supplemental annuities applying cost-of-living increases to the benefits of annuitants have been instituted from time to time. The most recent of these became effective as of July 1, 1979 for annuitants who had retired prior to July 1, 1978. The increase percentages varied according to year of retirement and began with a 5% increase for those who retired between July 1, 1977 and June 30, 1978 and increased to 31% for those who retired prior to March 1, 1974. Other supplemental annuities have become effective as of July 1, 1968 and July 1, 1974.

Rate of Member Contribution

(i) Regular member contributions, excluding Social Security Integration contributions

Class A - 5% of total salary

For other classes of members, the class of service multiplier is applied to the 5% rate to produce the following:

Class C - 5%

Class D-3 - 8.655%

Class E-1 - 7.5% during the first 10 years of judicial service and 5.625% thereafter.

Class E-2 - 5.625%

(ii) Additional contribution for Social Security Integration Credit

A member of any class who elected before March 1, 1974 Social Security Integration Credit pays 5% of any salary in excess of the amount of salary covered by Social Security during the year for which contributions are being made. A member electing to end additional contributions is ineligible to make future contributions or accrue future benefits.

Interest Credited on Member Contribution

A rate of 4% stipulated as the statutory rate of interest, has been credited on the member contributions since the inception of the system.

SCHEDULE N (5)

### Refund of Accumulated Member Contributions

On the death of a member not qualifying for death benefits, his accumulated member contributions are paid to his beneficiary; also, any member terminating service when not eligible for another form of benefit is paid a refund of his accumulated contributions and interest; any other terminating member may elect the refund of his accumulated contributions and interest in lieu of the retirement allowance to which he is entitled.

### Employer Contributions

The State pays the balance of the required contributions in excess of the members contributions in accordance with the law. Basically, the employer contribution is the normal cost plus an accrued liability contribution funded over 30 years, assuming the accrued liability contribution increases at least 4% each year. In addition, contributions are required to fund each of the Supplemental Allowances over a 20 year period.

ACTUARIAL ASSUMPTIONS

Interest Rate: 5-1/2% per annum, compounded annually.

Service Tables: Service tables for active members based on the experience of the Retirement System in 1975-80, with values at specimen ages in five separate classes as follows:

CLASS*	AGE	Rates of Separation Due To							SALARY SCALE
		Withdrawal after Years of Service			Death	Dis- ability	Early Retire- ment**	Super- annuation Retire- ment**	
		1	5	11					
A and B (MALE)	25	.2279	.1074	.0040	.0012	.0007	.0340	-	\$ 4,000
	35	.2008	.0750	.0036	.0039	.0020	.0270	-	7,409
	45	.1649	.0498	.0033	.0099	.0051	.0160	-	11,318
	55	.1286	.0320	-	.0251	.0135	.0210	.1924	16,114
	65	-	-	-	.0475	-	-	.4329	22,727
A and B (FEMALE)	25	.1829	.1290	.0023	.0005	.0006	.0321	-	4,000
	35	.1516	.0836	.0019	.0010	.0016	.0204	-	7,409
	45	.1320	.0543	.0016	.0018	.0041	.0149	-	11,318
	55	.1280	.0353	-	.0038	.0102	.0258	.1800	16,114
	65	-	-	-	.0121	-	-	.4000	22,727
C (MALE and FEMALE)	25	.1303	.0102	.0002	.0012	.0007	.0125	-	4,000
	35	.1303	.0102	.0002	.0039	.0020	.0125	-	7,109
	45	.1303	.0102	-	.0099	.0051	.0125	-	11,221
	55	-	-	-	.0251	-	-	.0843	16,300
	65	-	-	-	.0475	-	-	.5000	22,992
D (MALE and FEMALE)	25	.0300	.0160	.0145	.0012	.0007	.0390	-	4,000
	35	.0300	.0160	.0145	.0039	.0020	.0390	-	5,642
	45	.0300	.0160	-	.0099	.0051	.0390	-	7,959
	55	-	-	-	.0251	-	-	.0700	11,227
	65	-	-	-	.0475	-	-	.2500	15,837
E (MALE and FEMALE)	25	.0950	.0200	.0070	.0012	.0007	.0183	-	4,000
	35	.0950	.0200	.0070	.0039	.0020	.0183	-	5,642
	45	.0950	.0200	.0070	.0099	.0051	.0183	-	7,959
	55	.0950	.0200	-	.0251	.0135	.0183	-	11,227
	65	-	-	-	.0475	-	-	.1000	15,837

Superannuation and Withdrawal Allowances: The mortality table used for those receiving superannuation and withdrawal allowance is the 1971 Group Annuity Mortality Table.

Disability Allowances: The mortality tables used for those receiving disability allowances are modifications based on sex of 1965 Railroad Retirement Board Mortality among Totally Disabled Annuitants.

\*As defined in Retirement Law prior to March 1, 1974 amendment (Act 31).  
 \*\*Retirement Rates are assumed to decrease by 20% after 1990.