

SOUTH CAROLINA RETIREMENT SYSTEM  
REPORT OF THE ACTUARY ON  
THE TWENTY-SEVENTH VALUATION  
PREPARED AS OF JUNE 30, 1977

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July 10, 1978

State Budget and Control Board  
South Carolina Retirement System  
Columbia, South Carolina 29211

Gentlemen:

We transmit herewith our report on the twenty-seventh actuarial valuation of the South Carolina Retirement System, prepared as of June 30, 1977.

The valuation indicates that exclusive of the pre-retirement death benefit, for Class One employers the total contribution rate payable may be continued at 3.50 per cent of earnable compensation, and for Class Two employers the contribution rates may be continued at 6.80 per cent of earnable compensation by the State and 5.95 per cent of earnable compensation by other employers. In addition, the contribution rates of participating employers should be continued at .30 per cent of payroll to provide the pre-retirement death benefits.

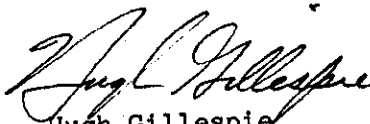
The valuation included sufficient reserves to cover two lifetime cost-of-living increases of 4 per cent per annum commencing July 1, 1977, in accordance with Section 61-128 of the act.

We trust that the report is in satisfactory form for use by the Board.

Respectfully submitted,

GEORGE B. BUCK CONSULTING ACTUARIES, INC.

By

  
Hugh Gillespie  
Consulting Actuary

REPORT OF THE ACTUARY ON THE TWENTY-SEVENTH VALUATION OF  
THE SOUTH CAROLINA RETIREMENT SYSTEM  
PREPARED AS OF JUNE 30, 1977

The South Carolina Retirement System was established as of July 1, 1945. The System is supported by the joint contributions of members and employers. The contributions to be made by employers are set from time to time on the basis of periodic actuarial valuations.

This report presents the results of an actuarial valuation of the contingent assets and liabilities of the System as of June 30, 1977, and gives the percentage rates of contribution payable by Class One and Class Two employers. At the end of the report are tables showing the distribution of the members classified by age and by years of service, and of retired members and beneficiaries classified by age.

There are two classes of employers and members under the System. Those employers becoming participants in the System on or after July 1, 1964 are Class Two employers. Class One employers include all employers who elected, by written notice to the Board not later than December 31, 1964, to remain and have their members remain under the provisions of the System as in effect on June 30, 1964. Class Two employers include all employers who elect, by written notice to the Board in allowable election periods, to participate and have their members participate as Class Two members provided such employers and employees in their employ make additional required contributions.

## SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

A summary of the main benefit provisions of the System, as interpreted in preparing the actuarial valuation, and a summary of the sources of revenue from which benefits are paid is presented in the following digest. "Average final compensation" means the average annual earnable compensation of a member during the three consecutive fiscal years of his creditable service producing the highest such average. "Prior service" means service prior to July 1, 1945 for which credit is allowed. "Membership service" means service rendered while a member of the System for which credit is allowed. The term "creditable service" means the sum of prior service and membership service.

### BENEFITS

#### Service Retirement Allowance

##### Condition for Allowance

A retirement allowance is payable upon the request of any teacher or employee who has attained age 60 or has rendered 30 or more years of creditable service.

An employee must retire at age 70 except that with the approval of both his employer and the Board, an employee may remain in service to age 72, or for such period of time as may be necessary for such employee to qualify for coverage under the old age and survivors insurance provision of Title II of the Federal Social Security Act, as amended.

A teacher must retire at age 65 or upon the completion of the scholastic year in which he attains age 65, except that with the approval of his employer, a teacher may remain in service to age 72.

On and after July 1, 1971, it is mandatory for an employee or teacher to retire no later than the end of the fiscal year in which he reaches his seventy-second birthday.

Amount of Allowance

Effective July 1, 1976 on service retirement, a Class One member receives a retirement allowance equal to 1 per cent of the portion of his average final compensation not in excess of \$4,800, plus 1.30 per cent of such compensation in excess of \$4,800, multiplied by the number of years of his creditable service.

On service retirement, a Class Two member receives a retirement allowance equal to 1.25 per cent of the portion of his average final compensation not in excess of \$4,800, plus 1.65 per cent of the portion of such compensation in excess of \$4,800, multiplied by the number of years of his creditable service.

If a member has not attained age 65 or completed 30 years of creditable service at the time of retirement, his allowance is reduced  $\frac{5}{12}$  of 1 per cent for each month by which his age at retirement is less than age 65.

In no event will a Class One member who retires on or subsequent to July 1, 1976 or a Class Two member whose creditable service commenced on or before June 30, 1964 receive a smaller retirement allowance than he would have received under the benefit provisions applicable to a Class One member in effect prior to July 1, 1976.

Effective July 1, 1975 out-of-State service means service as a teacher or employee rendered by a member of the System for any state, territory or other governmental subdivision under the jurisdiction of the United States other than this State.

Effective July 1, 1975 out-of-State service is creditable irrespective of when it was performed at a cost of 10 per cent of current annual earnable compensation for each year established, provided that the earnable compensation used cannot be less than his earnable compensation in any one of the three preceding fiscal years.

If the member's creditable service does not, at his retirement, exceed his out-of-State service, the employer annuity based on his total out-of-State service before and after July 1, 1945 shall be reduced in the proportion which his creditable service bears to his out-of-State service.

Disability Retirement  
Allowance

Condition for Allowance

A disability retirement allowance is payable to any member who while in service becomes permanently incapacitated for duty mentally or physically, and who has had 5 or more years of creditable service.

Amount of Allowance

Upon disability retirement, on or after July 1, 1976, a Class One or a Class Two member receives a service retirement allowance if he has attained age 65 otherwise he receives a disability retirement allowance equal to the service retirement allowance which would have been payable had he continued in service without further change in compensation to age 65, minus the actuarial equivalent of the contributions he would have made during such continued service.

In no event will a Class One member whose creditable service commenced prior to July 1, 1976 receive a smaller allowance than he would have received under the disability benefit provisions applicable to Class One members prior to July 1, 1976.

In no event will a Class Two member whose creditable service commenced on or before June 30, 1964 receive a smaller allowance than he would have received under the disability benefit provisions applicable to a Class One member.

Deferred Retirement  
Allowance

Condition for Allowance

A deferred retirement allowance, commencing at age 60, is payable to any member who ceases to be a teacher or an employee after he has rendered at least 15 years of creditable service, provided he leaves his contributions in the System.

Amount of Allowance

The deferred retirement allowance is computed like a service retirement allowance, except that the employee annuity is the actuarial equivalent at age 60 of the member's contributions with such interest credits as are allowed.

Supplemental Minimum Allowance

Upon retirement after 20 or more years of creditable service a supplemental monthly sum is paid, in addition to the regular allowance and any amount provided from the general funds of the State, to provide a minimum of \$150 per month plus \$1 per month for each completed year of service in excess of 20, reduced by 5/12 of 1 per cent for each month by which the member's age at retirement is less than age 65 unless he has completed 35 years of creditable service.

Return of Contributions and Optional Death Benefit

Upon the withdrawal of a member without a retirement benefit, he is paid his total contributions with the accumulated regular interest thereon.

Upon the death of a member before retirement, his accumulated contributions are payable to his designated beneficiary or to his estate.

Upon the death of a member before retirement who had 35 years of creditable service or had attained age 65, or who had 20 years of creditable service and attained age 60, the person nominated to receive the amount of the member's accumulated contributions may elect to receive, in lieu of such accumulated contributions, an allowance for life in an amount as if the member had retired on the date of his death under Option 2 as described below. If such a person has received a refund of the member's accumulated contributions, he may, upon repayment of such refund in a single sum, receive the allowance under Option 2 from the time of the repayment of the contributions to the System.

Upon the death of a retired member who has not elected an optional form of allowance, a lump sum amount equal to the excess, if any, of his total accumulated contributions at the time of his retirement allowance commenced over the sum of the retirement allowance payments made to him, is paid to his designated beneficiary or estate.

### Lump Sum Death Benefit

Upon the death of a contributing member in service after the completion of one year of membership service or at any time if death is a result of an injury arising out of and in the course of the performance of duty, a lump sum equal to the member's annual earnable compensation at the time of death is paid to the person he has nominated for the refund of his accumulated contributions or estate, provided the member's employer is a participant in the Pre-retirement Death Benefit Program. Benefits under this program are to be provided in the form of group life insurance.

### Optional Allowance

Until the first payment on account of any benefit becomes normally due, any member may elect to receive his retirement allowance in accordance with one of the following forms, which are computed to be actuarially equivalent:

Option 1. A reduced retirement allowance payable during the retired member's life, with the provision that, if he dies within 10 years from his retirement date, an amount equal to his accumulated contributions at retirement, less  $1/120$  for each month he received a retirement allowance payment, shall be paid to a designated person.

Option 2. A reduced retirement allowance payable during the retired member's life, with the provision that after his death the reduced retirement allowance is to be continued to a designated beneficiary.

Option 3. A reduced retirement allowance payable during the retired member's life, with the provision that after his death one-half the reduced retirement allowance is to be continued to a designated beneficiary.

Option 4. A retirement allowance in such amount that, together with his Social Security benefit, he will receive approximately the same income per annum before and after the earliest age at which he is eligible for a Social Security benefit. A member who makes an election of this Option 4 shall be deemed to have made a further election of Option 1.



Post Retirement Increases  
in Allowances

If the increase in the Consumer Price Index for the previous year ending December 31 equals or exceeds 3%, the retirement allowance of each beneficiary in receipt of an allowance as of said December 31 is to be increased by 4%. Any such increase in allowances after the first five such increases becomes effective only if the additional liabilities on account of such increase in allowances do not require an increase in the employer rate of contribution. Any increase in allowance granted hereunder is to be permanent, irrespective of any subsequent decrease in the Consumer Price Index, and is to be included in determining any subsequent increase.

The allowance of a surviving annuitant of a beneficiary whose allowance is increased under this section is to be increased by the same per cent, when and if payable.

CONTRIBUTIONS

By Members

Effective July 1, 1964, without regard to the member's Social Security coverage, Class One members contribute at the rate of 3% of earnable compensation not in excess of \$4,800, and 5% of the portion in excess of \$4,800, and Class Two members contribute at the rate of 4% of earnable compensation not in excess of \$4,800, and 6% of the portion in excess of \$4,800.

By Employers

Employers make annual contributions consisting of a "normal contribution" and an "accrued liability contribution". The "normal contribution" rate is determined by the actuary after each valuation. The "accrued liability contribution" rate is determined by the first actuarial valuation of the System, provided, however, that such rate shall be increased on the basis of subsequent valuations if benefits are increased. Such rate may be decreased if the actuary engaged by the Board certifies that such reduction will not impair the System. Each year's accrued liability payment is to be at least 3% greater than the preceding annual accrued liability payment subject to the preceding sentence. On and after July 1, 1946, all employers' contributions for teachers are paid by the State.

MEMBERSHIP OF THE SYSTEM

In order to obtain the aggregate liabilities and assets on account of members of the System as of June 30, 1977, data were needed with respect to each active member and beneficiary of the System and also with respect to terminations during the valuation year. These data were furnished to the actuary by the Retirement System office on a magnetic tape.

The following table shows the number and annual earnable compensation of active members, as of June 30, 1977, on the basis of which the valuation was prepared.

TABLE I  
THE NUMBER AND EARNABLE COMPENSATION OF ACTIVE MEMBERS  
AS OF JUNE 30, 1977

GROUP	TOTAL		TEACHERS		EMPLOYEES	
	Number	Earnable Compensation	Number	Earnable Compensation	Number	Earnable Compensation
Men	51,520	\$ 529,422,485	11,906	\$ 125,753,441	39,614	\$ 403,669,044
Women	79,160	606,229,691	41,644	321,512,869	37,516	284,716,822
Total	130,680	\$1,135,652,176	53,550	\$ 447,266,310	77,130	\$ 688,385,866

There are in addition 28,535 inactive members and 46,424 active members not on the payroll as of the valuation date. The results of the valuation were adjusted to take these members into account.

The following table shows the number and annual amount of retirement allowances payable to retired members and to beneficiaries of deceased retired and active members as of June 30, 1977.

TABLE II

THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF  
RETIRED MEMBERS AND BENEFICIARIES ON THE ROLL  
AS OF JUNE 30, 1977

GROUP	NUMBER	TOTAL ANNUAL RETIREMENT ALLOWANCES
Service Retirements		
Teachers:		
Men	1,555	\$ 5,307,869
Women	8,284	23,990,388
Employees:		
Men	3,219	9,595,101
Women	2,468	5,832,489
Total	15,526	\$ 44,725,847
Disability Retirements		
Teachers:		
Men	179	\$ 548,844
Women	635	1,748,882
Employees:		
Men	687	1,669,395
Women	297	642,357
Total	1,798	\$ 4,609,478
Beneficiaries of Deceased Retired Members and Active Members		
Men	138	\$ 243,205
Women	1,100	2,043,894
Total	1,238	\$ 2,287,099
Grand Total	18,562	\$ 51,622,424

### VALUATION OF ASSETS AND LIABILITIES

The following valuation balance sheet shows the assets and liabilities of the System as of June 30, 1977. The amounts of the present assets shown at book value on the balance sheet were taken from financial information submitted by the Director of the System and exclude reserve assets creditable to the Group Life Insurance Fund for pre-retirement lump sum death benefits. Liabilities for the death benefits are not shown on the balance sheet since they are provided on a one-year term cost basis.

TABLE III  
VALUATION BALANCE SHEET SHOWING THE ASSETS AND LIABILITIES OF  
THE SOUTH CAROLINA RETIREMENT SYSTEM  
AS OF JUNE 30, 1977

ASSETS	
Present assets of System creditable to:	
Employee Annuity Savings Fund	\$ 346,354,084
Employer Annuity Accumulation Fund	<u>853,468,944</u>
Total Present Assets	\$ 1,199,823,028
Prospective contributions to the Employer Annuity Accumulation Fund:	
Normal contributions	\$ 490,458,181
Accrued liability contributions	<u>408,089,380</u>
Total Prospective Contributions by Employers	<u>898,547,561</u>
Total Assets	<u><u>\$ 2,098,370,589</u></u>
LIABILITIES	
Present value of benefits on account of which contributions have been accumulated to date in the Employee Annuity Savings Fund	\$ 346,354,084
Present value of benefits payable on account of retired members or their beneficiaries now drawing benefits from the Employer Annuity Accumulation Fund	475,926,565
Present value of benefits to active members and former members with vested rights to be paid by contributions of the employers into the Employer Annuity Accumulation Fund	1,233,998,317
Reserve for future increases in retirement allowances	<u>42,091,623</u>
Total Liabilities	<u><u>\$ 2,098,370,589</u></u>

## RESULTS OF VALUATION

The valuation balance sheet gives the following information with respect to the funds of the System.

### Employee Annuity Savings Fund

The Employee Annuity Savings Fund is the fund to which are credited the contributions made by members together with interest thereon. When a member retires, the amount of his accumulated contributions is transferred from the Employee Annuity Savings Fund to the Employer Annuity Accumulation Fund and his annuity is paid from the latter fund. The assets credited to the Employee Annuity Savings Fund on June 30, 1977, which represent the accumulated contributions of members to that date, amounted to \$346,354,084. The liabilities of this fund are also shown as \$346,354,084. Future contributions into this fund and benefits payable from such contributions are considered to be of equivalent value and hence are not shown in the balance sheet.

### Employer Annuity Accumulation Fund

The Employer Annuity Accumulation Fund is the fund to which the contributions made by employers are credited and from which are paid all benefits on account of retired members and their beneficiaries.

The present assets creditable to the Employer Annuity Accumulation Fund on June 30, 1977 amounted to \$853,468,944. The liabilities on account of active members and former members with vested rights amounted to \$1,233,998,317. In addition, the balance sheet indicates liabilities of \$475,926,565 on account of all benefits payable to retired members or their beneficiaries from the Employer Annuity Accumulation Fund. The balance sheet also shows a reserve of \$42,091,623 for future increases in retirement allowances effective after the valuation date, including sufficient reserves to provide two additional lifetime cost-of-living increases of 4 per cent per annum commencing July 1, 1977. The total liabilities, therefore, amounted to \$1,752,016,505. The difference between these liabilities and the present assets credited to this fund is \$898,547,561, which represents the present value of future contributions to be made by the employers. Of this amount \$490,458,181 represents the present value of prospective normal contributions by the employers and the balance of \$408,089,380 represents the present value of prospective accrued liability contributions.

The retirement act provides that the contributions of employers shall consist of a normal contribution to cover the liability on account of service currently rendered and an accrued liability contribution on account of liabilities for past service which are not covered by present assets.

The following rates of contribution are payable by employers exclusive of the rate required for the pre-retirement lump sum death benefit:

For Class One employers, the total employer contribution rate may be continued at 3.50 per cent of earnable compensation of which 1.80 per cent is attributable to the normal contribution and 1.70 per cent is attributable to the accrued liability contribution.

For Class Two employers, the total contribution rates may be continued at 6.80 per cent payable by the State and 5.95 per cent by the other Class Two employers. Of the total rates, 4.12 per cent and 3.14 per cent are attributable to normal contributions of the State and other employers respectively. The accrued liability rates are 2.68 per cent for the State and 2.81 per cent for other employers. It is anticipated that the accrued liability of \$408,089,380 shown in the balance sheet will be liquidated within a period of 23.5 years from the valuation date.

If provision were made for three additional lifetime cost-of-living increases of 4 per cent per annum commencing July 1, 1977, the reserve required would be \$68,805,318. This exceeds the reserve shown in the balance sheet by \$26,713,695. It is anticipated that the resultant accrued liability of \$434,803,075 would be liquidated within a period of 26.5 years from the valuation date.

The rate necessary to provide the pre-retirement lump sum death benefit on a one-year term cost basis may be continued at last year's rate of .30 per cent of earnable compensation, on the basis of the valuation and in view of the development of reserve assets of \$5,507,431 creditable to the Group Life Insurance Fund. Employers participating in the Pre-retirement Death Benefit Program should contribute .30 per cent of earnable compensation in addition to the appropriate rate above.

RATES OF PAYMENT TO EMPLOYER ANNUITY ACCUMULATION FUND

The valuation balance sheet gives the basis for determining the percentage rates for fixing the contributions to be made by employers to the Employer Annuity Accumulation Fund under the provisions of the retirement act. The following table gives the rates of contribution payable by employers, as determined on the basis of the present valuation.

TABLE IV

RATES OF CONTRIBUTION RECOMMENDED FOR PAYMENT BY EMPLOYERS ON THE BASIS OF THE VALUATION AS OF JUNE 30, 1977

RATES OF CONTRIBUTION	CLASS ONE	CLASS TWO	
		State	Others
Normal	1.80%	4.12%	3.14%
Accrued Liability	1.70	2.68	2.81
Pre-retirement Death Benefit	.30	.30	.30
Total	3.80%	7.10%	6.25%

BASIS FOR VALUATION

The valuation of the Retirement System was made on the basis of the rates of separation, salary scale and mortality tables which were adopted by the Board of June 11, 1974. An interest rate of 5-1/4 per cent per annum was used. An outline of the actuarial assumptions and method employed is included on the following page.

A detailed record of each member of the System on the valuation date was required as a basis for determining the contingent assets and liabilities of the System. Summaries of the tabulations of the data submitted are given in the following tables.



OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHOD

INTEREST RATE: 5-1/4% per annum, compounded annually.

SEPARATIONS FROM SERVICE AND SALARY INCREASES: Representative values of the assumed annual rates of separation and annual rates of salary increases are as follows:

Age	With- drawal	Death	Disa- bility	Annual Rate of		Death	Disa- bility	Service Retirement
				Service Retirement	With- drawal			
<u>Men Teachers</u>				<u>Women Teachers</u>				
20	11.11%	.04%	.01%		13.79%	.03%	.02%	
25	9.97	.05	.01		12.83	.03	.03	
30	7.91	.08	.02		9.12	.04	.04	
35	6.06	.12	.03		5.61	.06	.04	
40	4.67	.18	.06		3.43	.08	.07	
45	3.67	.25	.11		2.33	.13	.12	
50	2.83	.35	.20	4.00%	1.74	.20	.20	4.00%
55	2.03	.50	.34	5.50	1.18	.29	.35	6.00
60		.70	.59	7.50		.45	.61	8.00
64		.92	.94	20.00		.66	.82	35.00
<u>Employees</u>				<u>Teachers and Employees</u>				
	With- drawal	Death	Disa- bility	Service Retirement	Salary Increase			
20	11.11%	.07%	.04%		8.31%			
25	9.97	.09	.04		7.40			
30	7.91	.11	.06		6.00			
35	6.06	.14	.08		4.30			
40	4.67	.18	.10		3.51			
45	3.67	.28	.15		3.10			
50	2.83	.46	.25	2.00%	2.80			
55	2.03	.75	.40	3.50	2.60			
60		1.08	.61	5.00	2.40			
64		1.36	.85	17.50	2.30			

DEATHS AFTER RETIREMENT: Combined Annuity Mortality Tables, Modified and Makehamized, for service retirement and dependent beneficiaries with a 2 year set back in ages for men employees, a 3 year set back for women employees, men teachers and men dependents and a 4 year set back for women teachers and women dependents. A special mortality table is used for disability retirements.

LOADING OR CONTINGENCY RESERVES: None.

VALUATION METHOD: Projected benefit method with level percentage entry age normal cost and open-end unfunded accrued liability. Gains and losses are reflected in the period remaining to liquidate the unfunded accrued liability. Lump sum death benefits are provided on a one-year term cost basis.

TABLE 1

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THE NUMBER AND EARNABLE COMPENSATION  
OF MEMBERS DISTRIBUTED BY  
AGE AS OF JUNE 30, 1977

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
16	8	\$ 18,859	3	\$ 4,958
17	20	57,072	23	47,907
18	114	328,032	123	424,005
19	409	1,522,434	388	1,661,543
20	651	2,822,659	708	3,113,174
21	868	4,125,385	1,266	6,326,664
22	985	5,092,813	1,859	10,499,828
23	1,281	7,528,574	3,147	19,997,196
24	1,462	9,686,429	3,490	24,159,967
25	1,646	11,761,096	3,767	27,721,117
26	1,767	14,016,044	3,687	28,511,969
27	1,839	15,705,661	3,562	27,877,067
28	1,880	17,120,972	3,333	26,058,480
29	1,852	17,864,827	3,051	24,795,297
30	1,956	19,588,172	3,185	25,445,981
31	1,757	18,221,843	2,527	20,125,182
32	1,454	15,710,217	2,008	15,810,892
33	1,403	15,672,018	1,955	15,404,443
34	1,357	15,985,359	1,935	15,399,450
35	1,227	14,656,185	1,866	14,422,541
36	1,175	14,463,206	1,616	12,756,851
37	1,092	13,594,243	1,571	12,364,233
38	992	12,196,727	1,544	11,847,856
39	1,025	12,857,557	1,508	11,583,387
40	892	10,860,711	1,475	11,258,295
41	996	12,107,593	1,395	10,420,079
42	974	11,765,208	1,479	11,563,630
43	1,013	12,424,510	1,421	10,953,669
44	966	11,756,771	1,458	11,534,452
45	1,109	13,774,036	1,517	11,688,839
46	948	11,601,403	1,412	11,476,615
47	1,064	12,497,962	1,420	11,673,429
48	1,015	12,143,006	1,502	12,010,706
49	997	11,671,655	1,475	12,132,369
50	979	11,444,522	1,591	12,988,145
51	942	10,977,658	1,380	11,248,065
52	989	11,294,404	1,468	11,950,644
53	972	11,540,539	1,406	11,428,691
54	977	11,491,878	1,231	10,346,412
55	988	11,416,616	1,314	10,947,156

TABLE 1

THE NUMBER AND EARNABLE COMPENSATION  
OF MEMBERS DISTRIBUTED BY  
AGE AS OF JUNE 30, 1977

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
56	1,032	\$ 11,891,928	1,223	\$ 10,234,791
57	946	10,492,765	1,203	10,009,642
58	880	9,648,591	1,128	9,077,936
59	869	9,303,752	933	7,831,922
60	726	8,044,237	867	7,202,454
61	721	8,067,797	773	6,409,366
62	509	5,523,544	562	4,764,919
63	478	4,758,467	462	3,765,219
64	400	4,297,232	351	2,858,002
65	277	2,931,867	217	1,604,818
66	146	1,326,544	121	827,581
67	114	1,061,222	74	484,809
68	110	893,875	53	353,413
69	72	621,771	44	296,000
70	52	263,406	23	133,491
71	50	392,115	27	150,415
72	27	191,924	20	129,899
73	25	113,607	4	32,010
74	14	52,512	2	23,139
75	10	37,809	3	30,526
76	10	44,657	1	5,597
78	4	30,685	1	6,143
79	2	40,405	1	4,800
80	3	24,166	1	11,615
81	1	450		
82	1	2,301		
TOTAL	51,520	\$529,422,485	79,160	\$606,229,691

## SUMMARY

TEACHERS	11,906	\$125,753,441	41,644	\$321,512,869
EMPLOYEES	39,614	\$403,669,044	37,516	\$284,716,822

SEE FOOTNOTE TABLE I

TABLE 2

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THE NUMBER AND EARNABLE COMPENSATION  
OF MEMBERS DISTRIBUTED BY  
YEARS OF SERVICE AS OF JUNE 30, 1977

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
0	4,883	\$ 32,355,764	5,837	\$ 38,426,631
1	8,278	56,807,013	13,253	77,695,009
2	5,373	47,554,433	8,700	56,518,408
3	4,836	46,092,624	8,249	57,372,135
4	3,973	41,238,142	6,266	46,369,744
5	3,073	34,473,149	5,071	39,140,179
6	2,496	28,790,530	4,310	34,241,070
7	2,228	26,149,088	3,744	29,649,786
8	2,022	23,640,606	3,073	25,762,144
9	1,573	19,668,212	2,549	21,799,153
10	1,456	18,264,824	2,054	17,705,324
11	1,327	17,229,264	1,971	16,596,780
12	1,043	13,415,052	1,305	12,065,231
13	896	10,928,614	1,447	13,069,133
14	748	9,782,460	1,058	10,353,420
15	686	9,309,560	955	9,193,788
16	624	8,313,751	798	8,220,657
17	581	7,909,110	740	7,326,353
18	532	7,022,198	754	7,819,990
19	483	6,746,277	603	6,279,405
20	545	7,470,257	681	7,212,858
21	466	6,408,722	634	6,654,187
22	481	6,452,714	717	7,538,975
23	390	5,282,952	507	5,577,741
24	366	4,904,233	483	5,267,838
25	303	4,171,602	407	4,376,047
26	391	5,369,838	448	4,894,929
27	321	4,848,776	369	4,011,795
28	301	4,362,490	384	4,190,228
29	188	3,064,074	209	2,482,001
30	176	2,874,714	247	2,763,935
31	111	2,005,718	187	2,165,559
32	49	615,937	168	1,919,325
33	41	643,953	124	1,448,636
34	39	590,204	171	2,039,706
35	35	605,696	138	1,600,606

TABLE 2

THE NUMBER AND EARNABLE COMPENSATION  
OF MEMBERS DISTRIBUTED BY  
YEARS OF SERVICE AS OF JUNE 30, 1977

CONTINUED

YEARS OF SERVICE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
36	49 \$	938,091	123 \$	1,403,861
37	43	866,731	96	1,119,448
38	25	455,943	91	1,066,445
39	27	564,202	71	914,149
40	24	508,876	59	700,660
41	14	294,706	37	460,816
42	12	204,435	21	210,591
43	5	95,609	18	218,590
44	1	24,200	17	215,344
45	1	20,700	4	44,459
46	2	27,751	5	55,383
47	1	34,000	3	24,546
50			1	17,448
51			2	17,630
52	1	9,090		
53			1	11,615
55	1	15,600		
TOTAL	51,520	\$529,422,485	79,160	\$606,229,691

## SUMMARY

TEACHERS	11,906	\$125,753,441	41,644	\$321,512,869
EMPLOYEES	39,614	\$403,669,044	37,516	\$284,716,822

SEE FOOTNOTE TABLE I

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF RETIRED MEMBERS  
AND BENEFICIARIES BY AGE AS OF JUNE 30, 1977

SERVICE RETIREMENTS AND BENEFICIARIES

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
21			1 \$	150
22	2 \$	4,753		
25			1	689
26	1	1,922	2	1,043
28	2	3,072		
29	2	1,000		
30	1	1,080	2	4,064
31			3	2,043
32	1	2,252	4	6,458
33	1	134		
34	4	5,697		
35	1	1,028	3	4,072
36	1	1,063	3	1,591
37			1	3,848
38			2	2,582
39	1	579	3	4,894
40	1	3,161	2	865
41	2	1,960	2	1,218
42	2	7,654	2	2,345
43	2	3,985	2	2,840
44	2	1,703	3	5,413
45	1	569	9	16,988
46	2	5,287	8	9,836
47	1	5,882	13	27,577
48	1	602	9	14,892
49	1	830	13	34,944
50	4	15,248	9	23,801
51	4	5,505	7	27,833
52	9	25,824	18	50,739
53	4	2,931	17	43,164
54	6	38,419	31	108,797
55	15	57,777	30	112,442

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF RETIRED MEMBERS  
AND BENEFICIARIES BY AGE AS OF JUNE 30, 1977

SERVICE RETIREMENTS AND BENEFICIARIES

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
56	19	\$ 103,305	45	\$ 169,484
57	18	94,908	65	257,421
58	19	132,522	67	292,043
59	40	254,206	86	365,485
60	30	131,277	136	602,734
61	63	329,022	189	647,161
62	79	332,328	237	886,694
63	144	557,034	379	1,261,646
64	195	666,873	421	1,367,959
65	242	703,310	603	1,853,751
66	365	1,162,936	641	1,996,438
67	400	1,334,290	731	2,215,383
68	361	1,185,310	747	2,384,427
69	340	1,179,962	752	2,209,685
70	287	849,161	703	2,181,139
71	300	927,470	622	1,693,230
72	284	848,150	635	1,694,348
73	237	717,351	592	1,560,173
74	230	616,354	490	1,283,625
75	193	456,577	484	1,094,976
76	138	450,809	382	872,837
77	155	399,059	484	990,786
78	102	228,382	299	599,504
79	87	230,093	310	598,643
80	90	226,358	213	360,204
81	77	177,454	219	335,898
82	81	150,592	196	310,697
83	63	146,649	167	265,820
84	52	93,553	163	238,153
85	37	70,054	127	177,443
86	18	30,703	108	140,415
87	24	49,726	99	128,770
88	18	25,837	67	84,315
89	8	14,740	58	70,349
90	16	22,970	45	58,866

TABLE 3

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF RETIRED MEMBERS  
AND BENEFICIARIES BY AGE AS OF JUNE 30, 1977

SERVICE RETIREMENTS AND BENEFICIARIES

CONTINUED

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
91	6 \$	9,662	27 \$	29,732
92	6	9,879	21	23,493
93	3	6,564	13	14,934
94	3	5,107	6	8,262
95	2	2,641	9	6,125
96	2	3,800	4	2,367
97	1	1,134	2	3,016
98	1	277	3	2,994
99	1	7,710	2	3,534
104			1	5,557
107			2	1,127
109	1	159		
TOTAL	4,912 \$	15,146,175	11,852 \$	31,866,771

SUMMARY

LIFE ANNUITY	2,144 \$	5,405,923	8,390 \$	22,137,403
CASH REFUND	1,008	3,303,927	1,612	5,104,556
100% J+S	746	1,843,908	274	607,630
50% J+S	817	3,934,872	319	989,912
SOC. SEC. LEVELING	59	414,340	157	983,376
BENEFICIARIES	138	243,205	1,100	2,043,894



TABLE 4

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF RETIRED MEMBERS BY  
AGE AS OF JUNE 30, 1977

DISABILITY RETIREMENTS

AGE	MEN		WOMEN	
	NUMBER	AMOUNT	NUMBER	AMOUNT
27	1 \$	2,003		
29			2 \$	5,297
30	1	3,298	1	3,462
31	1	2,924	1	1,710
33	5	9,216	1	2,720
34	2	6,379	2	3,686
35	2	4,861	1	3,571
36	4	10,610		
37	1	1,481	1	4,400
38	2	18,074	3	8,909
39	1	4,666	2	3,119
40	2	3,734	3	8,772
41	1	3,360	2	5,988
42	3	12,858	4	6,814
43	14	34,695	3	8,833
44	6	40,469	8	15,044
45	8	21,239	10	29,557
46	8	27,907	12	36,452
47	9	20,652	6	22,261
48	19	46,942	14	40,846
49	11	29,181	9	33,148
50	10	24,711	9	14,785
51	17	38,980	30	87,589
52	30	96,853	12	52,130
53	26	84,610	20	66,434
54	27	88,166	28	80,346
55	33	87,389	25	86,443
56	40	143,961	40	100,553
57	36	101,906	44	156,459
58	36	87,927	45	115,753
59	50	106,566	62	155,591
60	58	162,778	50	172,431
61	66	155,126	66	173,257
62	59	149,213	65	179,840
63	60	136,523	58	167,319
64	66	204,195	53	142,362
65	49	80,401	52	122,266
66	25	46,906	39	84,755
67	22	43,097	27	47,338
68	11	13,800	21	40,963
69	7	13,263	14	17,764
70	11	13,354	12	16,765

SOUTH CAROLINA RETIREMENT SYSTEM  
REPORT OF THE ACTUARY ON  
THE TWENTY-SEVENTH VALUATION  
PREPARED AS OF JUNE 30, 1977