# REPORT ON THE ANNUAL VALUATION OF THE

## SCHOOL EMPLOYEES RETIREMENT SYSTEM

OF OHIO

PREPARED AS OF JUNE 30, 2004





November 10, 2004

Board of Trustees School Employees' Retirement System of Ohio 300 East Broad St., Suite 100 Columbus, OH 43215-3746

Dear Members of the Board:

Presented in this report are the results of the <u>annual actuarial valuation</u> of the School Employees Retirement System of Ohio. The purpose of the valuation is to measure the System's funding progress and to determine the required actuarial level of contributions for the basic benefits of SERS for the year ending June 30, 2004.

The date of the valuation was June 30, 2004.

The valuation was based upon data, furnished by the Executive Director and the SERS staff, concerning active, inactive and retired members along with pertinent financial information. The complete cooperation of the SERS staff in furnishing materials requested is hereby acknowledged with appreciation.

Your attention is directed particularly to the presentation of contribution rates on page 1 and the comments on page 7.

To the best of our knowledge, this report is complete and accurate. The valuation was performed by, and under the supervision of, independent qualified actuaries who are members of the American Academy of Actuaries with experience in performing valuations for public retirement systems.

The valuation was prepared in accordance with the principles of practice prescribed by the Actuarial Standards Board and generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the system, and on actuarial assumptions that are individually and in the aggregate internally consistent and reasonably based on the actual experience of the system.

Respectfully submitted,

Thomas J. Cavanaugh, F.S.A.

Principal, Consulting Actuary

TJC-PB/ddk V00418TCa-OH.doc

Philip Bonanno, E.A. Director, Consulting Actuary

One Pennsylvania Plaza • New York, NY 10119-4798 (212) 330-1000 Office • (212) 695-4184 Fax www.mellon.com

A Mellon Financial Company.<sup>ss</sup>

## TABLE OF CONTENTS

<u>Section</u>	ltem	Page No.
I	Summary of Principal Results	1
II	Membership Data	4
H	Valuation Balance Sheet	5
IV	Comments on Valuation	7
V	Derivation of Experience Gains and Losses	9
VI	Required Contribution Rates	10
VII	Supplemental Disclosure Information	11

<u>Schedule</u>

А	Development of Actuarial Value of Assets	16
В	Statement of Actuarial Assumptions and Methods	18
С	Summary of Main Benefit and Contribution Provisions	20
D	Detailed Tabulations of the Data	26
E	Glossary	36

## REPORT ON THE ANNUAL VALUATION OF THE SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO PREPARED AS OF JUNE 30, 2004

#### SECTION I - SUMMARY OF PRINCIPAL RESULTS

 This report, prepared as of June 30, 2004, presents the results of the annual actuarial valuation of the System which values the basic benefit provisions including post-retirement death benefits and Medicare Part-B reimbursements. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below.

VALUATION DATE		6/30/04		6/30/03
Active members included in valuation Number Annual compensation	\$	123,139 2,394,125,140	\$	122,315 2,302,288,847
Retirees Number Annual allowances	\$	60,569 491,618,849	\$	59,999 461,212,013
Deferred Vesteds Number Annual deferred allowances	\$	9,121 26,048,188	\$	8,796 24,377,942
Assets (net of Health Care Assets)	1 1 1			
Market related actuarial value Market value	\$ \$	8,666,538,476 8,264,582,923	\$ \$	8,771,784,331 7,218,857,541
Unfunded accrued liability	\$	2,584,340,799	\$	1,862,689,769
Employer contribution rate	1			
Normal Accrued liability	1	4.69% <u>5.88</u>	, , , , , ,	4.68% <u>4.41</u>
IOTAI	1	10.57%		9.09%
Accrued liability payment period	; ; ;	30 years	1 1 1	30 years

## SUMMARY OF PRINCIPAL RESULTS

2. The Board has set a total contribution rate of 24% of payroll, 14% from employers and 10% from employees. Contributions in excess of those required to support the basic benefits of SERS are allocated to support health care benefits provided SERS retirees.

3. The valuation balance sheet showing the results of the valuation is given in Section III.

4. Comments on the valuation results are given in Section IV, comments on the experience and actuarial gains or losses during the valuation year are given in Section V and the rates of contribution payable by employers are given in Section VI.

- 5. There were no changes in benefit provisions, actuarial assumptions, or methods since the last valuation.
- Schedule A of this report presents the development of the actuarial value of assets. Schedule B
  details the actuarial assumptions and methods employed. Schedule C gives a summary of the benefit
  and contribution provisions of the plan.
- 7. The table on the following page provides a history of some pertinent figures.
- 8. All historical information and data shown in this report with a valuation date prior to June 30, 2002 were obtained from the previous actuary's valuation report.
- Valuations results as of June 30, 2001 were restated by the previous actuary after issuance of the valuation report. This report reflects those restatements.

School Employees Retirement System of Ohio

Comparative Schedule

						Re	tired Lives				
Valuation		Active Me	mbers		unN	nber			Accrued	Valuation	
Date		Payroll	Average	Salary		Active/	Annual	Benefits	Liability	Assets	UAAL
June 30	Number	\$ Millions	Ş	% Incr.	Retired	Retired	\$ Millions	% of Payroll		\$ Millions	
1999	110,175	\$1,768	\$16,048	3.8%	56,632	1.9	\$350.6	19.8%	\$7,535	\$7,332	\$203
2000	113,811	1,866	16,398	2.2	57,824	2.0	376.7	20.2	7,919	8,100	(181)
2001	115,684	1,974	17,065	4.1	58,795	2.0	404.5	20.5	9,257	8,791	466
2002	120,254	2,176	18,093	6.0	59,349	2.0	432.2	19.9	9,986	8,879	1,107
2003	122,315	2,302	18,823	4.0	59,999	2.0	461.2	20.0	10,635	8,772	1,863
2004	123,139	2,394	19,442	3.3	60,569	2.0	491.6	20.5	11,251	8,667	2,584

Page 3

•

#### SECTION II - MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the system as of June 30, 2004 upon which the valuation was based. Detailed tabulations of the data are given in Schedule D.

#### **Active Members**

		G	roup Average	S
Number	Payroll	Salary	Age	Service
123,139	\$ 2,394,125,140	\$ 19,442	46.3	8.8

The total number of active members includes 70,279 vested members and 52,860 non-vested members.

## **Retired Lives**

	Annual		Group Ave	Group Averages		
Type of Benefit Payment	No.	Benefits	Benefit	Age		
Retirement	51,323	\$ 412,910,368	\$ 8,045	74.8		
Disability	5,180	56,708,712	10,948	63.2		
Survivor	4,066	21,999,769	5,411	70.3		
Total in SERS	60,569	\$ 491,618,849	\$ 8,117	73.5		

This valuation also includes 85,737 inactive members eligible for a contribution refund only (including 33,021 members not reported in the data files who had completed 1 or more years of service before terminating). Their contributions totaled \$84,106,703 as of June 30, 2004. In addition, there are 7,722 re-employed retirants with contributions of \$18,237,174, and 9,121 terminated vested members with annual deferred pension benefits of \$26,048,188.

#### **SECTION III - VALUATION BALANCE SHEET**

The following valuation balance sheet shows the assets and liabilities of the retirement system as of the current valuation date of June 30, 2004 and, for comparison purposes, as of the immediately preceding valuation date of June 30, 2003. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date. The development of the actuarial value of assets is presented in Schedule A.

## VALUATION BALANCE SHEET SHOWING THE ASSETS AND LIABILITIES OF THE SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

	JUNE 30, 2004	JUNE 30, 2003
ASSETS		
Current actuarial value of assets	\$ 8,666,538,476	\$ 8,771,784,331
Future member contributions	\$ 2,058,536,804	\$ 1,999,468,748
Prospective employers' contributions		
Normal contributions Unfunded accrued liability contributions	\$    900,909,344 \$ <u>2,584,340,799</u>	\$    872,373,699 \$ <u>1,862,689,769</u>
Total prospective contributions	\$ 3,485,250,143	\$ 2,735,063,468
Total assets	\$ <u>14,210,325,423</u>	\$ <u>13,506,316,547</u>
LIABILITIES		
Present value of benefits payable on account of present retired members and beneficiaries	\$ 5,173,265,691	\$ 4,880,716,092
Present value of benefits payable on account of active members	8,699,838,197	8,297,816,978
Present value of benefits payable on account of inactive and deferred vested members for service rendered before the valuation date	337,221,535	327,783,477
Total liabilities	\$ <u>14,210,325,423</u>	\$ <u>13,506,316,547</u>

#### SECTION IV - COMMENTS ON VALUATION

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

June 30, 2004.

#### **Total Assets**

Current actuarial assets as of the valuation date equaled \$8,666,538,476. Future member contributions were valued to be \$2,058,536,804. Prospective employers' contributions were calculated to be \$3,485,250,143, of which \$900,909,344 is attributable to service rendered after the valuation date (normal contributions) and \$2,584,340,799 is attributable to service rendered before the valuation date (unfunded accrued liability contributions).

Therefore, the balance sheet shows the present value of current and future assets of the System to be \$14,210,325,423 as of June 30, 2004.

#### **Total Liabilities**

The present value of benefits payable on account of presently retired members and beneficiaries totaled \$5,173,265,691 as of the valuation date. The present value of future benefit payments on behalf of active members amounted to \$8,699,838,197. In addition, the present value of benefits for inactive members, due to service rendered before the valuation date, was calculated to be \$337,221,535.

Therefore, the balance sheet shows the present value for all prospective benefit payments under the System to be \$14,210,325,423 as of June 30, 2004.

Section 3309.47 of State law requires that active members contribute 8% of annual compensation to the System, but the Board has the authority to raise the rate to 10%. Effective July 1, 2003 the rate was increased from 9% to 10% of compensation.

Section 3309.49 requires that the employers contribute a certain percentage of the annual compensation of members to cover the normal contributions and a certain percentage to cover the accrued liability contributions of the System. These individual contribution percentages are established in accordance with an actuarial valuation. The sum of these normal and accrued liability contributions shall not exceed 14% of the annual compensation of all members.

The following table provides a breakdown of total and accrued liabilities, and shows the resulting unfunded actuarial accrued liability.

· .

	Total Liability	Accrued Liability
Active Members		
Retirement Death Disability Termination Medicare Part-B Death After Retirement Total	\$7,199,370,140 121,049,679 732,990,014 497,309,073 140,121,993 <u>8,997,298</u> \$8,699,838,197	\$5,329,566,877 77,293,312 356,887,110 (122,340,545) 93,837,811 5,147,484 \$5,740,392,049
Benefit Recipients		
Retirement/Survivor/Disability Medicare Part-B Death After Retirement	\$4,955,868,846 197,050,568 <u>20,346,277</u>	\$4,955,868,846 197,050,568 20,346,277
Total	\$5,173,265,691	\$5,173,265,691
Deferred Vested Members	194,762,735	194,762,735
Inactive Members	142,458,800	142,458,800
Total Actuarial Values	\$ 14,210,325,423	\$ 11,250,879,275
Actuarial Value of Assets		8,666,538,476
Unfunded Actuarial Accrued Liability		\$2,584,340,799

## SECTION V - DERIVATION OF EXPERIENCE GAINS AND LOSSES

Actual experience will never (except by coincidence) coincide exactly with assumed experience. It is assumed that gains and losses will be in balance over a period of years, but sizable year to year fluctuations are common.

The sources of gains and losses will be detailed in a separate report. This section shows the overall net actuarial gain or loss for the year ended June 30, 2004. Detail on the derivation of the experience gain (loss) for the year ended June 30, 2004 is shown below.

		<u>\$ millions</u>
(1)	UAAL* as of 06/30/03	\$1,862.7
(2)	Normal cost from last valuation	110.7
(3)	Actual employer contributions	231.9
(4)	Interest accrual: (1) x .0825 + [[(2) - (3)] x .0404]	148.8
(5)	Expected UAAL before changes: (1) + (2) - (3) + (4)	1,890.3
(6)	Change due to plan amendments	0.0
(7)	Change due to new actuarial assumptions or methods	0.0
(8)	Expected UAAL after changes: (5) + (6) + (7)	1,890.3
(9)	Actual UAAL as of 6/30/04	2,584.3
(10)	Gain (loss) (8) - (9)	\$(694.0)
(11)	Gain (loss) as percent of actuarial accrued liabilities at start of year (\$10,634.5)	(6.5)%

\* Unfunded actuarial accrued liability.

## SECTION VI - REQUIRED CONTRIBUTION RATES

The valuation balance sheet gives the basis for determining the percentage rates for contributions to be made by employers to the Retirement System. The following table shows the rates of contribution payable by employers as determined from the present valuation for the 2004/2005 fiscal year.

## **BREAKDOWN OF REQUIRED CONTRIBUTIONS**

(expressed as percents of payroll)

	Basic Benefits	Post Retirement Death Benefit	Medicare Part-B	Total
Normal Cost				
Service Retirement Benefits	9.34%			
Disability Benefits	1.81			
Survivor Benefits	0.22			
Refunds	<u>3.01</u>			
Total	14.38%	0.02%	0.29%	14.69%
UAAL Payment	5.46	0.01	0.41	5.88
Total Contribution	19.84%	0.03%	0.70%	20.57%
Member Contribution	10.00	0.00	0.00	10.00
Employer Contribution	9.84%	0.03%	0.70%	<b>10.57% 3, 43</b>
		μ	2.5 2.35	11.5 2005
			2.54	11.46 2007

## SECTION VII- SUPPLEMENTAL DISCLOSURE INFORMATION

1. Statement Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB) set forth certain items of information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	60,569
Terminated participants and beneficiaries entitled to benefits but not yet receiving	
benefits	94,858
Active Participants	<u>123,139</u>
Total	278,566

### NUMBER OF ACTIVE AND RETIRED PARTICIPANTS AS OF JUNE 30, 2004

## 2. Another such item is the schedule of funding progress as shown below.

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial Accrued Liability (AAL) Entry Age	(3) Percent Funded (1)/(2)	(4) Unfunded AAL (2)-(1)	(5) Annual Covered Payroll	(6) Unfunded AAL as a Percentage of Covered Payroll (4)/(5)
06/30/95@	\$4,310,487	\$5,839,027	73.8%	\$1,528,540	\$1,429,559	106.9%
06/30/96#*	4,777,498	6,128,781	78.0	1,351,283	1,475,873	91.6
06/30/97*	5,521,248	6,504,638	84.9	983,390	1,551,609	63.4
06/30/98^	6,412,649	7,037,449	91.1	624,800	1,651,883	37.8
06/30/99+	7,331,692	7,534,903	97.3	203,211	1,768,098	11.5
06/30/00	8,281,286	8,100,427	102.2	(180,859)	1,866,283	(9.7)
06/30/01#^	8,790,858	9,256,656	95.0	465,798	1,974,097	23.6
06/30/02	8,878,760	9,986,306	88.9	1,107,546	2,175,735	50.9
06/30/03^	8,771,784	10,634,474	82.5	1,862,690	2,302,289	80.9
06/30/04	8,666,538	11,250,879	77.0	2,584,341	2,394,125	107.9

## SCHEDULE OF FUNDING PROGRESS (\$ Thousands)

After change in benefit provisions.
 # After change in actuarial assumption

@ Includes Medicare Part-B Supplement for this year and future years.

After change in actuarial assumptions. After change in asset method.

+ After change in method.

3. The annual required contribution (ARC) of the employer as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below. The accrued liability rate is based on amortization of the unfunded actuarial accrued liability of \$2,584,340,799 over a 30-year period from the valuation date.

## 2004/2005 FISCAL YEAR ANNUAL REQUIRED CONTRIBUTION (ARC) BASED ON THE VALUATION AS OF JUNE 30, 2004

ANNUAL REQUIRED CONTRIBUTION (ARC)	RATE
Normal	4.69%
Accrued liability	<u>5.88</u>
Total	10.57%

4. Additional information as of June 30, 2004 follows.

Valuation date	6/30/04
Actuarial cost method	Entry age
Amortization method	Level percent open
Remaining amortization period	30 years
Asset valuation method	4-year smoothed market
Actuarial assumptions:	
Investment rate of return*	8.25%
Projected salary Increases*	4.75 - 25.00%
*Includes inflation at	3.75%
Cost-of-living adjustments	3.00%

# Schedule of Employer Contributions

Fiscal Year 7-1/6-30	Valuation Date 6-30	Annual Required Contribution	Percentage Contributed
1995-96	1995	\$150,103,657	100%
1996-97	1996	144,487,949	100
1997-98	1997	139,955,108	100
1998-99	1998	127,195,004	100
1999-00	1999	98,148,589	100
2000-01	2000	78,459,360	100
2001-02	2001	110,795,693	100
2002-03	2002	181,236,112	100
2003-04	2003	212,193,468	100
2004-05	2004	256,046,087	

Solvency Tests (\$ in Millions)

27.4% 39.5 57.8 92.6 86.9 75.2 106.2 71.3 39.8 54.7 3 Portions of Accrued Liabilities covered by Assets 100% 100 100 100 100 100 100 100 100 100 6 100% 100 100 100 100 **1**00 <u>1</u>00 100 100 100 Ē **Available for** \$4,310 Net Assets 6,413 8,879 8,772 7,332 4,777 5,521 8,791 8,667 8,281 Benefits \$2,105 2,513 2,725 2,234 3,556 3,862 4,110 4,293 Employer Financed 2,332 2,937 Active and Members Inactive Portion 3) Actuarial Accrued Liabilities for Beneficiaries **Retirees and** \$2,700 2,790 2,996 3,269 3,469 3,734 4,294 4,599 5,173 Currently Receiving Benefits 4,881 3 Employee and Inactive Contributions Accumulated \$1,034 1,105 1,255 1,429 1,525 1,643 1,785 1,177 1,341 1,407 Ē es) June 30 1995 1998 1999 1996 2000 2002 2003 2004 1997 2001

Page 14

<u> </u>	Active members			
Valuation Date	Number	Annual Payroll (in millions)	Annual Average Pay	% Increase in Average Pay
1995 1996 1997 1998	100,784 101,777 103,739 109,878	\$1,429.6 1,475.9 1,551.6 1,651.9	\$14,184 14,501 14,957 15,456	4.1% 2.2 3.1 3.3
1999	110,175	1,768.1	16,048	3.8
2000 2001 2002	113,811 115,684 120,254	1,866.3 1,974.1 2,175.7	16,398 17,065 18,093	2.2 4.1
2002 2003 2004	122,315 123,139	2,302.3 2,394.1	18,823 19,442	4.0 3.3

## Schedule of Active Member Valuation Data

# Schedule of Retirants Added to And Removed From Rolls

	Fiscal year ended June 30			· - · · · · · · · · · · · · · · · · · ·					
ltem	1996	1997	1998	1999	2000	2001	2002	2003	2004
Beginning of Year	52,413	53,478	54,554	55,563	56,632	57,824	58,795	59,349	59,999
Added	4,032	3,993	4,174	4,127	4,647	4,051	3,977	3,414	3,013
Removed	(2,967)	(2,917)	(3,165)	(3,058)	(3,455)	(3,080)	(3,423)	(2,764)	(2,443)
End of Year	53,478	54,554	55,563	56,632	57,824	58,795	59,349	59,999	60,569

SCHEDULE A

June 30, 2007 96,795,920 96,795,920 0 June 30, 2006 169,742,962) (72,947,042) 96.795.920 96,795,920 June 30, 2005 23,848,876 96,795,920 169,742,962) 352,857,386 425,804,428 **Development of Actuarial Value of Assets** 8.25% (2,244,495) (736,499,525) (89, 190, 714) June 30, 2004 (401,955,552) \$ 9,075,340,941 8,565,443,627 7,522,414,151 649,553,306 1,132,220,190 387, 183, 679 169,742,962) 763,787,558) 745,036,511 352,857,386 337,983,130 \$ 8,666,538,476 96,795,920 300,860,704 \$ 8,967,399,180 8.25% \$ 9,213,992,836 (337,983,130) 79,212,296 June 30, 2003 (112,782,830) \$ 9,075,340,941 (1,552,926,790) 7,558,666,711 (917,730) (707,194,558) (678,971,847) 7,522,414,151 595,329,458 76,530,270 (169,742,962) 352,857,386) \$ 8,771,784,331 755,502,117 781,371,182 303,556,610 Phased-In Recognition of Investment Income Difference Between Market & Actuarial Amount for Immediate Recognition Total Recognized Investment Gain Amount for Phased-In Recognition Actuarial Value Beginning of Year Market Value Beginning of Year **Basic Benefits Valuation Assets** Valuation Date: Health Care Valuation Assets Market Total: B - C - D6 Actuarial Value End of Year: Administrative Expenses Current Year: 0.25 \* E4 Market Value End of Year Second Prior Year Benefit Payments A + D6 + E3 + F5 Investment Income Other revenues Third Prior Year First Prior Year Assumed Rate Contributions Net transfers Cash Flow Values: Net <sup>пі</sup> ті сі сі ті н. Н. Н. <u>02.</u> 0.04 0.05 Е. δ Ę F4. F5. Ċ Ŕ ഷ് ഗ് Ï \_\_\_\_\_ -;

income (line E4) are phased in over a closed 4 year period. During periods when investment performance exceeds the assumed rate, the actuarial value of assets will tend to be less than market value. During periods when investment performance is less than assumed, the actuarial value will tend The actuarial value of assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment to be greater than market value.

#### Page 16

## Page 17

## Asset Summary

June 30, 2004

		Market Value	Actuarial Value
1.	Assets at June 30, 2003	\$7,522,414,151	\$ 9,075,340,941
2.	Contributions and Misc. Revenue	647,308,811	647,308,811
3.	Investment Increment	1,132,220,190	(18,751,047)
4.	Benefit Payments	(736,499,525)	(736,499,525)
5.	Assets at June 30, 2004 (1) + (2) + (3) + (4)	\$ 8,565,443,627	\$ 8,967,399,180
6.	Investment Increment/Mean Assets*	15.1%	(0.2)%

Based on the approximation formula: I /[.5 x (A + B - I)], where

I = Investment increment
 A = Beginning of year asset value
 B = End of year asset value

## SCHEDULE B

## **Statement of Actuarial Assumptions and Methods**

Interest Rate: 8.25% per annum, compounded annually (net after all System expenses).

Salary Increases: Assumed annual rates of salary increases are as follows:

Service	Base (Economy)	Merit & Seniority	Total Increase
0	4.25%	20.75%	25.00%
. 1	4.25	13.25	17.50
2	4.25	10.75	15.00
3	4.25	8.75	13.00
4	4.25	7.75	12.00
5	4.25	5.75	10.00
6	4.25	4.75	9.00
7	4.25	3.75	8.00
8	4.25	2.75	7.00
9	4.25	1.75	6.00
10 - 14	4.25	0.75	5.00
15 & Over	4.25	0.50	4.75

Total covered payroll of the entire membership is assumed to increase 4.25% per year in the future.

**Service Retirement:** Representative values of the assumed annual rates of service retirement are as follows:

Age	Male	Female
50	45.0%	36.0%
55	30.0	27.0
60	11.0	23.0
61	11.0	14.0
62	17.0	14.0
63	14.0	14.0
64	17.0	14.0
65	35.0	30.0
70	25.0	38.0
75	100.0	100.0

Withdrawal Rates: Representative values of the assumed annual rates of withdrawal are as follows:

Service	Rate
0	50.00%
1	24.00
2	14.00
3	9.00
4	8.00
5	7.50
10	4.25
15	2.50
20	1.75

Disability Rates: Representative values of the assumed annual rates of disability are as follows:

Age	Male	Female
30	.150%	.100%
35	.495	.100
40	.540	.210
45	.675	.250
50	1.100	.525
55	1.100	.810

**Mortality Rates:** Mortality Rates for retirees and survivors are based on the 1994 Group Annuity Mortality table with male ages set back three years and female ages set back one year. Mortality for active members is 70% of the retiree table for males and 55% for females. Mortality for disabled members is developed from experience.

Representative values of the assumed annual rates of retiree mortality are as follows:

## Service Retired Members, Beneficiaries and Survivors (1994 Group Annuity Mortality Table (-3, -1)

Age	Male	Female
20	.0430%	.0280%
30	.0727	.0331
40	.0891	.0652
50	.1899	.1310
60	.5581	.3863
70	1.8034	1.2709
80	4.5171	3.5362

## Disability Retired Members

Age	male	Female
40	2.2571%	.7450%
50	2.8975	1.1535
60	4.2042	2.1839
70	6.2583	3.7635
80	10.9372	7.2312

Marriage Assumption: 80% married with the husband three years older than his wife.

Valuation Method: Entry Age Normal cost method. Entry age is established on an individual basis.

**Asset Valuation Method:** Actuarial value, as developed in Schedule A. Actuarial value of assets is based on a four-year average of adjusted market value returns. The difference between the actual returns at market value for the year and expected returns is determined. Twenty-five percent (25%) of that difference is added to the expected value along with corresponding amounts from each of the prior three years.

## SCHEDULE C

## SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Summary of Benefit and Contribution Provisions as of June 30, 2004

years of service.

regardless of age.

#### **Contributions for Basic Benefits**

Members contribute 10% of pay and employers contribute 14% of pay. Employer contributions not required to finance basic benefits are allocated to the health care program.

Average annual salary over the member's three highest

Final Average Salary

#### Normal Retirement

**Condition for Retirement** 

#### Amount of Allowance

Attainment of age 65 with at least five years of creditable service, or completion of 30 years of creditable service,

The annual retirement allowance payable shall not be greater than 100% of final average salary, and is the greater of:

Money Purchase - the greater of :

The sum of:

- a. An annuity based on the value of the member's accumulated contributions at retirement
- b. A pension equal to the annuity
- c. \$40 multiplied by the member's years of service prior to 9/1/1937.

or:

d. For members who have 10 or more years of service credit prior to 10/1/1956, an annual benefit of \$180.

2. Defined Benefit - the greater of: The sum of:

- a. 2.2% of final average salary multiplied by the member's years of service up to 30,
- 2.5% of final average salary multiplied by the member's years of service in excess of 30,

or: c.

\$86 multiplied by the years of service.

## **Early Retirement**

Condition for Retirement

Amount of Allowance

Not eligible for unreduced service retirement but has attained age 55 with at least 25 years of service, or age 60 with five years of service.

Normal retirement allowance accrued to the date of early retirement. The Defined Benefit amount determined above is adjusted by the following percentages based on attained age and/or years of service:

Attained	Years of Ohio	
Age	<u>Service Credit</u>	<u>Percentage</u>
58	25	75%
59	26	80
60	27	85
61		88
	28	90
62		91
63		94
	29	95
64		97
	•	

**Disability Retirement** 

**Condition for Retirement** 

Amount of Allowance

An allowance is paid upon becoming permanently disabled after completion of at least 5 years of total service credit.

1.

2.

For those who were active members prior to July 29, 1992 and did not elect the benefit structure outlined below, an allowance based on service to date of disablement, plus, if the age at disablement is less than 60, continuous service to age 60. The allowance is computed in the same manner as the defined benefit service retirement allowance, subject to a minimum of 30% of FAS and a maximum of 75% of FAS. It is payable for life, unless terminated.

For those who became active members after July 28, 1992, and for those who were active members prior to July 29, 1992 who so elected, an allowance equal to the greater of (i) 45% of FAS, or (ii) the lesser of 60% of FAS, or the allowance computed in the same manner as the defined benefit service retirement allowance. The allowance will continue until:

a. The date the member is granted a service retirement benefit, or

b. The date the allowance is terminated, or

c. The later of the date the member attains age 65 or the date the disability allowance has been paid for the minimum duration in accordance with the following schedule:

	Minimum Duration
Age at Disability	In Months
60 and earlier	60
61	60
62	48
63	48
64	36
65	36
66	24
67	24
68	24
69 and older	12

## **Death Benefits Prior to Retirement**

**Death While Eligible to Retire** 

If a member dies in service after becoming eligible to retire with a service allowance and leaves a surviving spouse or other sole dependent beneficiary, the survivor may elect to receive the same amount that would have been paid had the member retired the last day of the month of death and elected the 100% joint and survivor form of payment.

#### Survivor (Death-in-Service) Allowances

Condition for Benefit

Upon the death of a member with at least  $1\frac{1}{2}$  years of Ohio service credit and with at least  $\frac{1}{4}$  year of Ohio contributing service credit within  $2\frac{1}{2}$  years prior to the date of death, the survivor allowances are payable as follows:

- 1. Qualified Spouse: A monthly allowance commencing at age 62, except that the benefit is payable immediately if: (1) the qualified deceased member had 10 or more years of Ohio service credit; or (2) is caring for a surviving child, or (3) is incompetent.
- 2. Qualified Child: An allowance is payable to the qualified child of a deceased member who is under age 18, under age 22 and in school, or incompetent.
- 3. Qualified Parent's Allowance: A monthly allowance is payable to a dependent parent age 65 or more.

Except when survived by a dependent child(ren), upon the death of a member prior to retirement, the accumulated contributions of the member without interest is payable. Alternatively, the beneficiary may elect the following amounts, payable monthly while eligible:

#### Amount of Allowances

Number of Qualified Survivors	Annual Benefit as Percent of Member's FAS	Minimum Monthly Allowance
1	25%	\$96
2	40	186
3	50	236
4	55	236
5 or more	60	236

If the deceased member had attained at least 20 years of service, the total benefits payable to all qualified survivors are not less than:

Years of	Annual Benefit as Percent
<u>Service</u>	of Member's FAS
20	29%
21	33
22	37
23	41
24	45
25	48
26	51
27	54
28	57
29 or more	60

#### **Termination Benefits**

Refund of Members' Accumulated Contributions

**Deferred Benefits** 

Normal Form of Benefit

**Optional Forms of Benefit** 

In the event a member leaves service before any monthly benefits are payable on his behalf, his accumulated contributions, without interest, may be refunded.

If a member with at least 5 years of contributing service credit leaves service before being eligible for an immediate monthly allowance and does not withdraw any part of his accumulated contributions, he will be entitled to a deferred allowance at age 60. The amount of the allowance is based on his credited service and final average salary at termination of employment.

Single Life Annuity

A member upon retirement may elect to receive his allowance in one of the following forms that are computed to be actuarially equivalent to the applicable retirement allowance:

Upon the death of a retiree, 50%, 100%, or some other percentage of his reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner, his beneficiary or his estate for a specified number of years certain.

A member can select a partial lump-sum option at retirement. Under this option, the partial lump-sum shall not be less than 6 times and not more than 36 times the base maximum monthly benefit, and the base maximum monthly benefit will be actuarially reduced. A member selecting the partial lump-sum option may also select any of the regular options, which would result in a further reduction in the monthly benefit. In addition, the monthly benefit payable cannot be less than 50% of the unreduced amount.

Regardless of the form of benefit selected, a lump sum benefit of \$1,000 is paid at the death of the retiree.

On each anniversary of the initial date of retirement, the allowances of all retirees and survivors are increased by 3% of the base benefit.

Each recipient of a service retirement benefit, a disability benefit or a survivor benefit who was credited with at least 10 years of service and is covered under Medicare Part-B is reimbursed \$45.50 per month for premiums for that coverage.

Effective July 1, 1991, service retirees of SERS, or service or disability retirees of one of the other four Ohio retirement systems who are employed in a SERS covered position are required to contribute to a money purchase annuity, a type of defined contribution plan.

Upon termination of employment, a re-employed retirant who has attained age 65 is eligible to receive an annuity based on the amount of his/her accumulated contributions, and an equal amount of employer contributions, plus interest to the effective date of retirement. Interest is granted on the re-employed retirant's prior fiscal year account balance, calculated using a rate determined by the SERS Board, compounded annually. The benefit is payable as a lump sum or as an annuity if the amount of such annuity is at least \$25.

If a re-employed retirant dies while employed, a lump sum payment of the monthly annuity, discounted to the present value using the current actuarial assumption rate of interest, will be paid to his beneficiary.

If a re-employed retirant dies while receiving a monthly annuity, a lump sum payment will be made to a beneficiary in an amount equal to the excess, if any, of the lump sum

**Post-Retirement Death Benefit** 

Post-Retirement Increases

**Medicare Part B** 

**Re-Employed Retirants** 

Eligibility

Amount of Allowance

Benefits Payable Upon Death

payment the re-employed retirant would have received at the effective date of retirement over the sum of the annuity payments received by the re-employed retirant to the date of death.

Each re-employed retirant is required to contribute 10% of

his pay by payroll deductions.

Member Contributions

**Employer Contributions** 

**Other Benefits** 

Employer contributions are expressed as percents of member covered payroll. Employers are required to contribute 14% of payroll.

Re-employed retirant members of SERS are not eligible to receive any of the other benefits provided to regular SERS members.

## SCHEDULE D

## DETAILED TABULATIONS OF THE DATA

## Annuity and Pension Reserve Fund Retirants and Beneficiaries June 30, 2004 Type of Benefit, Annual Amount, and Basic Benefit Actuarial Liabilities

		% of Current Total Benefit		······································					
		Base	H.B. 204	Retirement	Current Total	Actuarial			
Group	Number	Allowances	and 284	Increases	Benefit	Liabilities			
	Superannuation Retirement								
	St	traight Life Allo	wance - Ben	efit Terminatin	g at Death				
Males	3,957	76.5%	0.0%	23.4%	\$41,241,692	\$366,499,568			
Females	<u>24,997</u>	78.0%	0.0%	22.0%	<u>172,327,658</u>	<u>1,614,444,482</u>			
Total	28,954				\$213,569,350	\$1,980,944,050			
	(	Option II Allowa	ince - Joint a	and Survivor Be	enefits				
Males	6,748	81.0%	0.0%	19.0%	\$83,716,570	\$988,838,020			
Females	<u>9,615</u>	85.7%	0.0%	14.3%	<u>81,979,553</u>	<u>961,036,459</u>			
Total	16,363				\$165,696,123	\$1,949,874,479			
	Option	III Allowance -	Life Benefit	s With Guarant	eed Benefits				
Males	387	74.9%	0.1%	25.0%	\$3,136,825	\$27,817,375			
Females	<u>913</u>	76.3%	0.0%	23.7%	<u>5,396,262</u>	<u>51,582,999</u>			
Total	1,300				\$8,533,087	\$79,400,374			
	Allowance to	o Survivor Bene	ficiary of De	eceased Supera	annuation Retira	nt			
:		Who Elec	ted Option	ll - Life Benefit					
Males	945	70.8%	0.1%	29.1%	\$3,142,074	\$25,192,863			
Females	<u>3,699</u>	64.3%	0.1%	35.5%	<u>21,588,147</u>	<u>174,932,812</u>			
Total	4,644	•			\$24,730,221	\$200,125,675			

Note that the actuarial liabilities include annual pension allowances and lump sum death benefits, but exclude Medicare Part-B supplement.

## Annuity and Pension Reserve Fund Retirants and Beneficiaries June 30, 2004 Type of Benefit, Annual Amount, and Basic Benefit Actuarial Liabilities (continued)

						and the second
		% of Current Total Benefit				
				Post	-	
		Base	H.B. 204	Retirement	Current Total	Actuarial
Group	Number	Allowances	and 284	Increases	Benefit	Liabilities
	Allowance	to Survivor Ber	neficiary of D	eceased Super	rannuation Retir	rant
		Who Elected (	ວption III - Gເ	aranteed Peric	od Only	
Males	23	83.8%	0.0%	16.2%	\$150,969	\$545,424
Females	<u>39</u>	78.3%	0.0%	21.7%	<u>230,618</u>	<u>783,548</u>
Total	62				\$381,587	\$1,328,972
		Total for Super	rannuation Al	llowances Bein	ıg Paid	
Males	12,060	79.2%	0.0%	20.8%	\$131,388,130	\$1,408,893,250
Females	<u>39,263</u>	79.2%	0.0%	20.8%	<u>281,522,238</u>	<u>2,802,780,300</u>
Total	51,323				\$412,910,368	\$4,211,673,550
		C	oisability Reti	irement		
1	Str	raight Life Allow	wance - Bene	fit Terminating	at Death	
Males	1,664	80.9%	0.0%	19.0%	\$25,895,533	\$218,756,401
Females	<u>3,516</u>	80.7%	0.0%	19.3%	<u>30,813,179</u>	<u>303,366,683</u>
Total	5,180				\$56,708,712	\$522,123,084
			•			
	Total Ben	efits Being Pai	d From Annu	ity and Pensio	n Reserve Fund	
Males	13,724	79.5%	0.0%	20.5%	\$157,283,663	\$1,627,649,651
Females	<u>42,779</u>	79.3%	0.0%	20.7%	<u>312,335,417</u>	<u>3,106,146,983</u>
Total	56,503				\$469,619,080	\$4 733 796 634

# Annuity and Pension Reserve Fund Retirants June 30, 2004 Current Annual Total Benefits by Attained Age

	Superannuation		Di	isability		Totals	
Attained		Annual		Annual		Annual	
Age	Number	Benefits	Number	Benefits	Number	Benefits	
Under 20							
20-24							
25-29							
30-34			4	\$45,719	4	\$45,719	
35-39			28	463,425	28	463,425	
40-44			148	2,418,134	148	2,418,134	
45-49	52	\$1,406,673	344	5,610,114	396	7,016,787	
50-54	370	10,018,125	621	9,761,461	991	19,779,586	
55-59	1,089	21,909,775	897	11,332,336	1,986	33,242,111	
60-64	5,079	55,485,190	1,052	11,762,929	6,131	67,248,119	
65-69	8,955	87,283,326	772	7,166,168	9,727	94,449,494	
70-74	9,260	79,318,123	553	4,112,640	9,813	83,430,763	
75-79	8,839	63,216,212	400	2,376,444	9,239	65,592,656	
80-84	7,335	44,135,387	261	1,303,248	7,596	45,438,635	
85-89	3,965	18,545,254	81	302,463	4,046	18,847,717	
90-94	1,390	5,285,549	16	45,290	1,406	5,330,839	
95-99	251	1,051,990	3	8,341	254	1,060,331	
100	12	49,044			12	49,044	
101	7	35,995			7	35,995	
102	7	21,964			7	21,964	
103	3	29,195			3	29,195	
104	2	4,229			2	4,229	
105 & Over	1	2,529	·		1	2,529	
Total	46,617	\$387,798,560	5,180	\$56,708,712	51,797	\$444,507.272	

I

	Life Annuities		Perioc	ls Certain		Totals		
Attained		Annual		Annual		Annual		
Age	Number	Benefits	Number	Benefits	Number	Benefits		
Under 20	2	\$4,337	1	\$6,519	3	\$ 10,856		
20-24	7	25,915			7	25,915		
25-29	1	16,680			1	16,680		
30-34	6	28,096			6	28,096		
35-39	3	33,623			3	33,623		
40-44	11	26,347	3	17,935	14	44,282		
45-49	34	151,872	4	23,603	38	175,475		
50-54	51	238,848	5	19,422	56	258,270		
55-59	82	586,522	2	2,045	84	588,567		
60-64	152	1,116,454	5	25,710	157	1,142,164		
65-69	348	2,259,036	8	56,990	356	2,316,026		
70-74	648	4,416,405	16	60,664	664	4,477,069		
/5-79	1,001	6,102,932	10	114,540	1,011	6,217,472		
00.04	1 101	5.040.400						
80-84	1,134	5,219,136	8	54,159	1,142	5,273,295		
85-89	783	3,082,984			783	3,082,984		
90-94	305	1,197,663			305	1,197,663		
95-99	/2	215,215			72	215,215		
100		004						
100		921			1	921		
101	2	5,185			2	5,185		
102	· ]	2,050	5		1	2,050		
103								
104								
105 & Over								
Total	4,644	\$24,730,221	62	\$381.587	4,706	\$25,111,808		

# Annuity and Pension Reserve Fund Survivors of Retirants June 30, 2004 Current Annual Total Benefits by Attained Age

## Survivor Benefit Fund Beneficiaries June 30, 2004 Annual Amount, and Basic Benefit Actuarial Liabilities

		% of Cu	irrent Annual	Benefit						
Group	Number	Base Allowances	HB 204 and 284	Post - Retirement Increases	Current Annual Benefits	Actuarial Liabilities				
	Benefits Being Paid From Survivor Benefit Fund									
Males	1,612	84.1%	0.0%	15.9%	\$7,061,737	\$96,168,606				
Females	<u>2,454</u>	75.9%	0.1%	24.0%	<u>14,938,032</u>	125,903,606				
Total	4,066	78.5%	0.1%	21.4%	\$21,999,769	\$222,072,212				

Note that actuarial liabilities are calculated for pension allowances for all survivors, including contingent (multiple) beneficiaries and beneficiaries in blackout; excluded are liabilities for the Medicare Part-B supplement. The total benefit amounts include those amounts for all contingent (multiple) beneficiaries although they are excluded from the total number of survivors reported.

	Totals					
Attained		Annual				
Age	Number	Benefits				
•						
Under 20	47	\$ 308,958				
20-24	17	106,701				
25-29	2	16,453				
30-34	5	34,992				
35-39	27	297,932				
40-44	55	491,550				
45-49	125	1,152,894				
50-54	151	1,334,461				
55-59	246	1,872,062				
60-64	451	2,637,488				
65-69	668	3,761,347				
70-74	709	3,639,325				
75-79	668	2,968,828				
80-84	503	1,939,445				
85-89	279	1,053,870				
90-94	94	318,205				
95-99	17	57,719				
100						
101						
102						
103	1	5,140				
104	1	2,399				
105 & Over						

4,066

\$21,999,769

Total

## Survivor Benefit Fund Survivors of Deceased Active Members June 30, 2004 Current Annual Total Benefits by Attained Age

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO
Total Active Member Data as of June 30, 2004
Tabulated by Attained Age and Years of Service

	Years of Service to Valuation Date								Totals
Attained									Valuation
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 plus	No.	Payroll
Under 20	782							782	\$ 4,221,424
20 - 24	4,874	147					a	5,021	44,282,123
25 - 29	4,817	875	45					5,737	83,542,737
30 - 34	5,751	1,937	409	54				8,151	136,266,108
35 - 39	7,667	3,617	1,022	508	95		•	12,909	221,091,895
40 - 44	9,285	6,407	2,482	1,395	833	213		20,615	384,365,468
45 - 49	7,474	6,759	4,159	2,525	1,326	945	116	23,304	486,038,039
50 - 54	4,592	4,158	3,504	3,561	1,857	1,057	349	19,078	431,199,027
55 - 59	3,138	2,218	2,132	2,856	2,321	1,454	377	14,496	334,990,130
60	446	329	243	321	320	292	96	2,047	45,913,458
61	416	312	239	327	335	294	107	2,030	45,792,222
62	308	208	199	249	237	250	114	1,565	34,844,529
63	260	182	161	191	209	220	94	1,317	29,041,704
64	226	165	108	156	191	174	106	1,126	24,103,164
65	174	117	94	128	128	153	102	896	18,598,928
66	195	103	85	102	127	117	88	817	15,484,398
67	167	82	65	69	64	106	96	649	11,817,700
68	116	91	60	66	47	56	· 86	522	9,523,476
69	102	73	53	40	48	66	72	454	8,397,987
70 & Over	398	287	181	175	140	183	259	1,623	24,610,623
			<b></b>						
Totals	51,188	28,067	15,241	12,723	8,278	5,580	2,062	123,139	\$ 2,394,125,140

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.3 years Service: 8.8 years Annual Pay: \$19,442

		the second s	1.3c.7 (				t at		
	Years of Service to Valuation Date							Totals	
Attained								^	Valuation
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 plus	No.	Payroll
II.									
Under 20	415							415	\$ 2,358,090
20 - 24	2,256	67						2,323	21,595,275
25 - 29	1,945	347	25					2,317	35,642,703
30 - 34	1,786	622	173	21				2,602	51,809,849
35 - 39	1,818	790	364	240	46			3,258	77,622,064
			•						
40 - 44	2,173	967	495	540	478	118		4,771	126,170,846
45 - 49	2,159	1,072	624	579	603	532	63	5,632	159,309,872
50 - 54	1,639	892	592	583	495	374	182	4,757	138,981,662
55 - 59	1,407	698	481	472	390	245	126	3,819	106,405,943
60	231	132	67	78	58	27	21	614	15,971,436
61	213	128	81	87	69	34	17	629	16,958,979
62	171	105	74	73	40	29	24	516	13,096,771
63	159	98	56	53	40	23	15	444	11,044,398
64	122	81	50	49	42	15	10	369	8,748,580
65	95	63	39	42	28	15	12	294	6,814,547
66	101	51	37	33	25	11	6	264	5,449,966
67	91	46	22	17	15	13	9	213	4,197,103
68	63	. 47	31	20	8	4	12	185	3,641,506
69	60	44	32	14	16	11	7	184	3,608,359
		÷							. , -
70 & Over	183	130	102	69	35	21	21	561	9,118.032
									, ,
						<u></u>	·· ·· ··		
Totals	17,087	6,380	3,345	2,970	2,388	1,472	525	34,167	\$ 818,545,981

## SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO Male Active Member Data as of June 30, 2004 Tabulated by Attained Age and Years of Service

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 45.3 years Service: 8.0 years Annual Pay: \$23,957

SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIC	)
Female Active Member Data as of June 30, 2004	
Tabulated by Attained Age and Years of Service	

	Years of Service to Valuation Date						Totals		
Attained									Valuation
Age	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 plus	No.	Payroll
Under 20	367							367	\$ 1,863,334
20 - 24	2,618	80						2,698	22,686,848
25 - 29	2,872	528	20					3,420	47,900,034
30 - 34	3,965	1,315	236	33	,			5,549	84,456,259
35 - 39	5,849	2,827	658	268	49			9,651	143,469,831
40 - 44	7,112	5,440	1,987	855	355	95		15,844	258,194,622
45 - 49	5,315	5,687	3,535	1,946	723	413	53	17,672	326,728,167
50 - 54	2,953	3,266	2,912	2,978	1,362	683	167	14,321	292,217,365
55 - 59	1,731	1,520	1,651	2,384	1,931	1,209	251	10,677	228,584,187
60	215	197	176	243	262	265	75	1,433	29,942,022
61	203	184	158	240	266	260	90	1,401	28,833,243
62	137	103	125	176	197	221	90	1,049	21,747,758
63	101	84	105	138	169	197	79	873	17,997,306
64	104	84	58	107	149	159	96	757	15,354,584
65	79	54	55	86	100	138	90	602	11,784,381
66	94	52	48	69	102	106	82	553	10,034,432
67	76	36	43	52	49	93	87	436	7,620,597
68	53	44	29	46	39	52	74	337	5,881,970
69	42	29	21	26	32	55	65	270	4,789,628
70 & Over	215	157	79	106	105	162	238	1,062	15,492,591
								•	
								<u></u>	
Totals	34,101	21,687	11,896	9,753	5,890	4,108	1,537	88,972	\$ 1,575,579,159

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 46.7 years Service: 9.1 years Annual Pay: \$17,709

## SCHOOL EMPLOYEES RETIREMENT SYSTEM OF OHIO

## Active Member as of June 30, 2004

# By Annual Pay

					Por	tion of
		Number	r of Active M	Total Number		
	Annual Pay	Men	Women	Totals	Group	Cumulative
	Less than \$1,000	252	445	697	0.6%	0.6%
	\$1,000 - 1,999	1,169	1,584	2,753	2.2%	2.8%
	2,000 - 2,999	1,922	2,425	4,347	3.5%	6.3%
	3,000 - 3,999	1,786	2,818	4,604	3.7%	10.0%
	4,000 - 4,999	1,291	2,860	4,151	3.4%	13.4%
	5,000 - 5,999	1,005	2,661	3,666	3.0%	16.4%
	6,000 - 6,999	812	2,868	3,680	3.0%	19.4%
	7,000 - 7,999	814	2,843	3,657	3.0%	22.4%
	8,000 - 8,999	679	2,808	3,487	2.8%	25.2%
	9,000 - 9,999	675	2,825	3,500	2.8%	28.0%
	10,000 - 11,999	1,289	6,140	7,429	6.0%	34.0%
	12,000 - 13,999	1,273	7,609	8,882	7.2%	41.2%
	14,000 - 15,999	1,184	8,127	9,311	7.6%	48.8%
	16,000 - 17,999	1,100	6,982	8,082	6.6%	55.4%
	18,000 - 19,999	970	6,140	7,110	5.8%	61.2%
	20,000 - 25,399	2,537	10,999	13,536	11.0%	72.2%
525,400	25,400 - 29,999	2,996	6,697	9,693	7.9%	80.1%
suichlap	30,000 and over	12,413	12,141	24,554	19.9%	100.0%
	Totals	34,167	88,972	123,139		

#### SCHEDULE E

#### GLOSSARY

<u>Actuarial Accrued Liability</u>. The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability".

<u>Accrued Service</u>. The service credited under the plan which was rendered before the date of the actuarial valuation.

<u>Actuarial Assumptions</u>. Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

<u>Actuarial Cost Method</u>. A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method".

<u>Actuarial Equivalent</u>. A series of payments is called an actuarial equivalent of another series of payments if the two series have the same actuarial present value.

<u>Actuarial Present Value</u>. The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

<u>Amortization</u>. Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

<u>Experience Gain (Loss)</u>. A measure of the difference between actual experience and that expected based upon a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

<u>Normal Cost</u>. The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost". Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

(concluded on next page)

## GLOSSARY (concluded)

<u>Plan Termination Liability</u>. The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for future service and salary. The termination liability will generally be less than the liabilities computed on a "going concern" basis and is not normally determined in a routine actuarial valuation.

<u>Reserve Account</u>. An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

<u>Unfunded Actuarial Accrued Liability</u>. The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability".

<u>Valuation Assets</u>. The value of current plan assets recognized for valuation purposes. Generally based on book value plus a portion of unrealized appreciation or depreciation.