

**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 annual actuarial valuation 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



Philip Bonanno, E.A.  
Director, Consulting Actuary

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**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**

1. 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.

**SUMMARY OF PRINCIPAL RESULTS**

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

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.
6. 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.
9. 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

Valuation Date June 30	Active Members				Retired Lives				Accrued Liability	Valuation Assets	UAAL
	Number	Payroll \$ Millions	Average Salary		Retired	Active/ Retired	Annual Benefits				
			\$	% Incr.			\$ Millions	% of Payroll			
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

**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**

Number	Payroll	Group Averages		
		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**

Type of Benefit Payment	No.	Annual Benefits	Group Averages	
			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
<b>Total in SERS</b>	<b>60,569</b>	<b>\$ 491,618,849</b>	<b>\$ 8,117</b>	<b>73.5</b>

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**

<b>ASSETS</b>	<b>JUNE 30, 2004</b>	<b>JUNE 30, 2003</b>
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	\$ 900,909,344	\$ 872,373,699
Unfunded accrued liability contributions	\$ <u>2,584,340,799</u>	\$ <u>1,862,689,769</u>
Total prospective contributions	\$ 3,485,250,143	\$ 2,735,063,468
<b>Total assets</b>	<b>\$ <u>14,210,325,423</u></b>	<b>\$ <u>13,506,316,547</u></b>
<b>LIABILITIES</b>		
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
<b>Total liabilities</b>	<b>\$ <u>14,210,325,423</u></b>	<b>\$ <u>13,506,316,547</u></b>

**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.

	<b>Total Liability</b>	<b>Accrued Liability</b>
<b>Active Members</b>		
Retirement	\$7,199,370,140	\$5,329,566,877
Death	121,049,679	77,293,312
Disability	732,990,014	356,887,110
Termination	497,309,073	(122,340,545)
Medicare Part-B	140,121,993	93,837,811
Death After Retirement	<u>8,997,298</u>	<u>5,147,484</u>
Total	\$8,699,838,197	\$5,740,392,049
<b>Benefit Recipients</b>		
Retirement/Survivor/Disability	\$4,955,868,846	\$4,955,868,846
Medicare Part-B	197,050,568	197,050,568
Death After Retirement	<u>20,346,277</u>	<u>20,346,277</u>
Total	\$5,173,265,691	\$5,173,265,691
Deferred Vested Members	194,762,735	194,762,735
Inactive Members	<u>142,458,800</u>	<u>142,458,800</u>
Total Actuarial Values	\$ 14,210,325,423	\$ 11,250,879,275
Actuarial Value of Assets		<u>8,666,538,476</u>
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: $(1) \times .0825 + [(2) - (3)] \times .0404$	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)**

	<b>Basic Benefits</b>	<b>Post Retirement Death Benefit</b>	<b>Medicare Part-B</b>	<b>Total</b>
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
<b>Employer Contribution</b>	<b>9.84%</b>	<b>0.03%</b>	<b>0.70%</b>	<b>10.57%</b>

**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:

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

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

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

**SCHEDULE OF FUNDING PROGRESS  
(\$ Thousands)**

Plan Year Ended	(1) Actuarial Value of Assets	(2) Actuarial 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

^ After change in benefit provisions.  
# After change in actuarial assumptions.  
\* After change in asset method.

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

<b>Fiscal Year 7-1/6-30</b>	<b>Valuation Date 6-30</b>	<b>Annual Required Contribution</b>	<b>Percentage Contributed</b>
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)

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

## Schedule of Active Member Valuation Data

Valuation Date	Active members			
	Number	Annual Payroll (in millions)	Annual Average Pay	% Increase in Average Pay
1995	100,784	\$1,429.6	\$14,184	4.1%
1996	101,777	1,475.9	14,501	2.2
1997	103,739	1,551.6	14,957	3.1
1998	109,878	1,651.9	15,456	3.3
1999	110,175	1,768.1	16,048	3.8
2000	113,811	1,866.3	16,398	2.2
2001	115,684	1,974.1	17,065	4.1
2002	120,254	2,175.7	18,093	6.0
2003	122,315	2,302.3	18,823	4.0
2004	123,139	2,394.1	19,442	3.3

## Schedule of Retirants Added to And Removed From Rolls

Item	Fiscal year ended June 30								
	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**

**Development of Actuarial Value of Assets**

Valuation Date:		June 30, 2003	June 30, 2004	June 30, 2005	June 30, 2006	June 30, 2007
A.	Actuarial Value Beginning of Year	\$ 9,213,992,836	\$ 9,075,340,941			
B.	Market Value End of Year	7,522,414,151	8,565,443,627			
C.	Market Value Beginning of Year	7,558,666,711	7,522,414,151			
D.	Cash Flow					
D1.	Contributions	595,329,458	649,553,306			
D2.	Other revenues	-	-			
D3.	Net transfers	(917,730)	(2,244,495)			
D4.	Benefit Payments	(707,194,558)	(736,499,525)			
D5.	Administrative Expenses	-	-			
D6.	Net	(112,782,830)	(89,190,714)			
E.	Investment Income					
E1.	Market Total: B - C - D6	76,530,270	1,132,220,190			
E2.	Assumed Rate	8.25%	8.25%			
E3.	Amount for Immediate Recognition	755,502,117	745,036,511			
E4.	Amount for Phased-In Recognition	(678,971,847)	387,183,679			
F.	Phased-In Recognition of Investment Income					
F1.	Current Year: 0.25 * E4	(169,742,962)	96,795,920			
F2.	First Prior Year	(352,857,386)	(169,742,962)	96,795,920		
F3.	Second Prior Year	(337,983,130)	(352,857,386)	(169,742,962)	96,795,920	
F4.	Third Prior Year	79,212,296	(337,983,130)	(352,857,386)	(169,742,962)	96,795,920
F5.	Total Recognized Investment Gain	(781,371,182)	(763,787,558)	(425,804,428)	(72,947,042)	96,795,920
G.	Actuarial Value End of Year:					
	A + D6 + E3 + F5	\$ 9,075,340,941	\$ 8,967,399,180			
H.	Difference Between Market & Actuarial Values:					
		(1,552,926,790)	(401,955,552)	23,848,876	96,795,920	0
I.	Health Care Valuation Assets	303,556,610	300,860,704			
J.	Basic Benefits Valuation Assets	\$ 8,771,784,331	\$ 8,666,538,476			

The actuarial value of assets recognizes assumed investment income (line E3) fully each year. Differences between actual and assumed investment 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 to be greater than market value.

## Asset Summary

June 30, 2004

	<u>Market Value</u>	<u>Actuarial Value</u>
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:  $I / [.5 \times (A + B - I)]$ , 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:

<b>Service</b>	<b>Base (Economy)</b>	<b>Merit &amp; Seniority</b>	<b>Total Increase</b>
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:

<b>Age</b>	<b>Male</b>	<b>Female</b>
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:

<b>Service</b>	<b>Rate</b>
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

<b>Disability Retired Members</b>		
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**

<b>Contributions for Basic Benefits</b>	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.
<b>Final Average Salary</b>	Average annual salary over the member's three highest years of service.
<b>Normal Retirement</b>	
Condition for Retirement	Attainment of age 65 with at least five years of creditable service, or completion of 30 years of creditable service, regardless of age.
Amount of Allowance	<p>The annual retirement allowance payable shall not be greater than 100% of final average salary, and is the greater of:</p> <ol style="list-style-type: none"> <li>1. Money Purchase - the greater of : <ul style="list-style-type: none"> <li>The sum of: <ol style="list-style-type: none"> <li>a. An annuity based on the value of the member's accumulated contributions at retirement</li> <li>b. A pension equal to the annuity</li> <li>c. \$40 multiplied by the member's years of service prior to 9/1/1937.</li> </ol> </li> <li>or:</li> <li>d. For members who have 10 or more years of service credit prior to 10/1/1956, an annual benefit of \$180.</li> </ul> </li> <li>2. Defined Benefit - the greater of: <ul style="list-style-type: none"> <li>The sum of: <ol style="list-style-type: none"> <li>a. 2.2% of final average salary multiplied by the member's years of service up to 30,</li> <li>b. 2.5% of final average salary multiplied by the member's years of service in excess of 30,</li> </ol> </li> <li>or:</li> <li>c. \$86 multiplied by the years of service.</li> </ul> </li> </ol>

**Early Retirement**

## Condition for Retirement

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.

## Amount of Allowance

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:

<u>Attained Age</u>	<u>Years of Ohio 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

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

## Amount of Allowance

1. 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.
2. 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:



<u>Age at Disability</u>	<u>Minimum Duration In Months</u>
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 1½ years of Ohio service credit and with at least ¼ year of Ohio contributing service credit within 2½ 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.

#### **Amount of Allowances**

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:

<u>Number of Qualified Survivors</u>	<u>Annual Benefit as Percent of Member's FAS</u>	<u>Minimum Monthly Allowance</u>
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:

<u>Years of Service</u>	<u>Annual Benefit as Percent of Member's FAS</u>
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**

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

##### **Deferred Benefits**

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.

#### **Normal Form of Benefit**

Single Life Annuity

#### **Optional Forms of Benefit**

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.

**Post-Retirement Death Benefit**

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

**Post-Retirement Increases**

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

**Medicare Part B**

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.

**Re-Employed Retirants**

**Eligibility**

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.

**Amount of Allowance**

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.

**Benefits Payable Upon Death**

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

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.

**Member Contributions**

Each re-employed retirant is required to contribute 10% of his pay by payroll deductions.

**Employer Contributions**

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

**Other Benefits**

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**

Group	Number	% of Current Total Benefit			Current Total Benefit	Actuarial Liabilities
		Base Allowances	H.B. 204 and 284	Retirement Increases		
<b>Superannuation Retirement</b>						
<b>Straight Life Allowance - Benefit Terminating at Death</b>						
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
<b>Option II Allowance - Joint and Survivor Benefits</b>						
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
<b>Option III Allowance - Life Benefits With Guaranteed Benefits</b>						
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
<b>Allowance to Survivor Beneficiary of Deceased Superannuation Retirant Who Elected Option II - Life Benefit</b>						
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)**

Group	Number	% of Current Total Benefit			Current Total Benefit	Actuarial Liabilities
		Base Allowances	H.B. 204 and 284	Post Retirement Increases		
<b>Allowance to Survivor Beneficiary of Deceased Superannuation Retirant Who Elected Option III - Guaranteed Period Only</b>						
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
<b>Total for Superannuation Allowances Being Paid</b>						
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
<b>Disability Retirement</b>						
<b>Straight Life Allowance - Benefit Terminating at Death</b>						
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
<b>Total Benefits Being Paid From Annuity and Pension Reserve Fund</b>						
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**

Attained Age	Superannuation		Disability		Totals	
	Number	Annual Benefits	Number	Annual Benefits	Number	Annual 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
<b>Total</b>	<b>46,617</b>	<b>\$387,798,560</b>	<b>5,180</b>	<b>\$56,708,712</b>	<b>51,797</b>	<b>\$444,507,272</b>

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

Attained Age	Life Annuities		Periods Certain		Totals	
	Number	Annual Benefits	Number	Annual Benefits	Number	Annual 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
75-79	1,001	6,102,932	10	114,540	1,011	6,217,472
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	72	215,215			72	215,215
100	1	921			1	921
101	2	5,185			2	5,185
102	1	2,050			1	2,050
103						
104						
105 & Over						
<b>Total</b>	<b>4,644</b>	<b>\$24,730,221</b>	<b>62</b>	<b>\$381,587</b>	<b>4,706</b>	<b>\$25,111,808</b>



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

Group	Number	% of Current Annual Benefit			Current Annual Benefits	Actuarial Liabilities
		Base Allowances	HB 204 and 284	Post - Retirement Increases		
<b>Benefits Being Paid From Survivor Benefit Fund</b>						
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>	<u>125,903,606</u>
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.

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

Attained Age	Totals	
	Number	Annual 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		
<b>Total</b>	<b>4,066</b>	<b>\$21,999,769</b>

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

Attained Age	Years of Service to Valuation Date							Totals	
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 plus	No.	Valuation Payroll
Under 20	782							782	\$ 4,221,424
20 - 24	4,874	147						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>Totals</b>	<b>51,188</b>	<b>28,067</b>	<b>15,241</b>	<b>12,723</b>	<b>8,278</b>	<b>5,580</b>	<b>2,062</b>	<b>123,139</b>	<b>\$ 2,394,125,140</b>

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

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

Attained Age	Years of Service to Valuation Date							Totals	
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 plus	No.	Valuation Payroll
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
<b>Totals</b>	<b>17,087</b>	<b>6,380</b>	<b>3,345</b>	<b>2,970</b>	<b>2,388</b>	<b>1,472</b>	<b>525</b>	<b>34,167</b>	<b>\$ 818,545,981</b>

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 OHIO**  
**Female Active Member Data as of June 30, 2004**  
**Tabulated by Attained Age and Years of Service**

Attained Age	Years of Service to Valuation Date							Totals	
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 plus	No.	Valuation 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
<b>Totals</b>	<b>34,101</b>	<b>21,687</b>	<b>11,896</b>	<b>9,753</b>	<b>5,890</b>	<b>4,108</b>	<b>1,537</b>	<b>88,972</b>	<b>\$ 1,575,579,159</b>

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**

Annual Pay	Number of Active Members			Portion of Total Number	
	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%
25,400 - 29,999	2,996	6,697	9,693	7.9%	80.1%
30,000 and over	12,413	12,141	24,554	19.9%	100.0%
<b>Totals</b>	<b>34,167</b>	<b>88,972</b>	<b>123,139</b>		

## SCHEDULE E

### GLOSSARY

Actuarial Accrued Liability. 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".

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

Actuarial Assumptions. 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.

Actuarial Cost Method. 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".

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

Actuarial Present Value. 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.

Amortization. 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.

Experience Gain (Loss). 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.

Normal Cost. 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)**

Plan Termination Liability. 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.

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

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

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