

APR 16 1986 LCP&R

**SUMMARY OF 1985 ACTUARIAL VALUATIONS
FOR THE LEGISLATIVE COMMISSION
ON PENSIONS AND RETIREMENT**

January 24, 1986
Revised April 10, 1986

 **FILE COPY**

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INTRODUCTION

This report summarizes the results of the July 1, 1985 actuarial valuations. This revised report also includes the results of the valuation of the Minneapolis Employees Retirement Fund. All actuarial costs and liabilities have been calculated by the Commission Actuary, The Wyatt Company.

The calculations were performed in accordance with the requirements of Section 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission on June 11, 1985.

The primary requirements set forth in the Statutes are:

- The actuarial cost method is the entry age normal cost method with normal costs expressed as a level percentage of earnings.
- The asset valuation method equals the cost value plus 1/3 of the unrealized gains or losses.
- Interest is 8% before retirement (except 5% is used by MERF) and 8% after retirement (except 5% is used by MERF, Elective State Officers and all funds participating in the Minnesota Post-Retirement Investment Fund).
- Salary increases are 6.5% annually (except 3.5% is used by MERF).
- Payments on the unfunded actuarial accrued liability are based on a level percentage of payroll each year to the Statutory amortization date.

This report summarizes information found in the separate actuarial valuation reports for each of the funds. These reports follow a consistent format which simplifies the comparison of information from one fund to another. The calculations have also been performed in a consistent fashion. However, the assumptions used in 1984 have been carried forward unless they were deemed inappropriate. These assumptions will be evaluated in the future as experience becomes available.

SECTION I
MEMBERSHIP SUMMARY

The table on the following page summarizes the number of members in these three primary classifications:

- Active members who are continuing to accrue benefits under the plan.
- Terminated members who have a vested right to receive benefits in the future.
- Annuitants who are presently receiving benefits as retired members, disabled members or survivors of members.

Most funds also have a small liability which represents the employee contributions to be refunded to those members who have terminated without any vested rights, and some funds have liabilities for those members who are currently on a leave of absence but can be anticipated to return to work.

**MEMBERSHIP SUMMARY
AS OF JUNE 30, 1985**

<u>PLAN</u>	<u>ACTIVE MEMBERS</u>	<u>TERMINATED MEMBERS WITH DEFERRED BENEFITS</u>	<u>ANNUITANTS</u>
State Employees	45,590	940	11,696
State Patrol	764	21	407
Judges	240	7	139
Legislators	201	111	149
Elective State Officers	6	5	9
Public Employees	86,312	1,863	21,785
PERA Police and Fire	4,928	163	1,098
Teachers Retirement Association	58,533	2,191	13,802
Minneapolis Employees	3,812	101	4,658
Minneapolis Teachers	2,758	562	2,340
St. Paul Teachers	2,888	36	1,103
Duluth Teachers	1,182	50	593
TOTAL	207,214	6,050	57,779

SECTION 2
FINANCIAL SUMMARY

This table shows the contributions (employee and employer) and benefit payments reported by the fund during the twelve months ending June 30, 1985.

The table also shows the asset value used to determine contributions and unfunded liabilities. This value is called the current assets and is based on a combination of cost and market values as described by the Statutes.

**FINANCIAL SUMMARY
AS OF JULY 1, 1985
(In Thousands of Dollars)**

<u>PLAN</u>	<u>PRIOR YEAR</u>		<u>CURRENT ASSETS</u>
	<u>CONTRIBUTIONS</u>	<u>BENEFIT PAYMENTS</u>	
State Employees	\$72,845	\$50,456	\$1,158,383
State Patrol	6,326	3,977	100,486
Judges	2,727	2,159	13,785
Legislators	357	903	8,398
Elective State Officers	29	119	197
Public Employees	128,939	103,547	1,842,957
PERA Police and Fire	26,277	8,648	338,400
Teachers Retirement Association	189,292	91,741	2,585,778
Minneapolis Employees	27,063	36,263	529,066
Minneapolis Teachers	9,870	9,895	239,072
St. Paul Teachers	7,707	5,730	159,874
Duluth Teachers	3,178	3,014	53,839
TOTAL	\$474,610	\$316,452	\$7,030,235

SECTION 3

1986 PENSION PLAN CONTRIBUTIONS: STATUTORY VS REQUIRED

The next two pages display a graphic comparison of the contributions presently required by Statute to the required contributions calculated by the Commission Actuary. The contributions are determined in the 1985 actuarial valuations and apply to the 1986 Fiscal Year.

The bottom portion of the graph expresses the contributions as a percentage of payroll. The top portion of the graph illustrates the difference between the Statutory and required percentages. When the Statutory rate is higher, there is a sufficiency and when the Statutory rate is lower, there is a deficiency.

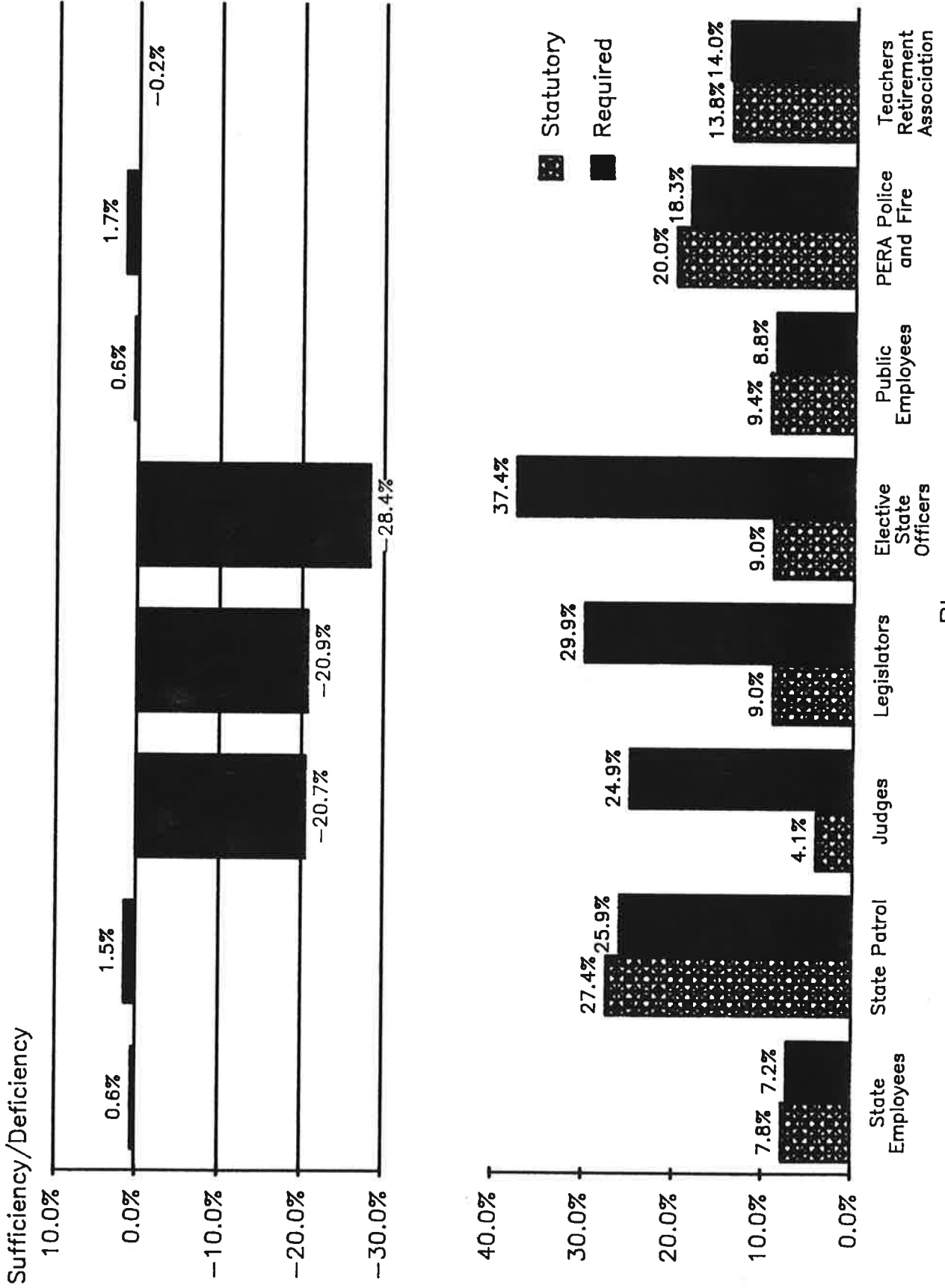
Statutory contributions include both employee and employer contributions except for three of the plans where only employee contributions are utilized. These three plans are Judges, Legislators and Elective State Officers. The deficiency shown in the upper graph reflects that there is no stated employer contribution each year. However, in the case of all three plans, the State will make the necessary payments to fund annuities payable from the Minnesota Post-Retirement Investment Fund and pay other benefits as they come due.

The required contribution consists of three parts:

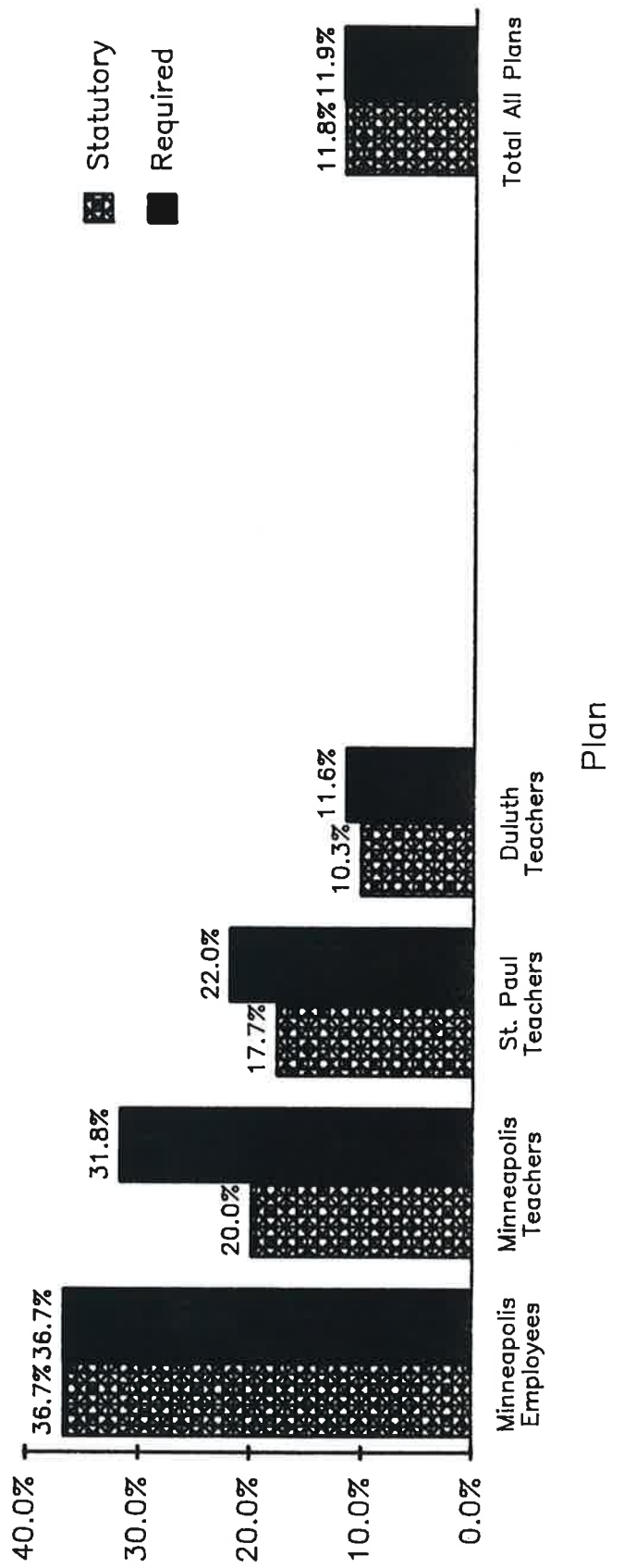
- Normal cost - the cost attributable to the current year.
- Supplemental contribution - the amount required to amortize the unfunded actuarial accrued liability as a level percentage of payroll at a future date (usually July 1, 2009).
- Expenses.

In order to make the graphs more readable, the contribution percentages have been rounded. The formal results may be found in the Appendix.

1986 Pension Plan Contributions: Statutory vs. Required



1986 Pension Plan Contributions: Statutory vs. Required (cont)



SECTION 4
CONTRIBUTIONS FOR 1986 FISCAL YEAR

The projected payroll for the 1986 Fiscal Year is used to produce the contributions in the following table. This table is important because it illustrates the relative size of the funds according to contribution level.

CONTRIBUTIONS FOR 1986 FISCAL YEAR
(In Thousands of Dollars)

<u>PLAN</u>	<u>STATUTORY CONTRIBUTION</u>	<u>REQUIRED CONTRIBUTION</u>	<u>SUFFICIENCY(+) DEFICIENCY(-)</u>
State Employees	\$84,181	\$78,066	\$6,115
State Patrol	7,082	6,700	382
Judges	641	3,860	(3,219)
Legislators	406	1,349	(943)
Elective State Officers	33	137	(104)
Public Employees	133,334	124,921	8,413
PERA Police and Fire	27,845	25,499	2,346
Teachers Retirement Association	192,762	195,552	(2,790)
Minneapolis Employees	36,648	36,648	0
Minneapolis Teachers	17,520	27,849	(10,329)
St. Paul Teachers	13,434	16,651	(3,217)
Duluth Teachers	3,212	3,607	(395)
TOTAL	\$517,098	\$520,839	(\$3,741)

SECTION 5
REQUIRED PENSION PLAN CONTRIBUTIONS: 1985 VS 1986

The following graphs compare this year's required contribution to that calculated in the prior year by each fund's actuary. These contributions are expressed as a percentage of payroll.

In the case of the Legislators and Elective State Officers Plans, comparisons are not available for the prior year since this is the first year for an actuarial valuation.

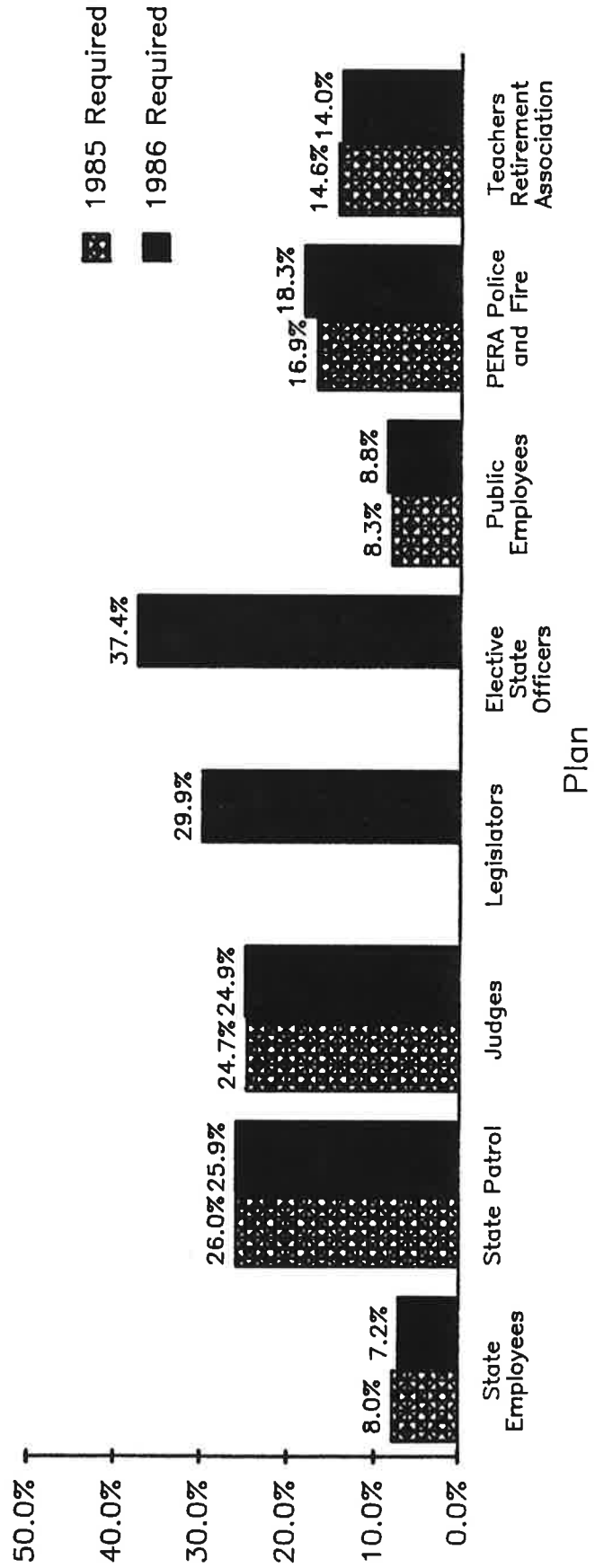
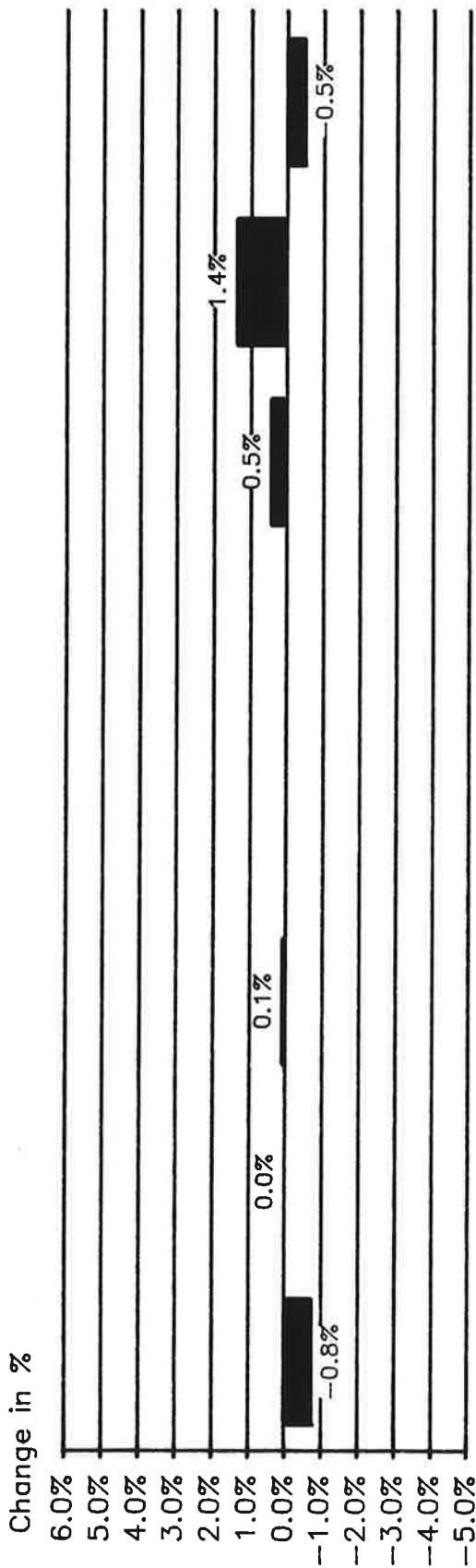
In order to make the graphs more readable, the contribution percentages have been rounded. The formal results may be found in the Appendix.

Four of the funds had benefit changes effective in 1986 and one of these four funds also had a change in assumptions. In these situations, contributions were calculated both before and after the change.

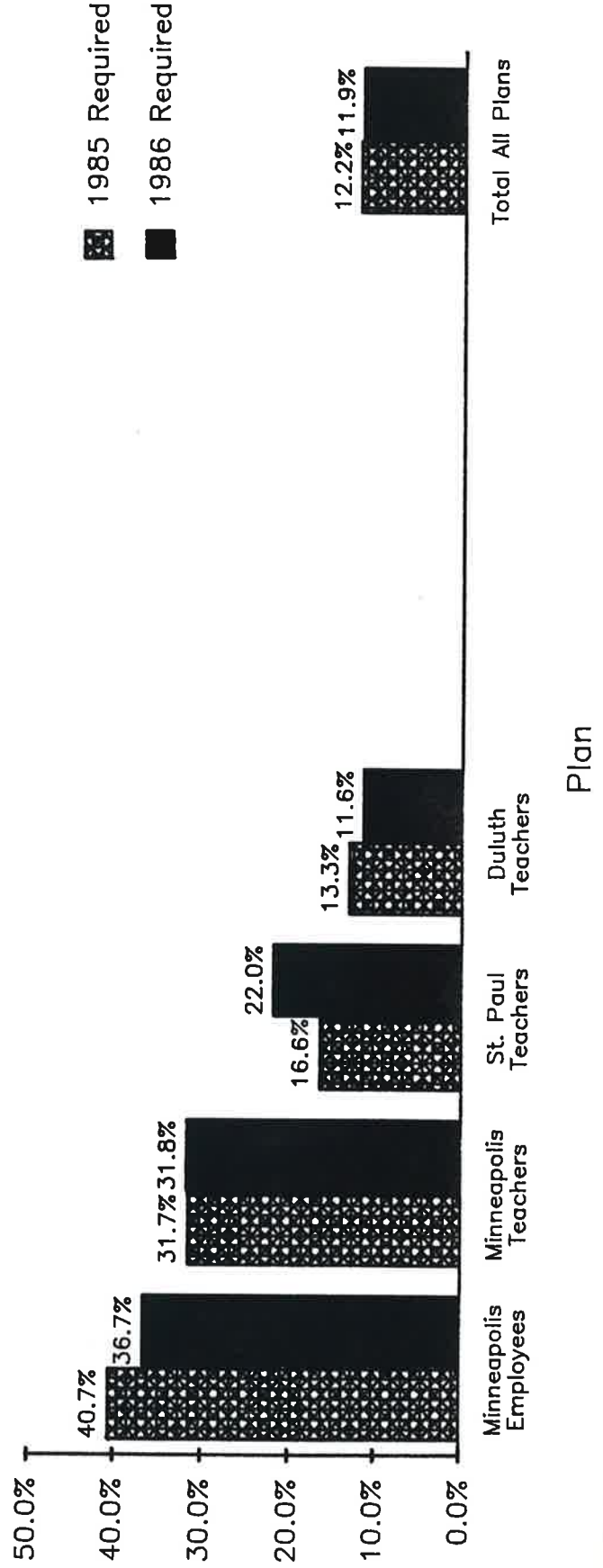
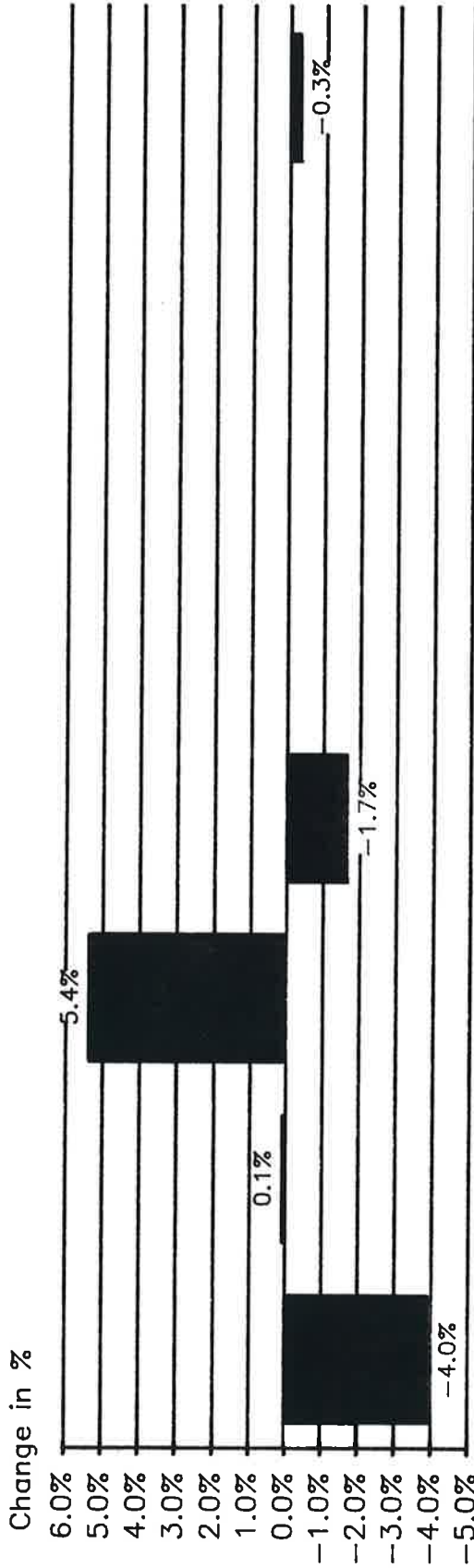
- PERA Police & Fire - Changes in the disability and survivor's benefits increased contributions from 17.92% to 18.32%.
- Minneapolis Teachers - Elimination of the 30 year maximum on service increased contributions from 28.70% to 31.78%.
- St. Paul Teachers - Improvement in the potential annual lump sum bonus to retirees increased contributions from 19.54% to 21.95%.
- Duluth Teachers - Addition of a potential annual lump sum bonus to retirees increased contributions from 8.44% to 11.55%. Duluth Teachers also utilized 5% interest for post-retirement in 1985, as a result of wording in the Statute. If these assumptions had not been changed and if benefit improvements had not been made, the contribution in 1985 of 13.26% would have decreased to 13.22% for 1986.

The 1985 numbers for Minneapolis Teachers and St. Paul Teachers reflect actuarial valuations performed on December 31, 1984. All funds are now on the same fiscal year which commences July 1, 1985.

Required Pension Plan Contributions: 1985 vs. 1986



Required Pension Plan Contributions: 1985 vs. 1986(cont)



SECTION 6
ACCRUED LIABILITY FUNDING RATIO: 1984 VS 1985

These funding ratios represent a relationship determined on the date of the actuarial valuation. For 1985, this date is July 1. For 1984, the date is June 30 in the case of most funds, but as noted in a previous section, the Minneapolis Teachers and St. Paul Teachers were last valued December 31, 1984.

Comparisons for the Legislators and Elective State Officers Plans are not available because this is the first valuation.

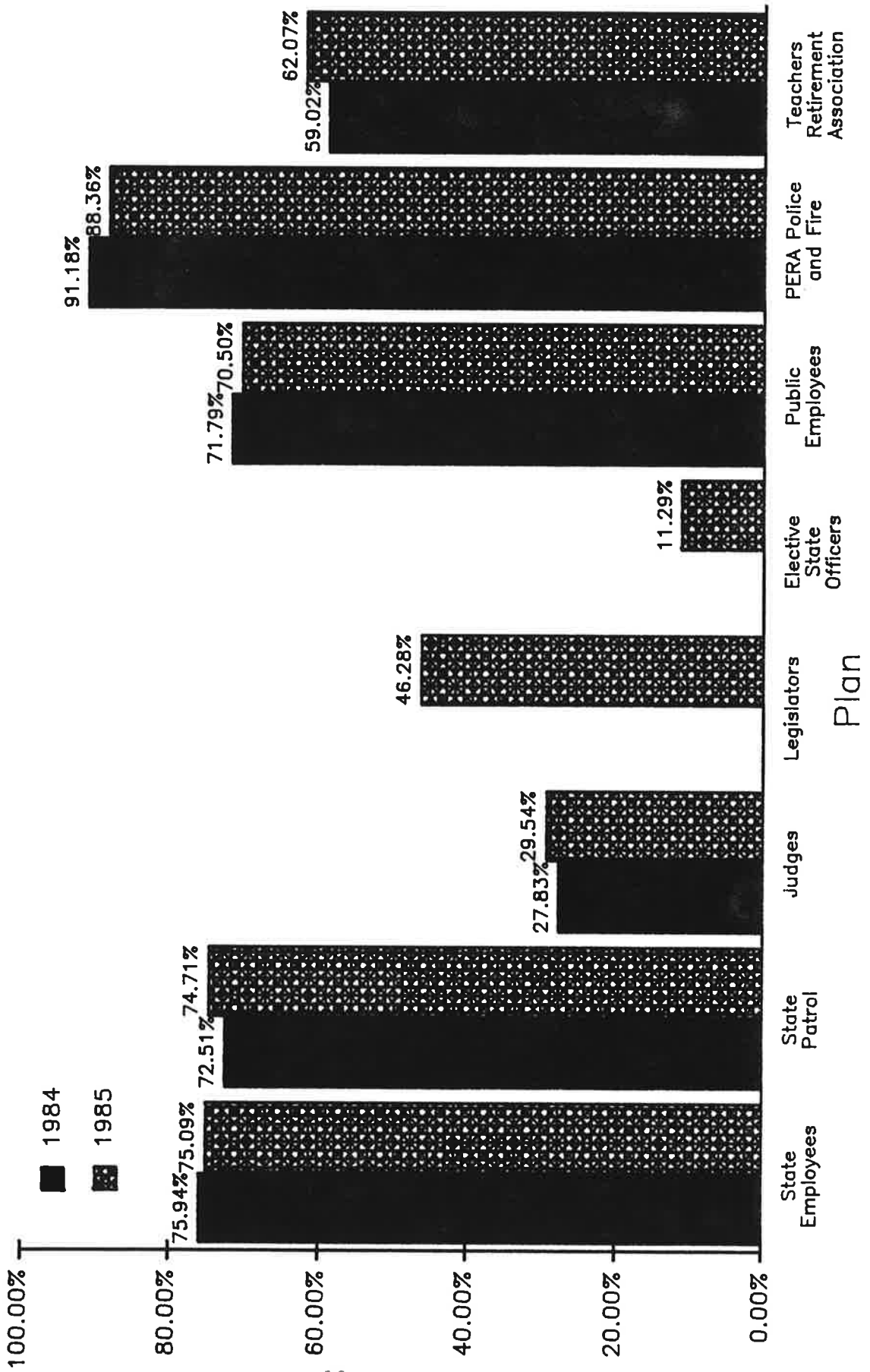
The accrued liability funding ratio is the traditional measurement that has been used over the past several years. It is the ratio of the assets (used by the actuary) to the actuarial accrued liability determined by the entry age normal cost method.

Four of the funds had benefit changes effective in 1986 and one of these four funds also had a change in assumptions. In these situations, funding ratios were calculated both before and after the change.

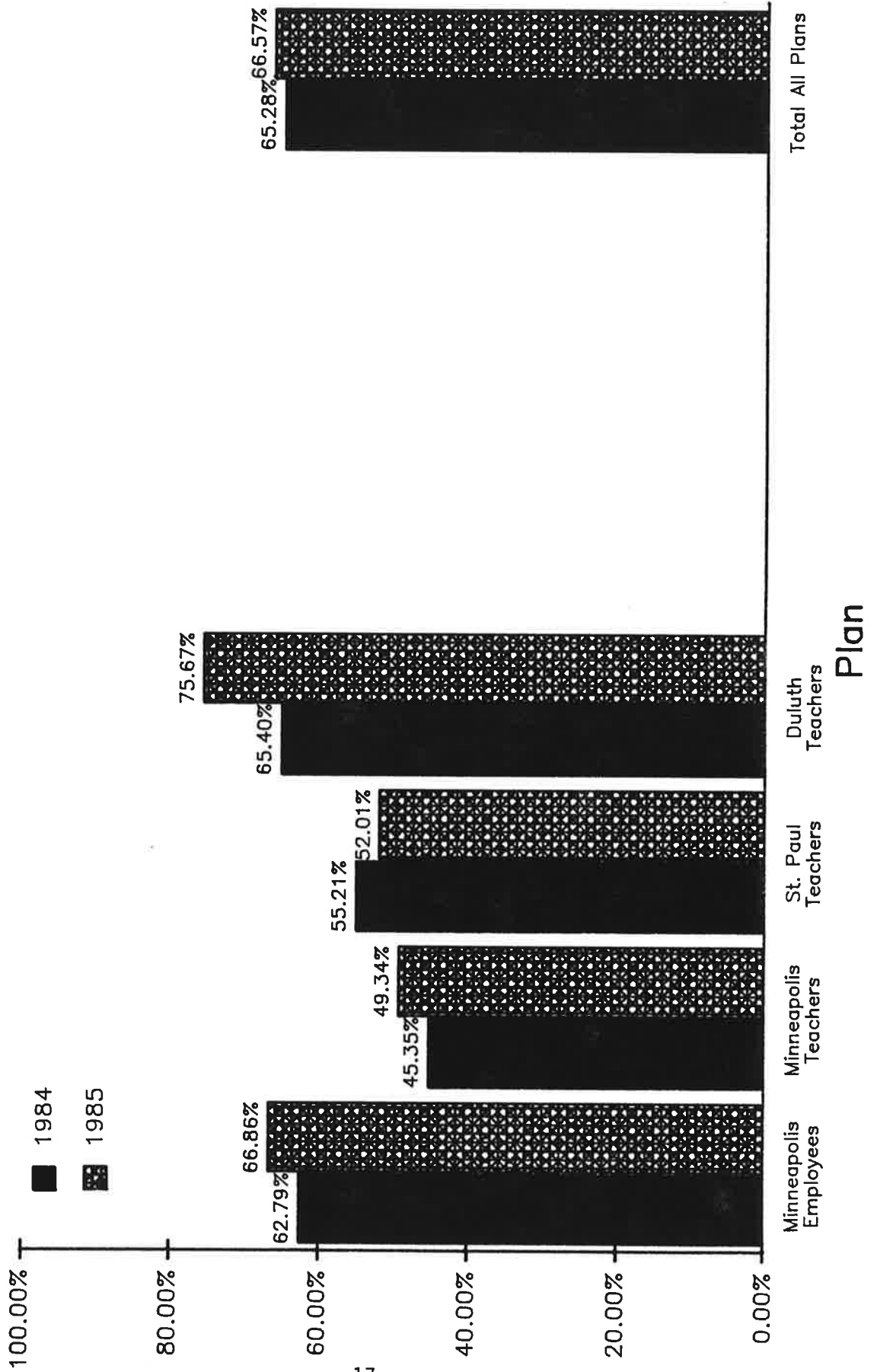
- PERA Police & Fire - Changes in the disability and survivor's benefits decreased the funding ratio from 89.45% to 88.36%.
- Minneapolis Teachers - Elimination of the 30 year maximum on service decreased the funding ratio from 53.00% to 49.34%.
- St. Paul Teachers - Improvement in the potential annual lump sum bonus to retirees decreased the funding ratio from 55.73% to 52.01%.
- Duluth Teachers - Addition of a potential annual lump sum bonus to retirees decreased funding ratios from 86.29% to 75.67%. Duluth Teachers also utilized 5% interest for post-retirement in 1985, as a result of wording in the Statute. If these assumptions had not been changed and if benefit

improvements had not been made, the funding ratio in 1984 of 65.40% would have increased to 67.35% for 1986.

Accrued Liability Funding Ratios: 1984 vs. 1985



Accrued Liability Funding Ratios: 1984 vs. 1985(cont)



SECTION 7
ACTUARIAL LIABILITY SUMMARY

The following table shows the calculation of the funding ratio in the previous graphs.

**ACTUARIAL LIABILITY SUMMARY
AS OF JULY 1, 1985
(In Thousands of Dollars)**

<u>PLAN</u>	<u>ACTUARIAL ACCRUED LIABILITY (1)</u>	<u>CURRENT ASSETS (2)</u>	<u>UNFUNDED (3)=(1)-(2)</u>	<u>FUNDING RATIO (2)/(1)</u>
State Employees	\$1,542,559	\$1,158,383	\$384,176	75.09%
State Patrol	134,508	100,486	34,022	74.71%
Judges	46,662	13,785	32,877	29.54%
Legislators	18,145	8,398	9,747	46.28%
Elective State Officers	1,745	197	1,548	11.29%
Public Employees	2,614,116	1,842,957	771,159	70.50%
PERA Police and Fire	382,998	338,400	44,598	88.36%
Teachers Retirement Association	4,166,116	2,585,778	1,580,338	62.07%
Minneapolis Employees	791,325	529,066	262,259	66.86%
Minneapolis Teachers	484,578	239,072	245,506	49.34%
St. Paul Teachers	307,407	159,874	147,533	52.01%
Duluth Teachers	71,154	53,839	17,315	75.67%
TOTAL	\$10,561,313	\$7,030,235	\$3,531,078	66.57%

SECTION 8
CASH FLOW PROJECTION SUMMARY

For the first time, the annual actuarial reports project contributions, disbursements and an investment return over the next 25 years.

The following table summarizes the results of that projection by showing assets at the beginning and at the end of the projection period. Assets are defined to be the Current Assets and do not include assets in either the Minnesota Post-Retirement Investment Fund or the Retirement Benefits Fund.

CASH FLOW PROJECTION SUMMARY
(In Thousands of Dollars)

<u>PLAN</u>	<u>ASSETS</u>	
	<u>1985</u>	<u>2010</u>
State Employees	\$733,800	\$3,649,801
State Patrol	56,293	264,519
Judges	4,756	(275,091)
Legislators	2,421	(67,911)
Elective State Officers	197	(5,896)
Public Employees	1,020,580	9,272,837
PERA Police and Fire	264,114	2,996,205
Teachers Retirement Association	1,444,095	12,258,800
Minneapolis Employees	169,372	196,887
Minneapolis Teachers	239,072	189,881
St. Paul Teachers	159,874	297,168
Duluth Teachers	53,839	245,493
TOTAL	\$4,148,413	\$29,022,693

APPENDIX - HIGHLIGHTS

STATE EMPLOYEES RETIREMENT FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

	<u>06/30/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 352 % of Payroll	7.64%	7.80%
2. Required Contributions - Chapter 356 % of Payroll	8.02%	7.24%
3. Sufficiency (Deficiency) (A1-A2)	-0.38%	0.56%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$1,158,383
b. Current Benefit Obligations (Table 8)	NA	\$1,285,197
c. Funding Ratio (a/b)	NA	90.13%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$996,003	\$1,158,383
b. Actuarial Accrued Liability (Table 9)	\$1,311,550	\$1,542,559
c. Funding Ratio (a/b)	75.94%	75.09%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	NA	\$2,195,123
b. Current and Expected Future Benefit Obligations	NA	\$2,068,864
c. Funding Ratio (a/b)	NA	106.10%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	45,332	45,590
b. Projected Annual Earnings	\$949,841	\$1,078,983
c. Average Annual Earnings (Actual \$)	\$20,953	\$23,667
d. Average Age	NA	39.6
e. Average Service	NA	8.9
2. Others		
a. Service Retirements (Table 4)	10,001	10,464
b. Disability Retirements (Table 5)	699	695
c. Survivors (Table 6)	469	537
d. Deferred Retirements (Table 7)	877	940
e. Terminated Other Non-vested (Table 7)	5,590	4,957
f. Total	17,636	17,593

STATE PATROL RETIREMENT FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

	<u>06/30/84 VALUATION</u>	<u>07/01/85 VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 352B % of Payroll	27.40%	27.40%
2. Required Contributions - Chapter 356 % of Payroll	25.95%	25.92%
3. Sufficiency (Deficiency) (A1-A2)	1.45%	1.48%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$100,486
b. Current Benefit Obligations (Table 8)	NA	\$128,874
c. Funding Ratio (a/b)	NA	77.97%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$86,785	\$100,486
b. Actuarial Accrued Liability (Table 9)	\$119,682	\$134,508
c. Funding Ratio (a/b)	72.51%	74.71%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$178,674	\$202,389
b. Current and Expected Future Benefit Obligations	\$170,074	\$194,860
c. Funding Ratio (a/b)	105.06%	103.86%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	741	764
b. Projected Annual Earnings	\$23,016	\$25,846
c. Average Annual Earnings (Actual \$)	\$31,061	\$33,830
d. Average Age	NA	40.5
e. Average Service	NA	13.7
2. Others		
a. Service Retirements (Table 4)	280	285
b. Disability Retirements (Table 5)	5	13
c. Survivors (Table 6)	112	109
d. Deferred Retirements (Table 7)	21	21
e. Terminated Other Non-vested (Table 7)	10	9
f. Total	428	437

JUDGES RETIREMENT FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

	<u>06/30/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 490 % of Payroll	4.18%	4.13%
2. Required Contributions - Chapter 356 % of Payroll	24.73%	24.86%
3. Sufficiency (Deficiency) (A1-A2)	-20.55%	-20.73%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$13,785
b. Current Benefit Obligations (Table 8)	NA	\$47,074
c. Funding Ratio (a/b)	NA	29.28%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$11,792	\$13,785
b. Actuarial Accrued Liability (Table 9)	\$42,378	\$46,662
c. Funding Ratio (a/b)	27.83%	29.54%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$17,769	\$21,459
b. Current and Expected Future Benefit Obligations	\$62,294	\$72,435
c. Funding Ratio (a/b)	28.52%	29.63%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	244	240
b. Projected Annual Earnings	\$14,286	\$15,521
c. Average Annual Earnings (Actual \$)	\$58,549	\$64,671
d. Average Age	NA	53.2
e. Average Service	NA	11.5
2. Others		
a. Service Retirements (Table 4)	79	83
b. Disability Retirements (Table 5)	2	4
c. Survivors (Table 6)	55	52
d. Deferred Retirements (Table 7)	4	7
e. Terminated Other Non-vested (Table 7)	2	0
f. Total	142	146

LEGISLATORS RETIREMENT FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

07/01/85
VALUATION

A. CONTRIBUTIONS (TABLE 11)

1. Statutory Contributions - Chapter 3A % of Payroll	9.00%
2. Required Contributions - Chapter 356 % of Payroll	29.92%
3. Sufficiency (Deficiency) (A1-A2)	-20.92%

B. FUNDING RATIOS

1. Accrued Benefit Funding Ratio	
a. Current Assets (Table 1)	\$8,398
b. Current Benefit Obligations (Table 8)	\$18,066
c. Funding Ratio (a/b)	46.49%
2. Accrued Liability Funding Ratio	
a. Current Assets (Table 1)	\$8,398
b. Actuarial Accrued Liability (Table 9)	\$18,145
c. Funding Ratio (a/b)	46.28%
3. Projected Benefit Funding Ratio (Table 8)	
a. Current and Expected Future Assets	\$15,697
b. Current and Expected Future Benefit Obligations	\$27,923
c. Funding Ratio (a/b)	56.22%

C. PLAN PARTICIPANTS

1. Active Members (Table 3)	
a. Number	201
b. Projected Annual Earnings	\$4,507
c. Average Annual Earnings (Actual \$)	\$22,423
d. Average Age	45.6
e. Average Service	5.9
2. Others	
a. Service Retirements (Table 4)	108
b. Disability Retirements (Table 5)	NA
c. Survivors (Table 6)	41
d. Deferred Retirements (Table 7)	111
e. Terminated Other Non-vested (Table 7)	15
f. Total	275

ELECTIVE STATE OFFICERS RETIREMENT FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

07/01/85
VALUATION

A. CONTRIBUTIONS (TABLE 11)

1. Statutory Contributions - Chapter 3A % of Payroll	9.00%
2. Required Contributions - Chapter 356 % of Payroll	37.42%
3. Sufficiency (Deficiency) (A1-A2)	-28.42%

B. FUNDING RATIOS

1. Accrued Benefit Funding Ratio	
a. Current Assets (Table 1)	\$197
b. Current Benefit Obligations (Table 8)	\$1,595
c. Funding Ratio (a/b)	12.35%
2. Accrued Liability Funding Ratio	
a. Current Assets (Table 1)	\$197
b. Actuarial Accrued Liability (Table 9)	\$1,745
c. Funding Ratio (a/b)	11.29%
3. Projected Benefit Funding Ratio (Table 8)	
a. Current and Expected Future Assets	\$762
b. Current and Expected Future Benefit Obligations	\$2,116
c. Funding Ratio (a/b)	36.01%

C. PLAN PARTICIPANTS

1. Active Members (Table 3)	
a. Number	6
b. Projected Annual Earnings	\$366
c. Average Annual Earnings (Actual \$)	\$61,000
d. Average Age	46.2
e. Average Service	5.9
2. Others	
a. Service Retirements (Table 4)	6
b. Disability Retirements (Table 5)	NA
c. Survivors (Table 6)	3
d. Deferred Retirements (Table 7)	5
e. Terminated Other Non-vested (Table 7)	1
f. Total	15

PUBLIC EMPLOYEES RETIREMENT FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

	<u>06/30/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 353 % of Payroll	9.61%	9.36%
2. Required Contributions - Chapter 356 % of Payroll	8.32%	8.77%
3. Sufficiency (Deficiency) (A1-A2)	1.29%	0.59%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$1,842,957
b. Current Benefit Obligations (Table 8)	NA	\$2,310,374
c. Funding Ratio (a/b)	NA	79.77%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$1,599,674	\$1,842,957
b. Actuarial Accrued Liability (Table 9)	\$2,228,361	\$2,614,116
c. Funding Ratio (a/b)	71.79%	70.50%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$2,403,175	\$3,373,562
b. Current and Expected Future Benefit Obligations	\$2,702,139	\$3,209,739
c. Funding Ratio (a/b)	88.94%	105.10%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	83,702	86,312
b. Projected Annual Earnings	\$1,225,625	\$1,423,911
c. Average Annual Earnings (Actual \$)	\$14,643	\$16,497
d. Average Age	NA	42.2
e. Average Service	NA	8.1
2. Others		
a. Service Retirements (Table 4)	15,765	17,277
b. Disability Retirements (Table 5)	638	654
c. Survivors (Table 6)	3,665	3,854
d. Deferred Retirements (Table 7)	1,843	1,863
e. Terminated Other Non-vested (Table 7)	NA	38,986
f. Total	21,911	62,634

PUBLIC EMPLOYEES POLICE AND FIRE FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

	<u>06/30/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 353 % of Payroll	20.00%	20.00%
2. Required Contributions - Chapter 356 % of Payroll	16.92%	18.32%
3. Sufficiency (Deficiency) (A1-A2)	3.08%	1.68%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$338,400
b. Current Benefit Obligations (Table 8)	NA	\$352,356
c. Funding Ratio (a/b)	NA	96.04%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$279,757	\$338,400
b. Actuarial Accrued Liability (Table 9)	\$306,817	\$382,998
c. Funding Ratio (a/b)	91.18%	88.36%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$579,925	\$719,219
b. Current and Expected Future Benefit Obligations	\$538,257	\$673,023
c. Funding Ratio (a/b)	107.74%	106.86%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	4,744	4,928
b. Projected Annual Earnings	\$117,881	\$139,222
c. Average Annual Earnings (Actual \$)	\$24,848	\$28,251
d. Average Age	NA	37.2
e. Average Service	NA	9.4
2. Others		
a. Service Retirements (Table 4)	715	765
b. Disability Retirements (Table 5)	44	54
c. Survivors (Table 6)	242	279
d. Deferred Retirements (Table 7)	175	163
e. Terminated Other Non-vested (Table 7)	NA	350
f. Total	1,176	1,611

TEACHERS RETIREMENT ASSOCIATION FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

	<u>06/30/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 354 % of Payroll	13.90%	13.83%
2. Required Contributions - Chapter 356 % of Payroll	14.55%	14.03%
3. Sufficiency (Deficiency) (A1-A2)	-0.65%	-0.20%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$2,585,778 *
b. Current Benefit Obligations (Table 8)	NA	\$3,614,856 *
c. Funding Ratio (a/b)	NA	71.53%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$2,193,254	\$2,585,778 *
b. Actuarial Accrued Liability (Table 9)	\$3,716,432	\$4,166,116 *
c. Funding Ratio (a/b)	59.02%	62.07%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$4,761,022	\$5,376,933 *
b. Current and Expected Future Benefit Obligations	\$4,917,531	\$5,430,487 *
c. Funding Ratio (a/b)	96.82%	99.01%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	58,190	58,533
b. Projected Annual Earnings	\$1,232,357	\$1,393,716
c. Average Annual Earnings (Actual \$)	\$21,178	\$23,811
d. Average Age	NA	41.5
e. Average Service	NA	11.5
2. Others		
a. Service Retirements (Table 4)	11,885	12,798
b. Disability Retirements (Table 5)	222	223
c. Survivors (Table 6)	737	781
d. Deferred Retirements (Table 7)	NA	2,191
e. Terminated Other Non-vested (Table 7)	NA	13,628
f. Total	12,844	29,621

* Includes Variable Annuity Fund of \$111,591.

MINNEAPOLIS EMPLOYEES RETIREMENT FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

	<u>06/30/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 422A % of Payroll	40.71%	36.74%
2. Required Contributions - Chapter 356 % of Payroll	40.71%	36.74%
3. Sufficiency (Deficiency) (A1-A2)	0.00%	0.00%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$529,066
b. Current Benefit Obligations (Table 8)	NA	\$766,595
c. Funding Ratio (a/b)	NA	69.02%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$500,209	\$529,066
b. Actuarial Accrued Liability (Table 9)	\$796,661	\$791,325
c. Funding Ratio (a/b)	62.79%	66.86%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$1,033,386	\$999,784
b. Current and Expected Future Benefit Obligations	\$1,033,386	\$999,784
c. Funding Ratio (a/b)	100.00%	100.00%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	4,107	3,812
b. Projected Annual Earnings	\$102,361	\$99,740
c. Average Annual Earnings (Actual \$)	\$24,924	\$26,165
d. Average Age	NA	47.6
e. Average Service	NA	15.1
2. Others		
a. Service Retirements (Table 4)	3,396	3,459
b. Disability Retirements (Table 5)	327	261
c. Survivors (Table 6)	883	938
d. Deferred Retirements (Table 7)	298	101
e. Terminated Other Non-vested (Table 7)	NA	197
f. Total	4,904	4,956

MINNEAPOLIS TEACHERS' RETIREMENT FUND

REPORT HIGHLIGHTS (DOLLARS IN THOUSANDS)

	<u>12/31/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 354A % of Payroll	20.30%	19.99%
2. Required Contributions - Chapter 356 % of Payroll	31.68%	31.78%
3. Sufficiency (Deficiency) (A1-A2)	-11.38%	-11.79%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$239,072
b. Current Benefit Obligations (Table 8)	NA	\$459,380
c. Funding Ratio (a/b)	NA	52.04%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$223,334	\$239,072
b. Actuarial Accrued Liability (Table 9)	\$492,478	\$484,578
c. Funding Ratio (a/b)	45.35%	49.34%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$399,525	\$454,677
b. Current and Expected Future Benefit Obligations	\$621,512	\$658,153
c. Funding Ratio (a/b)	64.28%	69.08%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	3,099	2,758
b. Projected Annual Earnings	\$82,035	\$87,643
c. Average Annual Earnings (Actual \$)	\$26,471	\$31,778
d. Average Age	NA	44.0
e. Average Service	NA	14.4
f. Additional Members on Leave	NA	234
2. Others		
a. Service Retirements (Table 4)	NA	2,153
b. Disability Retirements (Table 5)	56	47
c. Survivors (Table 6)	NA	140
d. Deferred Retirements (Table 7)	NA	562
e. Terminated Other Non-vested (Table 7)	NA	60
f. Total	NA	2,962

ST. PAUL TEACHERS' RETIREMENT FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

	<u>12/31/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 354A % of Payroll	17.00%	17.71%
2. Required Contributions - Chapter 356 % of Payroll	16.58%	21.95%
3. Sufficiency (Deficiency) (A1-A2)	0.42%	-4.24%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$159,874
b. Current Benefit Obligations (Table 8)	NA	\$282,588
c. Funding Ratio (a/b)	NA	56.57%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$143,600	\$159,874
b. Actuarial Accrued Liability (Table 9)	\$260,109	\$307,407
c. Funding Ratio (a/b)	55.21%	52.01%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$341,742	\$340,343
b. Current and Expected Future Benefit Obligations	\$322,828	\$403,836
c. Funding Ratio (a/b)	105.86%	84.28%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	2,806	2,888
b. Projected Annual Earnings	\$75,983	\$75,852
c. Average Annual Earnings (Actual \$)	\$27,079	\$26,265
d. Average Age	42.9	42.9
e. Average Service	11.7	11.6
f. Additional Members on Leave of Absence	140	134
2. Others		
a. Service Retirements (Table 4)	927	963
b. Disability Retirements (Table 5)	28	28
c. Survivors (Table 6)	106	112
d. Deferred Retirements (Table 7)	35	36
e. Terminated Other Non-vested (Table 7)	NA	1,770
f. Total	1,096	2,909

DULUTH TEACHERS' RETIREMENT FUND

**REPORT HIGHLIGHTS
(DOLLARS IN THOUSANDS)**

	<u>06/30/84</u> <u>VALUATION</u>	<u>07/01/85</u> <u>VALUATION</u>
A. CONTRIBUTIONS (TABLE 11)		
1. Statutory Contributions - Chapter 354A % of Payroll	10.29%	10.29%
2. Required Contributions - Chapter 356 % of Payroll	13.26%	11.55%
3. Sufficiency (Deficiency) (A1-A2)	-2.97%	-1.26%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	NA	\$53,839
b. Current Benefit Obligations (Table 8)	NA	\$64,730
c. Funding Ratio (a/b)	NA	83.17%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$47,859	\$53,839
b. Actuarial Accrued Liability (Table 9)	\$73,174	\$71,154
c. Funding Ratio (a/b)	65.40%	75.67%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$81,126	\$95,064
b. Current and Expected Future Benefit Obligations	\$98,949	\$102,842
c. Funding Ratio (a/b)	81.99%	92.44%
C. PLAN PARTICIPANTS		
1. Active Members (Table 3)		
a. Number	1,137	1,182
b. Projected Annual Earnings	\$28,519	\$31,222
c. Average Annual Earnings (Actual \$)	\$25,083	\$26,415
d. Average Age	43.8	43.5
e. Average Service	12.9	12.0
2. Others		
a. Service Retirements (Table 4)	531	562
b. Disability Retirements (Table 5)	8	8
c. Survivors (Table 6)	23	23
d. Deferred Retirements (Table 7)	47	50
e. Terminated Other Non-vested (Table 7)	0	0
f. Total	609	643