

Bloomington Fire Department Relief Association
ACTUARIAL VALUATION REPORT

January 1, 1999

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LCP & R JUN 29 1999

Bloomington Fire Department Relief Association
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Bloomington Fire Department Association
Report Highlights

	January 1, 1998	January 1, 1999
	Valuation	Valuation
<hr/>		
A. CONTRIBUTIONS % OF PAYROLL (Table 11)		
1. Statutory Contributions - Chapter 354A	6.44%	10.07%
2. Required Contributions - Chapter 356	(6.35%)	(12.69%)
3. Sufficiency / (Deficiency)	<hr/> 12.79%	<hr/> 22.76%
B. FUNDING RATIOS		
1. Accrued Benefit Funding Ratio		
a. Current Assets (Table 1)	\$ 87,829,787	\$ 98,908,878
b. Current Benefit Obligations (Table 8)	60,685,005	66,480,059
c. Funding Ratio	<hr/> 144.73%	<hr/> 148.78%
2. Accrued Liability Funding Ratio		
a. Current Assets (Table 1)	\$ 87,829,787	\$ 98,908,878
b. Actuarial Accrued Liability (Table 9)	59,322,179	64,855,595
c. Funding Ratio	<hr/> 148.06%	<hr/> 152.51%
3. Projected Benefit Funding Ratio (Table 8)		
a. Current and Expected Future Assets	\$ 111,712,442	\$ 122,732,784
b. Current and Expected Future Benefit Obligations	83,204,834	88,679,501
c. Funding Ratio	<hr/> 134.26%	<hr/> 138.40%
C. PLAN PARTICIPANTS		
1. Active Members		
a. Number (Table 3)	144	140
b. Projected Annual Earnings	\$ 7,122,960	\$ 7,523,040
c. Average Annual Earnings (Actual dollars)	\$ 49,465	\$ 53,736
d. Average Age	36.5	37.1
e. Average Service	9.0	9.4
f. Additional Members on Leave of Absence	-	-
2. Others		
a. Service Retirements (Table 4)	95	100
b. Disability Retirements (Table 5)	5	5
c. Survivors (Table 6)	12	14
d. Deferred Retirements (Table 7)	9	8
e. Terminated Other Non-Vested (Table 7)	-	-
f. Total	<hr/> 121	<hr/> 127

Bloomington Fire Department Relief Association *Commentary*

Purpose

The purpose of this valuation is to determine the financial status of the Plan. To achieve this purpose, an actuarial valuation is made at the beginning of each fiscal year as required by Section 356 of Minnesota Statutes.

Report Highlights

The financial status of the Plan can be measured by three different funding ratios:

The *Accrued Benefit Funding Ratio* is a measure of current funding status and, when viewed over a period of years, presents a view of the funding progress. It is based upon benefits which have been earned by service to the valuation date. This year's ratio is 148.78%. The corresponding ratio for the prior year was 144.73%.

The *Accrued Liability Funding Ratio* is also a measure of funding status and funding progress. It is based on the actuarial cost method that has historically been use by the State. For 1999 the ratio is 152.51%, which is an increase from the 1998 value of 148.06%.

The *Projected Benefit Funding Ratio* is a measure of the adequacy or deficiency in the contribution level. This year's ratio of 138.40% shows that the current statutory contributions are sufficient in the long run.

Asset Information (Tables 1 and 2)

The Actuarial Value of Assets is determined as the market value of the Special Fund as of December 31, 1998 less liabilities payable as of December 31, 1998. The calculation of the Actuarial Value of Assets is shown in Table 1 on lines F.1 to F.5.

The term "Actuarial Value of Assets" is used to indicate that the value was determined for use in this actuarial valuation. Since Minnesota Statutes refer to this value as "Current Assets", the latter phrase will be used in the remainder of this report.

Actuarial Balance Sheet (Table 8)

An actuarial balance sheet provides a method for evaluating current and future levels of funding. The Current Benefit Obligation used to measure current funding level is calculated as follows:

For Active Members - salary and service are projected to retirement to determine benefits for each member and the ratio of credited service to total service establishes the portion of the projected benefit to be used in calculating the current funding level.

For Non-active Members - the discounted value of benefits.

Actuarial Cost Method (Table 9)

The approach used by the State of Minnesota to determine contribution sufficiency is the Entry Age Normal Actuarial Cost Method. The primary characteristic of this method is that it allocates costs as a level of percentage of payroll.

A comparison of this actuarial method (Table 9) to the actuarial balance sheet (Table 8) illustrates the two techniques for allocating liabilities of active Members to past and future. As noted in the prior section, the balance sheet allocates benefits and the corresponding liabilities, on the basis of service. The method used in Table 9 allocates liabilities so that the cost each year will be a constant percentage of payroll. Both approaches, however, calculate the value of all future benefits the same way (see line F of Table 8 and line A6, column 1, of Table 9).

An Unfunded Actuarial Accrued Liability is computed under the Entry Age Normal Actuarial Cost Method by comparing the liabilities allocated to past service (Actuarial Accrued Liability) to the Current Assets. This amount, line B3, is funded as a level dollar amount determined on a rolling thirty year period.

Sources of Actuarial Gains and Losses (Table 10)

The assumptions used in making the calculations using the Entry Age Normal Actuarial Cost Method are based on long-term expectations. Each year, the actual experience will deviate from the long-term expectation. For an analysis of the major components of the Actuarial Gain or Loss refer to Table 10.

Contribution Sufficiency (Table 11)

This report determines the adequacy of Statutory Contributions by comparing the Statutory Contributions to the Required Contributions.

The Required Contributions, set forth in Chapter 356, consist of:

Normal Costs based on the Entry Age Normal Actuarial Cost Method.

A Supplemental Contribution for amortizing any Unfunded Actuarial Accrued Liability (the Fund is allowed a credit toward Required Contributions equal to 10 % of the Unfunded Actuarial Accrued Liability if it is negative).

An Allowance for Expenses.

Table 11 shows the Fund has a current year contribution sufficiency since the Statutory Contribution Rate is 10.07% compared to the Required Contribution Rate of (12.69)%.

GASB Disclosure Information (Tables 14 and 15)

Disclosure under GASB Statement No. 27 became effective beginning with 1997 Fiscal Year end. Required disclosure items are included in Tables 14 and 15.

Changes in Actuarial Assumptions

All actuarial assumptions are the same as those used in the prior valuation. Table 12 contains a summary of all actuarial assumptions and methods.

Changes in Plan Provisions

Effective with the 1998 Fiscal Year, the City of Bloomington is no longer required to make additional contributions to the Fund. Remaining sources of funding from employee dues and State of Minnesota statutory contribution are projected to provide sufficient funds to meet emerging benefit liabilities.

All other plan provisions are the same as those used in the prior valuation. Table 13 contains a summary of current plan benefits.

TABLE 1

Bloomington Fire Department Association
Accounting Balance Sheet

January 1, 1999

	Market Value	Cost Value
A. ASSETS		
1. Cash, Equivalents, Short-Term Securities	\$ 4,327,169	\$ 4,327,169
2. Investments		
a. Fixed Income	35,510,093	16,847,050
b. Equity	59,036,176	45,811,294
c. Real Estate	164,010	893,209
3. Other Assets	-	-
B. TOTAL ASSETS	\$ 99,037,448	\$ 67,878,722
C. AMOUNTS CURRENTLY PAYABLE	\$ (128,570)	\$ (128,570)
D. ASSETS AVAILABLE FOR BENEFITS		
1. Total Assets	\$ 99,037,448	\$ 67,878,722
2. Unrestricted Fund Balance	Not Reported	Not Reported
3. Total Assets Available for Benefits	\$ 99,037,448	\$ 67,878,722
E. TOTAL AMOUNTS CURRENTLY PAYABLE AND ASSETS AVAILABLE FOR BENEFITS	\$ 98,908,878	\$ 67,750,152
F. DETERMINATION OF ACTUARIAL VALUE OF ASSETS		
1. Cost Value of Assets Available for Benefits (D.3)		\$ 67,878,722
2. Market Value of Assets Available for Benefits (D.3)	\$ 99,037,448	
3. Amounts Currently Payable (C)	(128,570)	
4. Market less Amounts Currently Payable (F.2 + F.3)	\$ 98,908,878	
5. Actuarial Value of Assets (F.4)		\$ 98,908,878

TABLE 2

Bloomington Fire Department Association
Change In Assets Available for Benefits

December 31, 1998

	Market Value	Cost Value
A. ASSETS AVAILABLE AT BEGINNING OF PERIOD	\$ 87,829,787	\$ 62,793,593
B. OPERATING REVENUES		
1. Member Contributions	\$ 20,592	\$ 20,592
2. State of Minnesota Contributions	568,433	568,433
3. City of Bloomington Contributions	-	-
4. Investment Income	5,576,746	5,576,746
5. Investment Expenses	Combined Reporting	Combined Reporting
6. Net Realized Gain / (Loss)	814,039	814,039
7. Other	2,652	2,652
8. Net Change in Unrealized Gain / (Loss)	6,122,532	-
9. Total Operating Revenue	\$ 13,104,994	\$ 6,982,462
C. OPERATING EXPENSES		
1. Service Retirements	\$ (1,857,681)	\$ (1,857,681)
2. Disability Benefits*	-	-
3. Survivor Benefits*	-	-
4. Refunds	-	-
5. Administrative Expenses	(168,222)	(168,222)
6. Total Operating Expenses	\$ (2,025,903)	\$ (2,025,903)
D. OTHER CHANGES IN RESERVES	\$ -	\$ -
E. ASSETS AVAILABLE AT END OF PERIOD	\$ 98,908,878	\$ 67,750,152

*Included in Item (C.1)

Bloomington Fire Department Relief Association

TABLE 3A

Active Members as of December 31, 1998

Age	Participant Count							TOTAL	
	YEARS OF SERVICE								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<20	-	-	-	-	-	-	-	-	-
20-24	5	3	-	-	-	-	-	-	8
25-29	2	8	8	-	-	-	-	-	18
30-34	-	12	16	6	-	-	-	-	34
35-39	1	7	9	5	1	-	-	-	23
40-44	-	3	8	6	4	1	-	-	22
45-49	-	1	3	12	7	1	1	-	25
50-54	-	-	-	-	9	-	-	-	9
55-59	-	-	-	-	-	-	-	-	-
60-64	-	-	1	-	-	-	-	-	1
65+	-	-	-	-	-	-	-	-	-
All	8	34	45	29	21	2	1	-	140

TABLE 3B

Deferred Vested Members as of December 31, 1998

Age	Participant Count							TOTAL	
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	6	-	-	-	-	-	-	-	6
50-54	-	2	-	-	-	-	-	-	2
55-59	-	-	-	-	-	-	-	-	-
60-64	-	-	-	-	-	-	-	-	-
65-69	-	-	-	-	-	-	-	-	-
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	6	2	-	-	-	-	-	-	8

Bloomington Fire Department Relief Association

TABLE 4

Retired Members as of December 31, 1998

Age	Participant Count								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	-	2	-	-	-	1	-	-	3
50-54	3	8	-	-	-	-	-	-	11
55-59	1	4	27	-	2	-	-	1	35
60-64	-	-	-	20	-	-	1	3	24
65-69	-	-	-	2	5	3	-	1	11
70-74	-	-	-	-	3	3	-	-	6
75-79	-	-	-	-	1	-	5	-	6
80-84	-	-	-	-	-	-	-	3	3
85+	-	-	-	-	-	-	-	1	1
All	4	14	27	22	11	7	6	9	100

TABLE 5

Disabled Members as of December 31, 1998

Age	Participant Count								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	1	2	-	-	-	-	-	-	3
50-54	-	2	-	-	-	-	-	-	2
55-59	-	-	-	-	-	-	-	-	-
60-64	-	-	-	-	-	-	-	-	-
65-69	-	-	-	-	-	-	-	-	-
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	-	-	-
80-84	-	-	-	-	-	-	-	-	-
85+	-	-	-	-	-	-	-	-	-
All	1	4	-	-	-	-	-	-	5

TABLE 6

Survivor Members as of December 31, 1998

Age	Participant Count								TOTAL
	YEARS OF RETIREMENT								
	<u><1</u>	<u>1-4</u>	<u>5-9</u>	<u>10-14</u>	<u>15-19</u>	<u>20-24</u>	<u>25-29</u>	<u>30+</u>	
<50	-	1	-	-	-	-	-	-	1
50-54	-	-	-	-	-	-	-	-	-
55-59	-	1	-	1	-	-	-	-	2
60-64	-	1	-	-	-	-	-	-	1
65-69	-	-	-	-	1	1	-	-	2
70-74	-	-	-	-	-	-	-	-	-
75-79	-	-	-	-	-	-	3	1	4
80-84	-	-	-	-	-	-	-	1	1
85+	-	-	-	-	1	-	-	2	3
All	-	3	-	1	2	1	3	4	14

Bloomington Fire Department Relief Association
Reconciliation of Members

	<u>Actives</u>	<u>Terminated</u>	
		<u>Deferred Retirement</u>	<u>Other Non-Vested</u>
A. ON JANUARY 1, 1998	144	9	-
B. ADDITIONS	6	3	-
C. DELETIONS			
1 Service Retirement	(2)	(4)	-
2 Disability	(1)	-	-
3 Death – Survivor	-	-	-
4 Death – Other	-	-	-
5 Terminated – Deferred	(3)	-	-
6 Terminated – Refund	-	-	-
7 Terminated - Other Non-Vested	(4)	-	-
8 Leave of Absence	-	-	-
9 Returned as Active	-	-	-
D. DATA ADJUSTMENTS	-	-	-
Vested	137	8	-
Non-Vested	3	-	-
E. TOTAL ON DECEMBER 31, 1998	140	8	-

	<u>Recipients</u>		
	<u>Retirement</u>		
	<u>Annuitants</u>	<u>Disabled</u>	<u>Survivors</u>
A. ON JANUARY 1, 1998	95	5	12
B. ADDITIONS	7	1	2
C. DELETIONS			
1 Service Retirement	-	(1)	-
2 Death	(2)	-	-
3 Annuity Expired	-	-	-
4 Returned as Active	-	-	-
D. DATA ADJUSTMENTS	-	-	-
E. TOTAL ON DECEMBER 31, 1998	100	5	14

Bloomington Fire Department Association
Actuarial Balance Sheet

January 1, 1999

A. CURRENT ASSETS (Table 1; Line F.6)		\$ 98,908,878	
B. EXPECTED FUTURE ASSETS			
1. Present Value of Expected Future Statutory Supplemental Contributions		\$ -	
2. Present Value of Future Normal Costs		23,823,906	
3. Total Expected Future Assets		<u>23,823,906</u>	
C. TOTAL CURRENT AND EXPECTED FUTURE ASSETS		<u>\$ 122,732,784</u>	
D. CURRENT BENEFIT OBLIGATIONS			
	<u>Non-Vested</u>	<u>Vested</u>	<u>Total</u>
1. Benefit Recipients			
a. Retirement Annuities		\$ 34,168,564	\$ 34,168,564
b. Disability Benefits		1,873,848	1,873,848
c. Surviving Spouse and Child Benefits		2,365,359	2,365,359
2. Deferred Retirements		3,695,987	3,695,987
3. Former Members Without Vested Rights		-	-
4. Active Members			
a. Retirement Annuities	\$ 18,581,054	1,137,415	19,718,469
b. Disability Benefits	3,672,671	-	3,672,671
c. Surviving Spouse and Child Benefits	772,702	-	772,702
d. Deferred Retirements	186,846	25,613	212,459
e. Refund Liability Due to Death or Withdrawal	-	-	-
5. Total Current Benefit Obligations	<u>\$ 23,213,273</u>	<u>\$ 43,266,786</u>	<u>\$ 66,480,059</u>
E. EXPECTED FUTURE BENEFIT OBLIGATIONS			<u>\$ 22,199,442</u>
F. TOTAL CURRENT AND EXPECTED FUTURE BENEFIT OBLIGATIONS			<u>\$ 88,679,501</u>
G. CURRENT UNFUNDED ACTUARIAL LIABILITY (D.5 - A)			\$ (32,428,819)
H. CURRENT AND FUTURE UNFUNDED ACTUARIAL LIABILITY (F - C)			\$ (34,053,283)

Bloomington Fire Department Association
Determination of Unfunded Actuarial Accrued Liability (UAAL) and
Supplemental Contribution Rate

January 1, 1999

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. DETERMINATION OF ACTUARIAL ACCRUED LIABILITY (AAL)			
1. Active Members			
a. Retirement Benefits	\$ 37,540,362	\$ 17,708,950	\$ 19,831,412
b. Disability Benefits	7,122,498	4,839,532	2,282,966
c. Surviving Spouse and Child Benefits	1,482,205	1,035,161	447,044
d. Deferred Retirements	430,678	240,263	190,415
e. Refund Liability Due to Death or Withdrawal	-	-	-
f. Total	<u>\$ 46,575,743</u>	<u>\$ 23,823,906</u>	<u>\$ 22,751,837</u>
2. Deferred Retirements	\$ 3,695,987		\$ 3,695,987
3. Former Members Without Vested Rights	-		-
4. Annuitants in MPRIF	-		-
5. Annuitants Not in MPRIF	38,407,771		38,407,771
6. Total	<u>\$ 88,679,501</u>	<u>\$ 23,823,906</u>	<u>\$ 64,855,595</u>
B. DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY (UAAL)			
1. Actuarial Accrued Liability (A.6)			\$ 64,855,595
2. Current Assets (Table 1; Line F.6)			98,908,878
3. Unfunded Actuarial Accrued Liability (B.1 - B.2)			<u>\$ (34,053,283)</u>
C. DETERMINATION OF SUPPLEMENTAL CONTRIBUTION RATE			
1. 30 Year Level Dollar Amortization Factor			16.140
2. Supplemental Contribution (B.3 / C.1), but not less than 0			\$ -
3. Supplemental Credit for Surplus Assets (10% * B.3)			\$ (3,405,328)
4. Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:			\$ 7,523,040
5. Supplemental Contribution Rate (C.3 / C.4)			<u>(45.27%)</u>

Bloomington Fire Department Association
Changes in Unfunded Actuarial Accrued Liability (UAAL)

December 31, 1998

A. UAAL AT BEGINNING OF YEAR	\$ (28,507,608)
B. CHANGE DUE TO INTEREST REQUIREMENTS AND CURRENT RATE OF FUNDING	
1. Normal Cost and Expenses	\$ 2,398,756
2. Contributions	(589,025)
3. Interest	(1,320,168)
4. Total	<u>\$ 489,563</u>
C. EXPECTED UAAL AT END OF YEAR (A + B.4)	\$ (28,018,045)
D. INCREASE / (DECREASE) DUE TO ACTUARIAL LOSSES / (GAINS) BECAUSE OF EXPERIENCE DEVIATIONS FROM EXPECTED	
1. Age and Service Retirements	\$ 575,356
2. Disability Retirements *	-
3. Death-in-Service Benefits *	-
4. Withdrawal *	-
5. Salary Increases	828,153
6. Contribution Income **	-
7. Investment Income	(8,160,402)
8. Mortality of Annuitants	727,586
9. Other Items	(5,931)
10. Total	<u>\$ (6,035,238)</u>
E. UAAL AT END OF YEAR BEFORE PLAN AMENDMENTS AND CHANGES IN ACTUARIAL ASSUMPTIONS (C + D.5)	\$ (34,053,283)
F. CHANGE IN UAAL DUE TO PLAN AMENDMENTS	-
G. CHANGE IN UAAL DUE TO CHANGES IN ACTUARIAL ASSUMPTIONS	<u>-</u>
H. UAAL AT END OF YEAR (E + F + G)	<u><u>\$ (34,053,283)</u></u>

* Included in Item D.1.

* Included in Item D.7.

Bloomington Fire Department Association
Determination of Contribution Sufficiency

January 1, 1999

	Percent of Payroll	Dollar Amount
A. STATUTORY CONTRIBUTIONS - CHAPTER 354		
1. Employee Contributions	0.27%	\$ 20,160
2. State of Minnesota Contributions	7.56%	568,433
3. City of Bloomington Contributions	-	-
4. Administrative Expense	2.24%	168,222
5. Total	10.07%	\$ 756,815
B. REQUIRED CONTRIBUTIONS - CHAPTER 356		
1. Normal Cost		
a. Retirement Benefits	22.49%	\$ 1,691,771
b. Disability Benefits	6.27%	471,435
c. Surviving Spouse and Child Benefits	1.34%	101,044
d. Deferred Retirements	0.24%	18,107
e. Refund Liability Due to Death or Withdrawal	0.00%	-
f. Total	30.34%	\$ 2,282,357
2. Supplemental Contribution Amortization	(45.27%)	(3,405,328)
3. Allowance for Administrative Expenses	2.24%	168,222
4. Total	(12.69%)	\$ (954,749)
C. CONTRIBUTION SUFFICIENCY / (DEFICIENCY) (A.5 - B.4)	22.76%	1,711,564
Projected Annual Payroll for Fiscal Year Beginning on the Valuation Date:		\$ 7,523,040

Bloomington Fire Department Relief Association
Summary of Actuarial Assumptions and Methods

<i>Interest:</i>	5.00% per annum
<i>Mortality:</i>	Pre-Retirement:
	Male - 1971 Group Annuity Mortality Table, without margins, projected to 1976 by Scale E.
	Female - 1971 Group Annuity Mortality Table, without margins, projected to 1976 by Scale E set back 7 years.
	Post-Retirement:
	Male - same as above.
	Female - same as above.
	Post-Disability:
	Male - same as above.
	Female - same as above.
<i>Retirement Age:</i>	Members are assumed to retire after attaining age 50 and completing 20 Years of Service.
<i>Separation:</i>	Graded rates shown in the rate table.
<i>Disability:</i>	Graded rates shown in the rate table.
<i>Social Security:</i>	N/A
<i>Salary Increases:</i>	3.5% per annum.
<i>COLA Increases:</i>	3.5% per annum.
<i>Actuarial Cost Method:</i>	Entry Age Normal Cost Method with normal costs expressed as level percentage of earnings from each Members date of joining the Association to the Members assumed retirement age.
<i>Asset Valuation Method:</i>	Market Value.
<i>Employee Contributions:</i>	\$144 per year
<i>City of Bloomington Contributions:</i>	None
<i>State of Minnesota Contributions:</i>	2% of the Fire and Casualty paid by the City of Bloomington

Bloomington Fire Department Relief Association
Summary of Actuarial Assumptions and Methods (continued)

<i>Payment on the Unfunded Accrued Liability:</i>	Any changes in the Unfunded Accrued Liability are amortized as level dollar amount over a new 30 year period
<i>Administrative Expenses:</i>	Prior year administrative expenses (excluding investment expenses) expressed as a level amount per participant.
<i>Family Composition:</i>	100% of Members are assumed to be married. Female is assumed to be three years younger than male. Duty-related death benefits are increased by 10% for estimated dependent child survivor benefit.
<i>Form of Payments:</i>	75% Joint and Survivor Annuity, Life Annuity if single.
<i>Missing Data:</i>	The submitted participant data has been reviewed for reasonableness and constancy with data submitted for prior valuations. We have not audited this data, and the results of this valuation may change based on the accuracy of the underlying data. In cases where submitted data was missing or incomplete, the following assumptions were applied:
Date of Birth:	Average age of participant group based on prior years valuation report.
Date of Hire:	Current valuation date minus years of service.
Years of Service:	Years of service on last year's valuation plus one year.
Sex:	Male.
Deferred Benefit:	Equal to one-third of current year average indexed earnings.
Salary:	Each Member is assumed to earn the same as Bloomington Policemen.

Bloomington Fire Department Relief Association
Summary of Actuarial Assumptions and Methods (continued)

Separations Expressed as the Number of Occurrences per 10,000

<u>Age</u>	<u>Death</u>		<u>Withdrawal</u>	<u>Disability</u>	<u>Retirement</u>
	<u>Male</u>	<u>Female</u>			
20	5	4	300	24	0
21	5	4	290	24	0
22	5	4	280	24	0
23	5	4	270	24	0
24	6	4	260	24	0
25	6	5	250	24	0
26	6	5	240	24	0
27	7	5	230	24	0
28	7	5	220	24	0
29	7	5	210	24	0
30	8	5	200	24	0
31	8	6	190	24	0
32	9	6	180	24	0
33	9	6	170	24	0
34	10	7	160	26	0
35	11	7	150	30	0
36	12	7	140	34	0
37	13	8	130	40	0
38	14	8	120	46	0
39	15	9	110	52	0
40	16	9	100	58	0
41	17	10	90	64	0
42	19	11	80	74	0
43	22	12	70	84	0
44	25	13	60	96	0
45	28	14	50	110	0
46	32	15	40	128	0
47	36	16	30	142	0
48	41	17	20	158	0
49	46	19	10	174	0
50	-	-	-	-	10,000

**Bloomington Fire Department Relief Association
Summary of Plan Provisions**

GENERAL

<i>Eligibility:</i>	Members in good and regular standing of the Bloomington Fire Department Relief Association, and who have actively served as fire fighters in the Bloomington Fire Department for at least one month.
<i>Membership Dues:</i>	One hundred forty-four dollars per year, payable semi-annually on January 1 and July 1.
<i>Index Salary:</i>	The average of the monthly salary for the preceding three years, including the current year of a patrol officer of the highest grade in the employ of the city of Bloomington.
<i>Basic Benefit:</i>	One third of the index salary. All benefits under the plan increase each time a pay increase is granted to the Bloomington Police Department.

RETIREMENT*Normal Retirement Benefit:*

<i>Eligibility:</i>	Age 50 with 20 years of Service.
<i>Amount:</i>	Basic Benefit
<i>Form of Payment:</i>	75% Joint and Survivor if married, Life Annuity if single.

Disability Benefit:

<i>Eligibility:</i>	Inability to perform the duties of a firefighter.
<i>Duty Related Amount:</i>	Basic benefit is payable at time of disability. This benefit is payable during the period of disability. After attainment of age 50, no evidence of disability is required for the benefit to continue.
<i>Non-Duty Related Amount:</i>	The basic benefit is multiplied by 5% for each year of service up to the date of disability (maximum 20 years). This benefit is payable during the period of disability. After attainment of age 50, no evidence of disability is required for the benefit to continue.
<i>Form of Payment:</i>	Same as for retirement.

**Bloomington Fire Department Relief Association
Summary of Plan Provisions (continued)**

DEATH***Spouse's Benefit***

Duty-Related Amount: 75% of the basic benefit is payable for his or her remaining lifetime. Benefits cease on remarriage of the surviving spouse.

Non-Duty Related Amount: 75% of the basic benefit multiplied by 5% for each year of service up to the date of death to a maximum of 20 years. This benefit is payable for his or her remaining lifetime. Benefits cease on remarriage of the surviving spouse.

Childrens' Benefit:

Eligibility: An active Member who dies and leaves surviving children.

Amount: 12% of the basic benefit is payable to each surviving child until attainment of age 18 or marriage. The maximum benefit paid to all family members will not exceed 100% of the basic benefit.

Lump Sum Death Benefit: \$500 is payable on the death of any active or inactive member:

TERMINATION

Eligibility: 20 years of Service.

Amount: The basic benefit is payable at age 50.

**Bloomington Fire Department Association
Schedule of Funding Progress**

January 1, 1999

Actuarial Valuation Date	Actuarial Value of Assets (A)	Actuarial Accrued Liability (B)	Unfunded AAL (UAAL) (B)-(A)	Funded Ratio (A)/(B)	Actual Covered Payroll (Previous FY) (C)	UAAL as % of Covered Payroll ((B)-(A))/(C)
01/01/95	53,669,100	50,359,800	(3,309,300)	106.57%	6,563,700	(50.42%)
01/01/96	66,622,700	56,410,500	(10,212,200)	118.10%	6,945,936	(147.02%)
01/01/97	74,763,000	58,807,600	(15,955,400)	127.13%	6,620,388	(241.00%)
01/01/98	98,908,878	64,855,595	(34,053,283)	152.51%	7,523,040	(452.65%)

Bloomington Fire Department Association
Schedule of Employer Contributions

January 1, 1999

Year Ended December 31	Actuarially Required Contribution Rate (A)	Actual Covered Payroll (B)	Actual Member Contributions (C)	Annual Required Contributions [(A)*(B)]-(C)	Actual Employer Contributions*	Percentage Contributed
1995	22.82%	6,563,700	20,242	1,477,357	498,646	33.75%
1996	10.67%	6,945,936	20,573	720,327	1,599,062	221.99%
1997	1.80%	6,620,388	20,592	98,708	568,433	575.87%
1998	(12.69%)	7,523,040	20,592	(975,341)	-	0.00%

*Includes contributions from other sources (if applicable)

Bloomington Fire Department Association

Schedule of Projected Benefits

Active Participants

<u>Name</u>	<u>Sex</u>	<u>Date of Birth</u>	<u>Date of Hire</u>	<u>Normal Retirement Date</u>	<u>Projected Annual Benefit</u>
ADELMANN, S	M	12/01/56	07/01/91	12/01/11	26,331
ALDRICH, W	M	12/31/57	02/07/98	12/01/17	32,367
ALLEN, D	M	07/01/73	08/01/93	07/01/23	38,442
ANDERSON, S	M	10/01/51	01/01/86	10/01/12	27,252
ANGRIMSON, T	M	10/01/67	03/01/97	10/01/17	32,367
ANGUS, T	M	03/01/61	06/01/97	03/01/18	32,367
ANSELMIN, D	M	11/01/68	12/01/96	11/01/18	33,500
ARBUCKLE, T	M	02/01/60	01/01/84	02/01/10	24,580
ARMSTRONG, M	M	09/15/60	12/21/98	09/01/18	33,500
ASKE, B	M	12/01/56	10/01/83	12/01/06	22,170
BAETEN, J	M	11/01/62	11/01/93	11/01/14	29,193
BAKER, R	M	11/01/59	08/01/96	11/01/16	31,273
BARNES, J	M	01/01/53	09/01/79	01/01/03	19,320
BATTEN, D	M	08/01/64	05/01/91	08/01/14	29,193
BAYARD, J	M	02/01/60	07/01/91	02/01/13	27,252
BELL, J	M	08/01/57	05/01/89	08/01/09	24,580
BRANDT, M	M	07/01/67	07/01/88	07/01/17	31,273
BUJOLD	M	08/01/57	06/01/97	08/01/12	27,252
CARLSON B	M	06/01/70	08/01/88	06/01/20	34,673
CARLSON T	M	10/01/66	11/01/91	10/01/16	31,273
CARNEY, T	M	09/01/53	07/01/88	09/01/09	24,580
CHEREP, T	M	10/01/68	12/01/95	10/01/18	33,500
CHOUDEK, E	M	02/12/68	04/04/98	02/01/18	32,367
COLLINS, P	M	04/01/54	12/01/84	04/01/06	21,420
CONGDON, D	M	05/01/38	06/01/87	05/01/12	26,331
DALY, L	M	10/01/52	04/01/87	10/01/07	22,946
DELONG, D	M	07/01/54	03/01/85	07/01/06	21,420
DONNELLY, R	M	08/01/64	11/01/91	08/01/14	29,193
DOYLE, M	M	03/01/49	06/01/82	03/01/03	19,320
DUERKOP, J	M	01/01/53	04/01/83	01/01/04	19,996
DUGAL, G	M	01/01/48	08/01/79	01/01/01	18,035
DUNHAM, B	M	03/01/55	07/01/80	03/01/05	20,696
DUPEY, D	M	05/01/69	09/01/96	05/01/19	33,500
EBEL, A	M	02/01/61	08/01/96	02/01/18	32,367
ELLINGS, D	M	08/01/59	03/01/82	08/01/09	24,580
EPPS, L	F	02/01/78	02/01/97	02/01/28	45,657

Bloomington Fire Department Association

Schedule of Projected Benefits

Active Participants

<u>Name</u>	<u>Sex</u>	<u>Date of Birth</u>	<u>Date of Hire</u>	<u>Normal Retirement Date</u>	<u>Projected Annual Benefit</u>
ERICKSON, T	M	10/01/58	11/01/88	10/01/09	24,580
FERRY, P	M	05/01/48	02/01/83	05/01/04	19,996
FINNEGAN, J	M	10/01/45	05/01/79	10/01/99	17,425
FISHER, P	M	12/01/74	09/01/97	12/01/24	41,180
FORSTER, J	M	05/01/73	06/01/92	05/01/23	38,442
FRITCHMAN, S	M	06/01/59	04/01/87	06/01/09	23,749
FROSIG, K	M	02/01/65	10/01/91	02/01/15	29,193
GALLAGHER, M	M	02/01/67	11/01/93	02/01/17	31,273
GANG, M	M	02/01/64	03/01/95	02/01/16	30,215
GILLUM, D	M	08/01/54	10/01/88	08/01/09	24,580
GOODWIN, P	M	10/01/61	03/01/91	10/01/11	26,331
GROTH, L	M	08/01/70	09/01/91	08/01/20	35,886
GUTH, C	M	09/01/55	11/01/80	09/01/05	21,420
HAEG J	M	02/01/70	01/01/91	02/01/20	34,673
HAER R	M	06/01/53	12/01/90	06/01/15	29,193
HARGESHEIM,B	M	06/01/62	03/01/97	06/01/18	32,367
HEGER, P	M	10/01/53	12/01/74	10/01/03	19,996
HENRY, B	M	05/01/63	11/01/89	05/01/13	27,252
HENRY, J	F	10/01/64	11/01/96	10/01/17	32,367
HORNYAK, J	M	03/01/76	09/01/97	03/01/26	42,621
HOY, M	M	07/01/68	07/01/89	07/01/18	32,367
HUNDT, A	M	06/01/57	05/01/81	06/01/07	22,170
HURLEY, M	M	03/01/52	02/01/80	03/01/02	18,666
HUTTER, J	M	02/01/64	11/01/90	02/01/14	28,206
JEFFERS, W	M	11/01/47	07/01/80	11/01/01	18,666
JOHNSON, N W	M	01/01/59	08/01/91	01/01/13	27,252
JORSCHUMB,S	M	04/01/68	06/01/97	04/01/18	32,367
JUDY, J	M	10/01/46	04/01/81	10/01/01	18,666
KAISER, K	M	06/01/54	08/01/80	06/01/04	19,996
KEELER T	M	10/01/68	09/01/87	10/01/18	33,500
KOKE, B	M	04/01/59	09/01/93	04/01/15	29,193
KRISTJANSON, J	M	11/01/72	06/01/96	11/01/22	38,442
LANENBERG, J	M	04/01/66	07/01/84	04/01/16	30,215
LANGER, P	M	06/01/66	07/01/91	06/01/16	30,215
LARKIN, R	M	09/01/64	02/01/88	09/01/14	29,193
LARSON B	M	09/01/52	08/01/84	09/01/05	21,420