LUVERNE FIREMEN'S RELIEF ASSOCIATION

Actuarial Valuation and Benefit Study

as of January 1, 1986

August 8, 1986

Pursuant to MS 69.77

LUVERNE FIREMEN'S RELIEF ASSOCIATION
ACTUARIAL VALUATION AND BENEFIT STUDY
AS OF JANUARY 1, 1986

PURPOSE AND SUMMARY

The following report sets forth the results of our study for the Luverne Firemen's Relief Association. The study included the following:

- o Determination of annual contribution for the current plan. - $20,386
- o Determination of annual contribution for various benefit alternatives.

The results of our study are summarized in the tables of the report and discussed further herein.

EMPLOYEE DATA

Based on data provided by the Association, there are 36 active members included in the valuation. The members have an average attained age of 37.3 and an average entry age of 27.7. Table 2(a) sets forth the prospective benefit each member may expect to receive if he remains in the Association until the normal retirement date assumed in the valuation, age 53 and completion of 20 years of service.

There are eighteen inactive members receiving benefits from the plan. There are no terminated members entitled to deferred benefits. Table 2(b) is a summary of the benefits for these members.

ASSETS

Mr. Curtis Bloemendaal provided us with a copy of the financial statement prepared by the Association's accountant of the Special Fund as of January 1, 1986. Assets are valued at $139,927 on such date. We have used this value for valuation purposes.

ACTUARIAL ASSUMPTIONS AND METHOD

Table 3 is a summary of the principal plan provisions of the current plan. We wrote to you in 1983 concerning the vesting provisions. We have assumed for the

The amortization payment is added to the normal cost for the total annual contribution due as of the valuation date. Interest must be added to the contribution at the rate of 5% from the valuation date to the date of payment. Thus, if payment were made as of December 31, 1986, the January 1 contribution amount would be multiplied by 1.05.

SUMMARY OF VALUATION RESULTS

Table 1(a) sets forth a summary of the results of the valuation of the current plan. The plan provides a monthly benefit of $60 plus 1% of $60 per year of service in excess of 20 and less than 30 payable on retirement after attainment of age 50 and 20 years of service. A $750 lump sum death benefit, deferred vested benefits, and disability and medical benefits are also provided.

Our last actuarial valuation as of January 1, 1983 reported an annual contribution as of year end of $21,470 for a $60 benefit level to fund the plan in accordance with the state requirements. As shown in Table 1(a) as of January 1, 1986 the contribution requirement has decreased to $20,386. The decrease is principally due to investment performance in excess of our 5% assumption over the period.

The annual contribution of $20,386 is that amount of new money which must be contributed to the Special Fund each year to keep the plan funded in accordance with state law. The sources of new money are State Aid and the city tax levy. Interest earnings on the Special Fund cannot be used to meet the contribution requirements.

CHANGE IN THE UNFUNDED ACCRUED LIABILITY

Chapter 356 requires a reconciliation of the unfunded accrued liability from one valuation to the next valuation. Based on our last actuarial valuation as of January 1, 1983, the association had an unfunded liability of $126,279.

prevent Associations such as Luverne's from paying benefits at one rate for the first 20 years and at another rate for the next 10 years of service. This means that for compliance with state law the Association's by-laws should be amended to provide a $3 benefit accrual (or such larger amount as approved by the membership and city council) for years 21-30.

In Table I(c) columns I and 2, we have set forth the determination of the cost of the current plan and this required change. With the change, the annual contribution is $22,599 which is less than the 1985 state aid and city contribution of $25,427. In column 3 we have determined the cost of a $1 benefit increase on the new basis and in column 4 we set forth an example of how to use multiples of columns 2 and 3 to determine the total cost with a benefit increase.

You requested that we look at various lump sum alternatives. Under the first alternative, existing inactive members would be unchanged. As new members became eligible for retirement, they would have the option of a monthly benefit of $3 per year of service or a lump sum of $450 per year of service as settlement of all rights under the plan. The $450 is actuarially equivalent to the $3 on a life only basis at 5% interest. When you have the choice of equivalent benefits, you still follow the state laws for funding monthly benefits. Accordingly, the costs for this option are exactly as set forth in Tables I(a) - I(c) with a $1 increase in the monthly benefit level equivalent to a $150 lump sum increase. Under the current plan provisions (Tables I(a) and I(b)) the member would receive $90 for each year from 21-30. Under Table I(c) which gives equal credit for each year, a member would receive $450 for years 21-30.

The second alternative is to make a lump sum payment to each current retiree for the remaining value of their benefit and to give future members a choice of a monthly benefit or lump sum when they retire. The payments to the retirees would total $131,029, an amount equal to the retired member's accrued liability. This means

If in connection with this study any additional work is required we will be happy to proceed as directed.

Respectfully submitted,

THE WYATT COMPANY

Victoria A. Suchsland
Fellow, Society of Actuaries

VAS:sh
August 8, 1986

Table I(b)

LUVERNE FIREMEN'S RELIEF ASSOCIATION

Annual Contribution for $1 Monthly Benefit Increase 4/

		Current Plan $3 Benefit 1/	Additional $1 Benefit 2/	Examples 3/ $4.00 Benefit	Examples 3/ $5.00 Benefit
1.	Accrued Liability				
	a. Active Members	104,038	34,555	138,593	173,148
	b. Retired Members	131,029	43,676	174,705	218,381
	c. Total	235,067	78,231	313,298	391,529
2.	Valuation Assets	139,927	--	139,927	139,927
3.	Unfunded Accrued Liability (1 - 2)	95,140	78,231	173,371	251,602
4.	Amortization Payment for Unfunded Accrued Liability	8,730	5,979	14,709	20,688
5.	Annual Normal Cost	10,685	2,051	12,736	14,787
6.	Annual Contribution Payable as of January 1, 1986 (4 + 5)	19,415	8,030	27,445	35,475
7.	Annual Contribution Payable as of December 31, 1986 (6 x 1.05)	20,386	8,431	28,817	37,248

1/ Contribution requirements for current plan provisions.

2/ This is annual contribution required to fund additional monthly benefit of $1 per year of service. Costs are in addition to those of column 1.

3/ This is an example of determination of contribution for increased benefit. If additional benefit of $1.00 per year of service was to be provided for a total benefit of $4.00 per year of service, costs equal column 1 plus 1 times column 2.

4/ Assuming current benefit structure remains the same.

Table I(d)

LUVERNE FIREMEN'S RELIEF ASSOCIATION

Annual Contribution Assuming Buyout for Inactives and Lump Sum Benefits for Active Members 1/

1.	January 1, 1986 Assets	139,927
2.	Inactive Accrued Liability 2/	131,029
3.	Assets Available to Fund Active Benefits (1 - 2)	8,898
4.	Active Accrued Liability as of December 31, 1985	133,740
5.	Active Accrued Liability as of December 31, 1986	149,130
6.	Increase in Active Accrued Liability (5 - 4)	15,390
7.	Deficit from Full Funding (4 - 3)	124,842
8.	Contribution for Deficit (.1 x 7)	12,484
9.	Minimum Contribution (6 + 8)	27,874

1/ $450 lump sum per year of service for active members.

2/ Members would continue to receive monthly benefits or could receive a lump sum payoff.

Table 2(b)

LUVERNE FIREMEN'S RELIEF ASSOCIATION

Monthly Benefits for Inactive Members as of January 1, 1986

NAME	TYPE	MONTHLY BENEFITS
R BAILEY	RETIRED	48.00
H BEUG	RETIRED	60.00
P BEUG	RETIRED	60.00
J BOLSEN	RETIRED	63.00
V CHRISTENSEN	RETIRED	60.00
V CORNISH	RETIRED	66.00
HADEUSCHLE	RETIRED	60.00
N FRAKES	RETIRED	63.00
VJLORENZEN	RETIRED	62.00
K LUETHJE	RETIRED	65.00
C MAXWELL	RETIRED	63.00
LAMCCLURE	RETIRED	66.00
JBMCROBERTS	RETIRED	60.00
A MOLLBERG	RETIRED	60.00
E OLSON	RETIRED	62.00
M SCHAIKOWSK	RETIRED	66.00
K SWENSON	RETIRED	60.00
E WOODLEY	RETIRED	62.00

Table 4

LUVERNE FIREMEN'S RELIEF ASSOCIATION

Actuarial Assumptions and Method

1.	Mortality:	The 1971 Group Annuity Mortality Table, without margins, projected to 1976 by Scale E. This table used for all rates of mortality.
2.	Withdrawal:	The rate of withdrawal is .060 at age 20 decreasing uniformly to zero at age 45 with no withdrawal after that age.
3.	Disability:	The 1947-49 Weekly Indemnity Tabular Annual Claims Cost was used for valuing the service connected disability on a one year term cost basis. The table was loaded for the nature of the group.
4.	Medical:	The medical benefit was valued on a one year term basis using the experience of the group.
5.	Retirement Age:	Members are assumed to retire after attaining age 53 and completing 20 years of service.
6.	Interest Rate:	Five percent compounded annually.
7.	Actuarial Cost Method:	The entry age normal cost method has been used with the normal cost determined as a level amount each year from the date of joining the Association to the assumed retirement age.