

DULUTH FIREMEN'S RELIEF ASSOCIATION

ACTUARIAL CALCULATIONS PRELIMINARY
TO CONSOLIDATION

This report incorporates the Laws of Minnesota 1989 Chapter 319.

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STATE OF MINNESOTA
DEPARTMENT OF STATE
FILED

JUL 11 1989

John Andrew Brown
Secretary of State

June 30, 1989

Legislative Commission on
Pensions and Retirement
55 State Office Building
St. Paul, Minnesota 55155

RE: DULUTH FIREMEN'S RELIEF ASSOCIATION

Commission Members:

We have performed actuarial calculations preliminary to consolidation for the Relief Association as of January 1, 1989 based on membership and financial data supplied by the Relief Association.

This report incorporates the Laws of Minnesota 1989 Chapter 319 which provides for:

- o A level benefit for PERA Police and Fire of 2.5% for all years of service.
- o An increase in the pre-retirement interest rate from 8.0% to 8.5% for PERA Police and Fire, and an increase in both the pre-retirement interest rate and the post-retirement interest rate from 8.0% to 8.5% for the Relief Association. (The new amortization date of 2020 does not apply to a consolidated relief association)
- o A partial post retirement adjustment for individuals in the Minnesota Post Retirement Investment Fund who have received benefits for less than twelve full months.

We certify that to the best of our knowledge and belief this actuarial work was performed in accordance with the requirements of Sections 353A.05 and 356.215, Minnesota Statutes, and the requirements of the Standards for Actuarial Work, adopted by the Commission on August 22, 1988.

Respectfully submitted,

THE WYATT COMPANY

Robert E. Perkins

Robert E. Perkins, FSA
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Michael C. Gunvalson

Michael C. Gunvalson, FSA
Actuary

cc: The Honorable Arne Carlson, State Auditor
The Honorable Joan Anderson Growe, Secretary of State
Howard Bicker, State Board of Investment
James Hacking, Public Employees Retirement Association
James Noble, Legislative Auditor
Thomas J. Triplett, Commissioner of Finance
Martin Mehling, Duluth Firemen's Relief Association
Kjell Rodne, Administrative Assistant City of Duluth

REPORT PRELIMINARY TO CONSOLIDATION

The purpose of this report is to estimate the cost of consolidating the Relief Association with PERA Police and Fire (P&F) as specified in Minnesota Statutes, Chapter 353A prior to potential final municipal approval of the consolidation question.

The consolidation process provides the Relief Association members and their beneficiaries an opportunity to change their retirement benefit plan coverage by electing between Relief Association and P&F benefits. In order to evaluate the financial aspects of consolidation, the costs in Table 1 have been determined under three possible outcomes - all individuals elect Relief Association benefits (column 2), all individuals elect P&F benefits (column 3) and each individual elects the benefit plan which has the greater total benefit plan actuarial value (column 4).

Table 1 also compares the consolidation calculations to those found in the actuarial valuation of the Relief Association as of December 31, 1988, prepared by Gabriel, Roeder, Smith & Company. Since the Relief Association benefits are identical for columns 1 and 2, the differences in liabilities and costs are due primarily to the use of different actuarial assumptions as required by statute, and to a lesser extent, to the differences in data. Table 2 shows the data and lists the major assumptions.

Whenever a retired member or the retired member's surviving spouse elects P&F benefits, the reserve for that benefit must be transferred to the Minnesota Post Retirement Investment Fund (MPRIF). The amount to be transferred if all benefit

recipients who are eligible for MPRIF elect P&F benefits is \$21,033,479, which is more than the current market value of assets. This amount includes an estimated increase of 4.0% for those who meet the MPRIF eligibility rules for a January 1, 1990 benefit adjustment.

Current benefit recipients who are not eligible for MPRIF will be paid directly by PERA. Their benefits will be escalated by the same percentage that applies to MPRIF annuitants, however no funds are required to be transferred to MPRIF.

Although the costs shown in Table 1 represent an appropriate range of estimates available today, the costs are subject to change in future years following the consolidation. The true cost of any pension plan is not completely determined until the last benefit payment has been made to the last benefit recipient. Prior to that date, annual budgets are determined by making assumptions regarding future experience.

Each year in the future following consolidation, municipal costs will be redetermined based on the elections made by members and beneficiaries and will consist of the following components:

- . Regular contributions (line 7) - a variable cost which will depend on the compensation of members still active.

- . Additional contributions (line 6) - a fixed cost which is an annual amount of \$3,342,912, the amount required to amortize the initial unfunded consolidation actuarial liability shown in column 4 of Table 1 by the year 2010.

. Additional contributions (undeterminable at this time) - a variable cost which will depend on actual experience. Any actuarial gains (for example, investment results in excess of 8.5%) will reduce future contributions and actuarial losses (for example, salary increases in excess of 6.5%) will increase future contributions.

DULUTH FIREMEN'S RELIEF ASSOCIATION
ACTUARIAL CALCULATIONS

TABLE 1

	Prior Valuation	Election Of Benefits Under The Consolidation		
	Relief Association (1)	All Elect Relief Association (2)	All Elect PERA P&F (3)	All Elect Greater Value (4)
Date of Calculations	12/31/88	1/1/89	1/1/89	1/1/89
Actuarial Present Value of Projected Benefits	\$53,448,421	\$56,263,954	\$44,178,057	\$56,426,644
Actuarial Accrued Liability	44,354,073	47,785,477	38,128,220	47,940,332
Normal Cost	823,060	828,721	542,408	823,947
<u>Determination of Municipality Contributions (Before Adjustment For State Aid)</u>				
1. Actuarial Present Value of Projected Benefits	\$53,448,421	\$56,263,954	\$44,178,057	\$56,426,644
2. Present Value of Future Member Contributions	NA	2,933,632	3,245,334	2,946,481
3. Present Value of Future Regular Municipal Contributions	NA	4,400,449	4,868,000	4,419,721
4. Market Value of Assets	13,479,716	13,479,716 *	21,033,479 **	13,479,716 *
5. Unfunded Amount to be Amortized (1-2-3-4)	30,879,240 ***	35,450,157	15,031,244	35,580,726
6. Additional Municipal Contribution (5 amortized by 2010)	2,350,183	3,330,646 ****	1,412,229 ****	3,342,912 ****
7. Regular Municipal Contribution	545,819 *****	439,860	439,051	439,860
8. Total Municipal Contribution (6+7)	2,896,002	3,770,506	1,851,280	3,782,772

* Equal to market value reported by Duluth and assuming no changes by the State Board of Investments.

** Under the assumption that all elect PERA P&F, the City of Duluth must contribute \$7,553,763 to the existing assets in order to have sufficient cash for transfer to the Post Fund. This extra contribution reduces the unfunded amount to be amortized by the year 2010 (line 5) and produces a total municipal contribution (line 8) of \$1,851,280.

*** Based on the Actuarial Accrued Liability less the Current Assets of \$13,474,833.

**** An increase (decrease) in Market Value of \$100,000 will decrease (increase) the municipal contribution by \$9,395.

***** Equals the Employer Normal Cost.

DULUTH FIREMEN'S RELIEF ASSOCIATION
DATA AND ASSUMPTIONS

TABLE 2

	Prior Valuation	Consolidation Calculation	
	Relief Association (1)	All Elect Relief Association (2)	All Elect PERA P&F (3)
Number in Plan			
Active Members	107	105	105
Deferred Former Members	1	1	1
Retired Members and Beneficiaries	170	171	171
Member Contribution			
Percentage	8.0%	8.0%	8.0%
Compensation Base	\$3,465,516	\$3,665,497	\$3,658,759
Contribution	277,241	293,240	292,701
Municipal Contribution			
Percentage	NA	12.0%	12.0%
Compensation Base	NA	\$3,665,497	\$3,658,759
Contribution	NA	439,860	439,051
Interest - Before Retirement	5.0%	8.5%	8.5%
After Retirement	5.0%	8.5%	5.0%
Salary Increase	3.5%	6.5%	6.5%
Post Retirement Benefit Increase	3.5%	6.5%	NA
Retirement Age/Service	58/20	58/20	60/3
Other Assumptions	per Duluth Relief Association Report	per PERA P&F Report	per PERA P&F Report

Secretary of State

Jan Anderson Steen

JUL 11 1989

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