

LITTLE ROCK FIREFIGHTERS PENSION FUND

ACTUARIAL VALUATION

AS OF DECEMBER 31, 2005

Osborn, Carreiro & Associates, Inc.

ACTUARIES • CONSULTANTS • ANALYSTS

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September 21, 2006

Board of Trustees
Little Rock Firefighters Pension Fund

Gentlemen:

This report presents the results of our actuarial valuation of the assets and liabilities of the Little Rock Firefighters Pension Fund as of December 31, 2005.

This valuation is required by Arkansas Code Annotated 24-11-205. The purpose of this report is to (1) evaluate the actuarial status of the Fund, (2) determine the level contribution requirement needed, (3) review the development of the Fund over the past several years, and (4) present certain actuarial items on page 9 for disclosure under Governmental Accounting Standards. This report is not intended for any other purpose.

The member and financial information used in this report was supplied by the Arkansas Fire & Police Pension Review Board. We did not audit this information, although we did review it for reasonableness and consistency.

I certify that this report has been prepared in accordance with generally accepted actuarial principles and practices. In my opinion, the actuarial methods used are appropriate and the actuarial assumptions produce results which, in the aggregate, are reasonable.

Sincerely,



Steve Osborn, F.S.A., M.A.A.A.
Actuary

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EXHIBIT 1

CONTRIBUTIONS

The following contribution level reflects the payment of the current year Normal Cost for benefits attributable to said year (see Exhibit 2) plus an amount sufficient to pay off the Unfunded Actuarial Liability over a 5-year period. These costs DO NOT include the contributions due to the Local Police and Firefighters Retirement System ("LOPFI") for persons hired after 1982.

	<u>Full Paid</u>
2006 Necessary Annual Contribution to pay:	
1 Normal Cost, plus	\$ 76,692
2 Pay off the Unfunded Actuarial Accrued Liability	<u>7,865,791</u>
3 Total necessary	\$ 7,942,483
Less	
4 Expected Employee Contribution (6.00% of salary)	<u>- 16,736</u>
Necessary Employer Contribution (This is the amount needed in addition to investment income)	<u>\$ 7,925,747</u>
Covered Payroll	\$ 278,939
Necessary Employer Rate	<u>2841.39%</u>

These contributions assume that the dollar contribution grows at a rate of 4% per year. The contributions are assumed to be made continuously throughout the year.

The actual 2005 contribution was \$3,843,398 from the employer.

EXHIBIT 2

COSTS AND LIABILITIES

		December 31, 2005	
		Dollar	Percent
		<u>Amount</u>	<u>of pay</u>
A	<u>Normal Cost</u> (Cost to fund current active members)		
	1 Regular Retirement Benefits	\$ 69,460	24.90%
	2 Voluntary Termination Benefits	3,181	1.14%
	3 Survivors' Benefits	1,904	0.68%
	4 Disability Benefits	2,147	0.77%
	TOTAL	\$ 76,692	27.49%
B	<u>Actuarial Accrued Liability</u>		
	1 <u>Active Lives</u>		
	Regular Retirement Benefits	\$ 2,059,601	
	Voluntary Termination Benefits	0	
	Survivors' Benefits	0	
	Disability Benefits	0	
	TOTAL ACTIVE LIVES	\$ 2,059,601	
	2 <u>Deferred Retirement Option</u>		
	DROP Accounts	\$ 7,832,776	
	Future DROP Payments & Pensions	31,525,156	
	TOTAL DROP	\$ 39,357,932	
	3 <u>Inactive Lives</u>		
	Retirees	\$ 69,524,092	
	Disability Retirees	3,698,033	
	Widows & Children	7,362,331	
	TOTAL INACTIVE LIVES	\$ 80,584,456	
	4 <u>Total Liability</u>	\$ 122,001,989	
C	<u>Assets</u>	\$ 85,232,491	
D	<u>Unfunded Actuarial Accrued Liability</u>	\$ 36,769,498	

EXHIBIT 3

SUMMARY OF FINANCIAL INFORMATION

(Items D-E, and G determined by Osborn, Carreiro and Associates, Inc.)

A. <u>INCOME</u>	Year Ended 12/31/2003	Year Ended 12/31/2004	Year Ended 12/31/2005
1 <u>Employee Contributions</u>	\$ 307,293	\$ 269,838	\$ 257,978
2 <u>Employer Contributions</u>			
Employer/Court Fines/Other	307,293	269,838	257,978
Insurance Tax	1,797,407	985,392	1,045,869
Local Millage	2,305,813	2,359,385	2,539,551
3 <u>Other Income</u>			
Guarantee Fund	0	0	0
LOPFI Subsidy	0	0	0
Police Supplement (Act 1452 of 1999)	0	0	0
Future Supplement (Act 1373 of 2003)	79,061	96,720	144,900
Other Income/Donations	24,045	31,510	0
Adjustment to prior year asset value	0	19,401	600
4 <u>Net Investment Income</u>	1,483,961	6,256,218	5,506,649
TOTAL INCOME	\$ 6,304,873	\$ 10,288,302	\$ 9,753,525
B. <u>EXPENSES</u>			
1 <u>Administrative</u>	\$ 27,188	\$ 33,173	\$ 33,871
2 <u>Benefits Paid</u>			
Monthly Benefits	5,077,819	5,588,733	5,968,095
Police Supplements	0	0	0
Future Supplements	79,061	96,720	121,950
DROP Payouts	2,383,488	3,173,298	1,927,609
3 <u>Refunds</u>	0	0	0
TOTAL EXPENSES	\$ 7,567,556	\$ 8,891,924	\$ 8,051,525

EXHIBIT 3 (Continued)

C	<u>ASSETS (at book value)</u>	<u>12/31/2003</u>	<u>12/31/2004</u>	<u>12/31/2005</u>
	1 Cash & Checking Accounts	\$ 0	\$ 0	\$ 0
	2 Bank Deposits	605,164	1,183,646	106,759
	3 Savings and Loan Deposits	0	0	0
	4 Other Cash Equivalents	2,322,756	3,046,703	2,391,556
	5 US Govt. Securities	20,739,704	19,273,648	29,679,128
	6 Non-US Govt Securities	0	9,025,232	8,537,410
	7 Mortgages	0	0	0
	8 Corporate Bonds	10,260,444	0	0
	9 Common Stocks	38,781,946	41,634,070	36,055,754
	10 Other	524,801	436,672	(468,636)
	11 Payables	(31,222)	0	0
	TOTAL ASSETS	\$ 73,203,593	\$ 74,599,971	\$ 76,301,971
D.	<u>RATIO OF ASSETS TO ANNUAL EXPENSES:</u>	9.7	8.4	9.5
E.	<u>NET INVESTMENT RETURN:</u> (Book Value Basis)	2.0%	8.8%	7.6%

Exhibit 3 (Continued)

	<u>12/31/2001</u>	<u>12/31/2002</u>	<u>12/31/2003</u>	<u>12/31/2004</u>	<u>12/31/2005</u>
F. <u>TOTAL MARKET VALUE</u>					
1. Market Value, end of year (Used for GASB calculations, page 9)	81,627,419	75,649,382	84,772,761	84,479,630	84,064,932
2. Market Value, beginning of year	85,943,791	81,627,419	75,649,382	84,772,761	84,479,630
G. <u>DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS</u>					
1. Actuarial Value of Assets, beginning of year	84,614,805	88,976,275	89,631,415	88,975,165	86,544,147
2. Non Investment Net Cash Flow	(1,273,200)	(2,020,757)	(2,746,644)	(4,859,840)	(3,804,649)
3. Development of Investment Income					
(a) Total Market Investment Income (F1-F2-G2)	(3,043,172)	(3,957,280)	11,870,023	4,566,709	3,389,951
(b) Amount for Immediate Recognition (6% G1)	5,076,888	5,338,577	5,377,885	5,338,510	5,192,649
(c) Amount for Phased In Recognition (a-b)	(8,120,060)	(9,295,857)	6,492,138	(771,801)	(1,802,698)
(d) Phased In Recognition					
Current year : 20% of 3(c)	(1,624,012)	(1,859,171)	1,298,428	(154,360)	(360,540)
First Prior Year	(570,572)	(1,624,012)	(1,859,171)	1,298,428	(154,360)
Second Prior Year	(532,164)	(570,572)	(1,624,012)	(1,859,171)	1,298,428
Third Prior Year	1,923,240	(532,164)	(570,572)	(1,624,012)	(1,859,171)
Fourth Prior Year	1,361,290	1,923,240	(532,164)	(570,572)	(1,624,012)
Total Phased In Recognition	557,782	(2,662,679)	(3,287,492)	(2,909,688)	(2,699,655)
(e) Actuarial Value Investment Income (3(b) + 3(d))	5,634,670	2,675,897	2,090,393	2,428,822	2,492,993
4. Actuarial Value of Assets, End of year (1 + 2 + 3(e))	88,976,275	89,631,415	88,975,165	86,544,147	85,232,491
5. Net Investment Return on the Actuarial Value of Assets	6.7%	3.0%	2.4%	2.8%	2.9%

Note: The Pension Review Board's Board Rule #11 first applies this methodology to determine the Actuarial Value of Assets for the 12/31/99 actuarial valuation report. Different methods were used to determine the Actuarial Value of Assets for the 12/31/98 and earlier reports.

EXHIBIT 3 (Continued)

ACCOUNTING INFORMATION

This page is included to provide the information required by the Governmental Accounting Standards Board Statement No. 25 and 27. The values below are based on the assumptions contained in Exhibit 8.

The Annual Pension Cost disclosed in this exhibit will almost always differ from the actual cash contribution to the fund. We must emphasize that these disclosures are shown in the city's financial statements; Sound actuarial projections should be used to determine the actual cash contribution requirements.

RECONCILIATION OF NET PENSION OBLIGATION (NPO)

	2004	2005	2006
1. Actuarially Required Contribution	5,161,220	5,161,220	8,175,513
2. Interest on NPO	(50,015)	50,479	121,779
3. Adjustment to (1)	(178,323)	179,977	434,186
4. Annual Pension Cost (1)+(2)-(3)	5,289,527	5,031,722	7,863,106
5. Actual Contribution Made	3,614,615	3,843,398	
6. Increase in NPO (4)-(5)	1,674,912	1,188,324	
7. NPO Beginning of Year	(833,589)	841,324	2,029,648
8. NPO End of Year	841,324	2,029,648	

REQUIRED SUPPLEMENTARY INFORMATION

(a)	(b)	(c)	(d)	(e)	(f)	(g)
Actuarial Valuation Date	Market Value of Plan Assets	Entry Age Actuarial Accrued Liability	Unfunded Accrued Liability (UAL) (c)-(b)	Funded Ratio (b)/(c)	Annual Covered Payroll	UAL as a % of Covered Payroll (d)/(f)
12/31/1997	70,610,935	83,574,653	12,963,718	84.5%	4,973,319	260.7%
12/31/1999	85,047,916	92,470,542	7,422,626	92.0%	4,050,671	183.2%
12/31/2001	81,627,419	105,512,669	23,885,250	77.4%	3,162,756	755.2%
12/31/2003	84,772,761	106,719,410	21,946,649	79.4%	2,363,860	928.4%
12/31/2005	84,064,932	122,001,989	37,937,057	68.9%	278,939	13600.5%

* Note: For volunteer/part paid members, Annual Covered Payroll is \$200 for such active members

EXHIBIT 4

COMPARISON WITH PRIOR YEARS

This exhibit compares current valuation results with those of prior years.

Valuation Date	Full Paid Active Members		Actuarial Computed Employer Contribution		Assets	Total Plan		
	No.	Annual Payroll	Percent of Pay	Dollar Amount		Unfunded Actuarial Liability	Normal Cost Percent	Funded Percent
12/31/1984	273	5,925,411	29.7%	1,760,631	12,750,000	17,850,000	18.3%	41.7%
12/31/1986	250	6,272,311	29.9%	1,877,828	18,120,000	18,090,000	18.2%	50.0%
12/31/1987 *	245	6,413,650	32.7%	2,098,427	20,760,000	19,950,000	19.5%	51.0%
12/31/1989	227	6,984,680	29.5%	2,062,111	28,590,000	18,730,000	22.2%	60.4%
12/31/1991	210	6,992,608	28.5%	1,994,457	33,620,000	16,550,000	21.1%	67.0%
12/31/1993 *	191	6,813,155	51.1%	3,482,725	40,213,736	29,466,060	28.2%	57.7%
12/31/1995	149	5,756,728	63.7%	3,665,888	47,364,321	28,995,526	27.9%	62.0%
12/31/1997 *	117	4,973,319	71.3%	3,544,582	61,541,957	22,032,696	27.6%	73.6%
12/31/1999 *	88	4,050,671	72.9%	2,953,799	77,434,021	15,036,521	27.9%	83.7%
12/31/2001 *	63	3,162,756	115.0%	3,635,690	88,976,274	16,536,395	26.9%	84.3%
12/31/2003 *	44	2,363,860	180.3%	4,262,235	88,975,164	17,744,246	25.7%	83.4%
12/31/2005 *	5	278,939	2841.4%	7,925,747	85,232,491	36,769,498	27.5%	69.9%

*Benefits or assumptions changed

Note: Normal cost prior to 12/31/89 is net of 6% employee contributions.

EXHIBIT 5

SHORT CONDITION TEST

The Arkansas General Assembly has stated that the funding objective for these plans is to pay for benefits with contributions that remain level as a percentage of employee payroll. Thus, the long-term condition test is met when the actual contributions are fairly level and are paid when due.

A short condition test can be used to measure a plan's progress. Under the short condition test, the fund's assets are compared with:

- 1) Active member contributions;
- 2) The liabilities for future benefits to the present retirees and inactive members;
- 3) The liabilities for service already rendered by active members.

If the plan has been following level cost funding, liability (1) and liability (2) above will almost always be fully covered by the rest of the present assets. In addition, liability (3) above will at least partially funded.

The larger the funded portion of liability (3), the stronger the condition of the fund. For a closed fund i.e., one like yours, where no new members are admitted), the funded portion of liability (3) should be steadily increasing.

The following table illustrates the history of the short condition test for this plan:

Valuation Date	<u>Computed Actuarial Liabilities</u>			Valuation Assets	<u>Portion of Liabilities covered by Assets</u>		
	(1) Active Members Contributions	(2) Retirees, Inactives, and DROPS	(3) Actives-Employer Financed		(1)	(2)	(3)
12/31/1984	2,000,000	10,820,000	17,780,000	12,750,000	100%	99%	0%
12/31/1986	2,560,000	13,370,000	20,280,000	18,120,000	100%	100%	11%
12/31/1987	2,900,000	13,670,000	24,140,000	20,760,000	100%	100%	17%
12/31/1989	3,450,000	16,160,000	27,710,000	28,590,000	100%	100%	32%
12/31/1991	3,980,000	18,550,000	27,640,000	33,620,000	100%	100%	40%
12/31/1993	4,372,806	27,039,616	38,267,374	40,213,736	100%	100%	23%
12/31/1995	3,921,702	40,649,316	31,788,829	47,364,321	100%	100%	9%
12/31/1997	3,581,126	52,173,022	27,820,505	61,541,957	100%	100%	21%
12/31/1999	3,129,346	65,378,804	23,962,392	77,434,021	100%	100%	37%
12/31/2001	2,581,353	84,091,498	18,839,818	88,976,274	100%	100%	12%
12/31/2003	2,057,219	90,610,919	14,051,272	88,975,164	100%	96%	0%
12/31/2005	248,814	119,942,388	1,810,787	85,232,491	100%	71%	0%

Exhibit 6

Employee Profile

Employee data needed for the valuation was obtained from the records furnished by the Arkansas Fire and Police Pension Review Board. The following table shows a detailed breakdown of the present participants by the number of participants and total salary.

Actives

Age		<i>Years of Service</i>							Total
		0-5	5-10	10-15	15-20	20-25	25-30	30 and Over	
Under 25	Count	0	0	0	0	0	0	0	0
	Salary	0	0	0	0	0	0	0	0
25-29	Count	0	0	0	0	0	0	0	0
	Salary	0	0	0	0	0	0	0	0
30-34	Count	0	0	0	0	0	0	0	0
	Salary	0	0	0	0	0	0	0	0
35-39	Count	0	0	0	0	0	0	0	0
	Salary	0	0	0	0	0	0	0	0
40-44	Count	0	0	0	0	0	0	0	0
	Salary	0	0	0	0	0	0	0	0
45-49	Count	0	0	0	0	2	1	0	3
	Salary	0	0	0	0	113,355	49,675	0	163,030
50-54	Count	0	0	0	0	0	0	0	0
	Salary	0	0	0	0	0	0	0	0
55-59	Count	0	0	0	0	0	0	2	2
	Salary	0	0	0	0	0	0	115,909	115,909
60-64	Count	0	0	0	0	0	0	0	0
	Salary	0	0	0	0	0	0	0	0
65 & Over	Count	0	0	0	0	0	0	0	0
	Salary	0	0	0	0	0	0	0	0
Unknown Age	Count	0	0	0	0	0	0	0	0
	Salary	0	0	0	0	0	0	0	0
Total	Count	0	0	0	0	2	1	2	5
	Salary	0	0	0	0	113,355	49,675	115,909	278,939

Exhibit 6

Inactive Profile

Employee data needed for the valuation was obtained from the records furnished by the Arkansas Fire and Police Pension Review Board. The following table shows a detailed breakdown of the present payees by the number of payees and total annual benefit.

Retirees and Survivors

Years Since Retirement

<i>Age</i>		<i>Years Since Retirement</i>							<i>10 and Over</i>	<i>Total</i>
		0-1	1-2	2-3	3-4	4-5	5-10			
Under 40	Count	0	0	0	0	0	0	0	0	
	Benefit	0	0	0	0	0	0	0	0	
40-44	Count	0	0	0	0	0	0	0	0	
	Benefit	0	0	0	0	0	0	0	0	
45-49	Count	0	0	2	0	0	2	1	5	
	Benefit	0	0	59,332	0	0	55,996	5,064	120,392	
50-54	Count	0	1	0	6	2	7	2	18	
	Benefit	0	28,037	0	168,472	54,213	176,818	36,924	464,464	
55-59	Count	0	0	6	4	8	20	11	49	
	Benefit	0	0	183,421	119,475	245,474	519,400	226,312	1,294,082	
60-64	Count	0	0	4	6	6	14	20	50	
	Benefit	0	0	135,252	198,678	188,936	396,156	392,667	1,311,689	
65-69	Count	0	0	0	0	2	16	35	53	
	Benefit	0	0	0	0	70,325	478,902	629,740	1,178,967	
70-74	Count	0	0	1	0	0	7	18	26	
	Benefit	0	0	6,300	0	0	254,432	321,669	582,401	
75-79	Count	0	0	0	0	0	3	28	31	
	Benefit	0	0	0	0	0	152,956	558,741	711,697	
80-84	Count	0	0	0	0	0	1	22	23	
	Benefit	0	0	0	0	0	42,486	232,330	274,816	
85 & Over	Count	0	0	0	0	0	0	21	21	
	Benefit	0	0	0	0	0	0	270,533	270,533	
Unknown Age	Count	0	0	0	0	0	0	0	0	
	Benefit	0	0	0	0	0	0	0	0	
Total	Count	0	1	13	16	18	70	158	276	
	Benefit	0	28,037	384,305	486,625	558,948	2,077,146	2,673,980	6,209,041	

This includes 211 retirees with annual benefit of \$5,209,446 .
 This includes 21 disableds with annual benefit of \$306,029 .
 This includes 44 survivors with annual benefit of \$693,566 .

Exhibit 6

Deferred Retirement Option Plan Profile

Employee data needed for the valuation was obtained from the records furnished by the Arkansas Fire and Police Pension Review Board. The following table shows a detailed breakdown of the current participants on DROP by the number of participants and total annual DROP benefit.

DROP Participants

Years Since Electing DROP

<i>Age</i>		0-1	1-2	2-3	3-4	4-5	5-10	Total
Under 40	Count	0	0	0	0	0	0	0
	Benefit	0	0	0	0	0	0	0
40-44	Count	0	0	0	0	0	0	0
	Benefit	0	0	0	0	0	0	0
45-49	Count	3	0	1	2	0	0	6
	Benefit	89,430	0	29,767	50,310	0	0	169,507
50-54	Count	10	8	0	4	0	4	26
	Benefit	315,852	257,581	0	122,340	0	124,083	819,856
55-59	Count	6	5	3	6	2	2	24
	Benefit	201,020	167,995	93,108	200,258	60,785	63,310	786,476
60-64	Count	2	3	1	0	3	0	9
	Benefit	58,249	115,968	30,362	0	93,175	0	297,754
65-69	Count	0	0	0	0	0	0	0
	Benefit	0	0	0	0	0	0	0
70-74	Count	0	0	0	0	0	0	0
	Benefit	0	0	0	0	0	0	0
75 & Over	Count	0	0	0	0	0	0	0
	Benefit	0	0	0	0	0	0	0
Unknown Age	Count	0	0	0	0	0	0	0
	Benefit	0	0	0	0	0	0	0
Total	Count	21	16	5	12	5	6	65
	Benefit	664,551	541,544	153,237	372,908	153,960	187,393	2,073,593

EXHIBIT 7

PRINCIPLE PROVISIONS OF THE PLAN

<u>EMPLOYEE</u>	Member of Fire Department
<u>EMPLOYER</u>	Little Rock Fire Department
<u>MEMBERSHIP</u>	Condition of Employment. Firefighters hired after 1982 must join the statewide Local Police and Firefighters Retirement System
<u>CREDITABLE SERVICE</u>	Determined on basis of service since employment
<u>CONTRIBUTIONS</u>	
<u>Employee</u>	6.00% of salary. Refundable if member terminates before retirement eligibility.
<u>Employer</u>	<ol style="list-style-type: none">1. Matching contribution equal to employee contribution2. State Insurance Premium Tax turnback3. Local Millage
<u>FINAL SALARY</u>	Salary attached to the rank of the member at time of retirement, based on regularly scheduled work-week.
<u>DEFERRED RETIREMENT OPTION PLAN</u>	This plan has elected to participate in the Deferred Retirement Option Plan effective January 26, 1994. Members who elect to participate have a DROP account that is increased by the monthly amount of their retirement as if they had retired as of the date DROP was elected. Has not elected coverage under Act 1457 of 1999.
<u>RETIREMENT BENEFITS</u>	
<u>Eligibility</u>	20 Years of Service regardless of age.
<u>Benefit</u>	50% of Final Salary, plus \$3,000, but not less than \$6,000. If service exceeds 20 years, the annual benefit is increased by \$240 for each year over 20, up to \$1,200/year extra. If service is more than 25 years, member receives an extra 1.25% (for each year over 25) of Final Salary, payable once the retiree reaches age 60. The benefit cannot exceed 100% of Final Salary.

EXHIBIT 7 (Continued)

DEATH BENEFITS

Eligibility

Death before 20 Years of Service not occurring while performing work in gainful employment outside the fire department, or death after 20 years.

Benefit

1. Widow receives same amount as member is receiving or eligible for.
2. Each child under age 19 receives \$1,500/year. If no surviving spouse, child receives spouse's benefit to age 19.

DISABILITY BENEFITS

Eligibility

Permanent physical or mental disability not acquired while performing work in gainful employment outside the fire department.

Benefit

Full Paid Non-duty disability

Retirement benefit but not less than \$6,000/year.

Full Paid Duty related disability

Retirement benefit but not less than 65% of Final Salary and not less than \$6,000/year.

COST OF LIVING
ADJUSTMENT

Retirees receive a 3% COLA per year (not less than \$75 per month) through 2009.

EXHIBIT 8

ACTUARIAL METHODS AND ASSUMPTIONS

The assumptions for this valuation have been selected in accordance with Actuarial Standards of Practice No. 27. The asset valuation method is prescribed in Arkansas Code Annotated 24-11-207. This prescribed asset valuation method directly impacts the investment return assumption. The assumed salary growth is restricted by A.C.A. 24-11-205 in relation to the investment return assumption.

ACTUARIAL COST METHOD

The "entry age normal" cost method has been used.

PRE-RETIREMENT MORTALITY

Deaths have been projected on the basis of the 1971 Group Annuity Table for Males, set back five years for females. Mortality rates at a few sample ages are:

<u>Age</u>	<u>Mortality rate per 1,000</u>
25	0.619
35	1.122
45	2.922
55	8.519

POST RETIREMENT MORTALITY

The 1971 Group Annuity Mortality Table was used. For females, the male table was used with a five-year setback. The life expectancy according to this table is as follows:

<u>Age</u>	<u>Males</u>	<u>Females</u>
55	22.71	27.99
65	15.11	19.24

VOLUNTARY TERMINATIONS

Annual termination rates at a few sample ages are:

<u>Age</u>	<u>Termination rate per 1,000</u>
20	40
25	35
30	29
35	15
40	6
45	5
50	5
55	5

EXHIBIT 8 (continued)

When a person had less than 4 years of service, we assumed that his chances of voluntary termination were a multiple of thereafter rates, with the following multiples being used:

1st year	2.85
2nd year	2.00
3rd year	1.50
4th year	1.15

ASSUMED INVESTMENT RETURN

6.0%

DISABILITIES

We continued the disability rates used in prior reports. Disability rates at a few sample ages are:

<u>Age</u>	<u>Disability rate per 1,000</u>
20	0.8
25	0.8
30	0.8
35	0.8
40	2.0
45	2.6
50	4.9
55	8.9
60	14.1

One third of the disabilities were assumed to be service related.

For mortality after disability, we assumed rates based on the Eleventh Actuarial Valuation of the Railroad Retirement System, for occupational disabilities

ASSET VALUATION

See Exhibit 3, Part G

EXHIBIT 8 (continued)

SALARY GROWTH

We have used the salary scale used in prior reports. Annual assumed growth at a few sample ages is:

<u>Age</u>	<u>ANNUAL SALARY INCREASE</u>		
	<u>Base</u>	<u>Merit</u>	<u>Total</u>
20	4.0%	4.0%	8.0%
25	4.0%	3.2%	7.2%
30	4.0%	2.8%	6.8%
35	4.0%	2.5%	6.5%
40	4.0%	2.2%	6.2%
45	4.0%	1.7%	5.7%
50	4.0%	1.2%	5.2%
55	4.0%	0.7%	4.7%
60	4.0%	0.2%	4.2%

EXPECTED RETIREMENT AND DROP PATTERN

Since the plan allows full benefits at ages younger than the traditional "65", an assumption that will have an important impact is what percentage of people who are eligible for this early retirement will actually take advantage of it.

This will depend on intangible things such as the economy, health, financial ability to retire, Social Security eligibility, and work patterns. Based on recent experience, we are using the following assumed rates:

<u>Age</u>	<u>Retirement rate per 1,000</u>	
	<u>Retirement</u>	<u>DROP</u>
40-59	100	200
60+	1,000	0

Note: A member was assumed to be eligible for retirement or DROP after attaining age 40 with 20 years of service. It is also assumed that twice the normal number will retire or elect DROP in the first year of eligibility.

EXHIBIT 8 (continued)

RETIREMENT PATTERN AFTER
ELECTION OF DROP

Once a person is on DROP (Deferred Retirement Option Program), they were assumed to retiree from the department as follows:

<u>Years on DROP</u>	<u>Retirement rate per 1,000</u>
1	100
2	200
3	200
4	300
5 or more	1,000