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**Retirement System for Employees of  
The City of Cincinnati**

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*Actuarial Valuation Report  
as of December 31, 1999*

*Prepared by:*

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## Highlights

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This report has been prepared by William M. Mercer, Incorporated for the City of Cincinnati to:

- Present the results of a valuation of the Retirement System for Employees of the City of Cincinnati as of December 31, 1999;
- Review experience under the Plan for the year ended December 31, 1999;
- Provide to the plan sponsor the recommended level of contributions under the Plan for the year ending December 31, 2000; and
- Provide reporting and disclosure information for financial statements, governmental agencies and other interested parties.

## Comments

The normal cost decreased from (\$12,070,000) in 1999 to (\$14,280,000) for 2000. The decrease primarily resulted from strong asset performance which more than offset benefit improvements.

*Plan Benefits:* Plan benefits were improved during 1999. The increase in present value of future normal costs is approximately \$73,102,000.

*Return on invested plan assets:* The actual return on the actuarial value of assets in 1999 was about 14.34% compared to the assumed rate of return of 8.75%. The resulting gain (decrease in present value of future normal costs) is approximately \$112,198,000.

*Salary increases:* Overall, this year's salary increases for participants who were active last year and this year were a little less than expected. This generated a gain in the normal cost. The total present value of future normal costs decreased by about \$1,053,000 as a result.

*New entrants:* Each year's valuation is based solely on the current participants of the plan, with no provision made for new participants in the future. As a result, every year the normal cost differs from the prior year since there are, in fact, new participants every year. This year, the new participants generated a loss (increase in present value of future normal costs) of approximately \$6,218,000.

*Demographic considerations:* The number of active participants decreased by 2.0% from 4,306 to 4,221, and the inactive membership increased by 1.5%. The net changes in status generated a loss (increase in present value of future normal costs) of approximately \$21,014,000 for the year.

## Highlights

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*Post-retirement medical benefits:* Medical claims for the 1999 calendar year increased by 6.77% from 1998 - less than the 7.0% increase assumed. As a result, a gain (decrease in present value of future normal costs) of approximately \$1,594,000 was generated for the year.

*Amortization of Prior Service Cost:* The unfunded actuarial accrued liability has been entirely paid off as of December 31, 1998.

*Impact of Employer Contributions:* The employer made actual contributions of \$12,768,885. Because the funding method required no contribution for 1999, this contribution has the same impact as a gain equal to this amount.

*Assumption Changes:* The following assumption changes were made for the December 31, 1999 valuation:

- For those participants who elected the 2.22% formula, the additional increase in final average salary used to reflect lump sum payments was increased from 9% to 10%.

The assumption change resulted in an increase in present value of future normal costs of \$1,659,000.

## SUMMARY OF VALUATION RESULTS

The summary presented on the following page provides a comparison of the principal valuation results for each of the last five plan years. Its purpose is to provide the Board with a concise summary of past plan operations which - when combined with estimates regarding future economic, legislative and financial factors affecting the plan - can give insight into anticipated future contribution requirements under the plan.

**RETIREMENT SYSTEM OF THE CITY OF CINCINNATI**

**SUMMARY OF VALUATION RESULTS**

	<b>12/31/95</b>	<b>12/31/96</b>	<b>12/31/97</b>	<b>12/31/98</b>	<b>12/31/99</b>	<b>Percentage (Decrease) Increase 1998/99</b>
Participants						
Active	4,650	4,524	4,433	4,306	4,221	(2.0)%
Inactive	4,270	4,329	4,236	4,236	4,300	1.5%
<b>Total Payroll</b>	<b>\$ 165,324,272</b>	<b>\$ 167,264,132</b>	<b>\$ 170,055,676</b>	<b>\$ 170,393,096</b>	<b>\$ 172,268,484</b>	<b>1.1%</b>
Employer Normal Cost Contribution as a Percent of Payroll	5.63%	(2.30)%	(8.90)%	(7.10)%	(8.30)%	N/A
Actual Contribution						
Employer	\$ 32,532,039	\$ 31,761,983	\$ 33,072,461	\$ 24,815,296	\$ 12,768,885	(48.5)%
Members	12,591,364	12,604,757	12,869,394	12,881,766	13,163,743	2.2%
Assets						
Market Value	\$ 1,606,393,396	\$ 1,840,367,439	\$ 2,161,461,760	\$ 2,410,525,750	\$ 2,626,392,512	9.0%
Actuarial Value	1,372,277,168	1,555,539,191	1,799,236,139	2,036,031,301	2,251,554,942	10.6%
Return (MV)	28.9%	17.0%	19.6%	14.1%	12.1%	
Value of Accrued Benefits						
Vested	\$ 1,158,520,800	\$ 1,179,403,066	\$ 1,222,827,241	\$ 1,447,409,153	\$ 1,580,417,442	9.2%
Non-Vested	21,661,703	34,166,797	38,950,302	46,761,344	50,344,718	7.7%
Total	1,180,182,503	1,213,569,863	1,261,777,543	1,494,170,497	1,630,762,160	9.1%
Ratio of Market Value of Assets to Present Value of Accrued Benefits						
Vested	139%	156%	177%	167%	166%	(0.6)%
Total	136%	152%	171%	161%	161%	0.0%

## Summary of Principal Valuation Results

A summary of principal valuation results from the current valuation and the prior valuation follows. Changes in plan provisions and actuarial assumptions between the two valuations are described on the following page. No significant changes in actuarial cost methods or valuation procedures have been made since the prior valuation.

Summary of Costs	Actuarial Valuation as of	
	December 31, 1999	December 31, 1998
Normal Cost ( <i>Beginning of Year</i> )	\$ (14,275,491)	\$ (12,065,591)
Normal Cost ( <i>Payable throughout the year</i> ) As a percentage of expected payroll	\$ (14,935,019) (8.30)%	\$ (12,623,021) (7.10)%

Assets and Actuarial Present Values		
Market Value of Assets	\$ 2,626,392,512	\$ 2,410,525,750
Actuarial Value of Assets	\$ 2,251,554,942	\$ 2,036,031,301
Unfunded Actuarial Accrued Liability	\$ 0	\$ 0
Actuarial Present Value of Accumulated Plan Benefits	\$ 1,630,762,160	\$ 1,494,170,497
Vested Present Value of Accumulated Plan Benefits	\$ 1,580,417,442	\$ 1,447,409,153

Summary of Data		
<b>Number of Participants in Valuation</b>		
Active Participants - Full Time <sup>12/31/99</sup>	4,221	4,306
Active Participants - Part Time	1,457	1,449
Participants with Deferred Benefits	116	104
Participants Receiving Benefits	4,184	4,132
<b>Total</b>	<b>9,978</b>	<b>9,991</b>

5794

5857

Active Participant Statistics		
Total Compensation	\$ 172,268,484	\$ 170,393,096
Average Compensation *	\$ 40,812	\$ 39,571
Average Age	45.0	44.9

\* Full-time employees

## **Certification**

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We have prepared an actuarial valuation of the Retirement System for Employees of the City of Cincinnati as of December 31, 1999 for the plan year ending December 31, 2000. The results of the valuation are set forth in this report, which reflects the provisions of the Plan as amended through 1999.

The following changes to plan provisions and actuarial assumptions were made:

### Plan Provisions

- Participants are given a choice of benefit formulas, either 2.50% of base compensation or 2.22% of total compensation.

### Actuarial Assumptions

The following actuarial assumptions and procedures were changed for the December 31, 1999 valuation:

- For those participants who elected the 2.22% formula, the additional increase in final average salary used to reflect lump sum payments was increased from 9% to 10%.
- Actual employee elections (2.22% or 2.50% formula) were available and reflected for the first time.

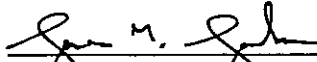
The valuation is based on employee and financial data which were provided by the System and which are summarized in this report.


All costs, liabilities and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures, in accordance with the provisions of current federal statutes and regulations issued thereunder, using an actuarial cost method which we believe is appropriate. In our opinion, the actuarial assumptions are reasonable and represent our best estimate of the anticipated experience under the Plan. This report fully and fairly discloses the actuarial position of the Plan on an ongoing basis.

## Certification

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We are available to answer any questions on the material contained in the report, or to provide explanations or further details as may be appropriate. We are both employed as consultants for William M. Mercer, Incorporated. We are both members of the American Academy of Actuaries and/or the Society of Actuaries and meet the Qualifications Standards of the American Academy of Actuaries to reach the actuarial opinions contained herein.

  
James M. Jackson, ASA  
Enrolled Actuary 99-2716

  
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Enrolled Actuary 99-3764

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## **Section 1.1**

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### **Unfunded Frozen Actuarial Accrued Liability**

The Unfunded Frozen Actuarial Accrued Liability is the portion, not yet funded, of the present value of projected plan benefits allocated to past service by the actuarial funding method being used. The Unfunded Frozen Actuarial Accrued Liability was completely amortized as of December 31, 1998.

## Section 1.2

### Determination of Contribution

	December 31, 1999	December 31, 1998
1. Present Value of Projected Benefits:		
(a.) Active Participants	\$ 1,115,102,265	\$ 1,006,623,380
(b.) Participants with Deferred Benefits	18,769,542	16,500,404
(c.) Participants Receiving Benefits	1,028,303,976	948,554,650
(d.) Total	2,162,175,783	1,971,678,434
2. Actuarial Value of Assets	2,251,554,942	2,036,031,301
3. Unfunded Frozen Actuarial Accrued Liability	0	0
4. Present Value of Future Employee Contributions	115,371,456	114,777,153
5. Present Value of Future Normal Costs <i>(1)(d.) - (2.) - (3.) - (4.)</i>	\$ (204,750,615)	\$ (179,130,020)
6. Present Value of Future Salaries	1,653,175,543	1,644,877,557
7. Normal Cost Rate <i>(5.) ÷ (6.)</i>	(12.3853)%	(10.8902)%
8. Expected Salaries of Active Participants*	179,854,268	177,825,853
9. Preliminary Normal Cost <i>(7.) x (8.)</i>	\$ (22,275,491)	\$ (19,365,591)
10. Expense Assumption	8,000,000	7,300,000
11. Final Normal Cost-Beginning of Year	\$ (14,275,491)	\$ (12,065,591)
12. Contribution Percentage – Beginning of Year <i>(11.) ÷ (8.)</i>	(7.9373)%	(6.7851)%
13. Final Normal Cost-During Year	\$ (14,935,019)	\$ (12,623,021)
14. Contribution Percentage <i>(13.) ÷ (8.)</i>	(8.3040)%	(7.0985)%

\* Expected salaries of employees not expected to retire in the following year.

**Section 1.2**

	December 31, 1999	December 31, 1998
15. Amortization of Current Unfunded Actuarial Accrued Liability	\$ 0	\$ 0
16. Amortization with Interest, Assuming Monthly Payments	\$ 0	\$ 0
17. Percentage of Total Expected Payroll <i>(16.) ÷ (8.)</i>	0.0000%	0.0000%
18. Total Contribution, Assuming Monthly Payments <i>(13.) + (16.)</i>	\$ (14,935,019)	\$ (12,623,021)
19. Percentage of Total Expected payroll <i>(18.) ÷ (8.)</i>	(8.3040)%	(7.0985)%

## Section 1.3

### Actuarial Gain (Loss)

The actuarial gain (loss) is the difference between the normal cost rate from the prior valuation and the normal cost rate in the current valuation.

1. Normal cost rate as of 1999 before expenses	(10.8902)%
2. Normal cost rate as of 2000 before expenses	(12.3853)%
3. Effect of Assumption Changes	0.1029%
4. Effect of Plan Change	4.5321%
5. Additional Employer Contributions	(0.7724)%
6. Actuarial gain (loss) <i>(1.) - (2.) + (3.) + (4.) + (5.)</i>	5.3577%

The actuarial gain (loss) can be broken down between its component parts as follows:

Component	Total Gain/(Loss)	Change in Normal Cost Rate
Asset Experience	\$112,198,000	6.7868%
Salary Experience	1,053,000	(0.0344)
New Entrants	(6,218,000)	(0.5249)
Participant Demographics	(21,014,000)	(0.9686)
Medical	1,594,000	* 0.0988
Total	\$87,613,000	5.3577%

There was also a loss of \$679,975 due to actual expenses being greater than the assumed expense of \$7,300,000.

**Section 1.4****Liabilities of the Plan**

	<b>December 31, 1999</b>	<b>December 31, 1998</b>
<b>Present Value of Benefits - Inactive Members</b>		
Retirees and Beneficiaries	\$743,711,203	\$682,619,947
Deferred Vested Participants and Survivors	8,894,334	7,934,264
Survivor Benefits	<u>8,485,155</u>	<u>8,377,174</u>
Total Non-medical Care Benefits	761,090,692	698,931,385
Medical Care Benefits	285,982,826	266,123,669
Total for Inactive Members	1,047,073,518	965,055,054
<b>Present Value of Benefits - Active Members</b>		
Retirement Benefits	700,273,293	609,001,538
Vesting Benefits	3,677,841	3,112,971
Survivor's Benefits	13,280,869	11,833,891
Disability Benefits	49,127,428	41,751,905
Return of Contributions	<u>20,776,875</u>	<u>21,127,454</u>
Total Non-medical Care Benefits	787,136,306	686,827,759
Medical Care Benefits	327,965,959	319,795,621
Total for Active Members	1,115,102,265	1,006,623,380
<b>Total for All Members</b>	<b>\$2,162,175,783</b>	<b>\$1,971,678,434</b>

## Section 2

### Accounting Information

#### A. Actuarial Present Value of Accumulated Plan Benefits

The actuarial present value of vested and nonvested accumulated plan benefits was computed on an ongoing plan basis in order to provide required accounting information. In this calculation, a determination is made of all benefits earned by current participants as of the valuation date, and the actuarial present value is then computed using demographic assumptions and an assumed interest rate. Assumptions with respect to future salary increases and accrual of future benefit service are not necessary for this purpose.

<b>Accumulated Benefits</b>	<b>December 31, 1999</b>	<b>Number of Vested Participants</b>
Vested Benefits		
Participants Currently Receiving Payments	\$ 1,028,303,976	4,184
Participants with Deferred Benefits	18,769,542	116
Active Participants	533,343,924	3,652
Nonvested Benefits	\$ 50,344,718	2,026 *
<b>Total Actuarial Present Value of Accumulated Plan Benefits</b>	<b>\$ 1,630,762,160</b>	
Market Value of Assets	\$ 2,626,392,512	

\* Includes 1,457 part-time employees, and medical benefits for participants with between 5 and 15 years of service.

## Section 2

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### B. Statement of Changes in Accumulated Plan Benefits

A statement of changes in the actuarial present value of accumulated plan benefits follows. This statement shows the effect of certain events on the actuarial present value shown on the previous page.

<b>Actuarial Present Value of Accumulated Plan Benefits as of December 31, 1998</b>	<b>\$ 1,494,170,497</b>
Increase (decrease) during the year attributable to:	
Plan amendment	\$ 36,023,106
Change in Actuarial Assumptions	1,002,528
Benefits Accumulated and Gains and Losses	62,293,626
Increase for interest due to the decrease in the discount period	126,510,409
Benefits Paid and Transfers to other Systems	(89,238,006)
Net increase (decrease)	\$ 136,591,663
<b>Actuarial Present Value of Accumulated Plan Benefits as of December 31, 1999</b>	<b>\$ 1,630,762,160</b>

The benefits valued include all benefits – retirement, preretirement death, and vested termination and medical benefits – payable from the Plan for employee service prior to the valuation date. Benefits are assumed to accrue (accumulate) in accordance with the plan provisions.

The actuarial present value of accumulated plan benefits shown in this report is calculated using the same actuarial assumptions used for funding purposes.

## Section 3.1

### Summary of Assets

	December 31, 1999
<b>Market Value</b>	
Cash, Cash Equivalents, Accounts Receivable and Accounts Payable	\$ (28,601,454)
Corporate Bonds	168,010,260
Commercial Paper	29,073,470
Venture Capital	14,130,000
U.S. Government Bonds	488,663,243
Asset Backed Securities	86,573,284
Common Stock	1,844,184,813
Loans to Members	22,860,176
Accrued Interest on Investments and Dividends Receivable	8,766,126
Equipment	12,569
<b>Total Assets</b>	<b>\$ 2,633,672,487</b>
Accrued Contributions	222,241
Less: Advanced Contribution	62,136
Less: Accrued Liabilities	7,440,080
<b>Assets for Valuation</b>	<b>\$ 2,626,392,512</b>



## Section 3.2

### Reconciliation of Assets

	<b>Market Value</b>
<b>Assets as of 12/31/98</b>	\$2,410,525,750
<b>Receipts</b>	
Investment income	70,580,694
Employer contributions	12,768,885
Employee contributions	13,163,743
Net appreciation	216,571,421
<b>Disbursements</b>	
Benefit payments	89,238,006
Transfers to other systems	0
Expenses	7,979,975
<b>Assets as of 12/31/99</b>	<b>\$2,626,392,512</b>

**Section 3.3**

**Development of Actuarial Value of Assets**

1. Actuarial Value of Assets 12/31/98	\$2,036,031,301
2. Contributions during 1999	25,932,628
3. Benefit Payments and transfers out during 1999	(89,238,006)
4. Expenses during 1999	(7,979,975)
5. Expected Return on Assets	174,610,675
6. Expected Actuarial Value of Assets 12/31/99	2,139,356,623
7. Market Value of Assets 12/31/98	2,626,392,512
8. Corridor Around Market Value (a.) 90% of Market Value (b.) 110% of Market Value	2,363,753,261 2,889,031,763
9. Distance from Corridor (8.a. - 6.)	224,396,638
10. 50% of Distance	112,198,319
11. Actuarial Value of Assets 12/31/98 (6. + 10.)	\$2,251,554,942

↑

12/31/99

50% 2,026,399,448

110% 2,476,710,436

Actual \* 2,550,000

255 = 73,289,564

x .50

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36,644,782 = 1.6%

## Section 4.1

### Plan Participants

#### A. Count of Active Full-Time Participants

Age	Years of Service								Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	
Under 25	60	1	1						62
25 - 29	99	41	9						149
30 - 34	108	111	113	2					334
35 - 39	87	182	263	55	11				598
40 - 44	83	115	248	142	166	31			785
45 - 49	61	91	171	95	213	288	17		936
50 - 54	39	75	111	46	126	279	89	11	776
55 - 59	25	26	65	20	55	145	45	9	390
60 - 64	6	14	21	8	25	37	21	10	142
65 - 69	1	2	3	3	6	11	6	3	35
70 - 74			2		1	4		2	9
75+		1				2	2		5
<b>Total</b>	<b>569</b>	<b>659</b>	<b>1,007</b>	<b>371</b>	<b>603</b>	<b>797</b>	<b>180</b>	<b>35</b>	<b>4,221</b>

Note: There are also 1,457 active Part-Time Participants.

## Section 4.1

### B. Average Compensation for Full-Time Participants

Age	Years of Service								Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35+	
Under 25	18,823	28,128	48,150						19,447
25 - 29	26,290	31,876	31,707						28,154
30 - 34	30,844	35,129	37,062	30,973					34,372
35 - 39	34,507	38,104	39,850	42,165	40,051				38,758
40 - 44	30,045	36,505	38,880	44,419	44,315	42,252			39,882
45 - 49	34,650	37,594	40,074	42,699	46,795	46,062	47,511		43,253
50 - 54	36,037	37,618	40,749	40,317	46,443	48,579	48,988	55,114	45,072
55 - 59	43,829	43,372	40,576	47,111	42,579	48,645	47,326	48,268	45,545
60 - 64	36,117	33,295	32,566	36,467	41,969	39,942	42,202	58,878	39,863
65 - 69	129,162	29,995	34,497	51,983	34,307	42,180	36,553	73,001	44,478
70-74			29,364		29,421	29,043		35,038	30,489
75+		27,503				34,679	45,493		37,569
<b>Total</b>	<b>30,791</b>	<b>36,860</b>	<b>39,229</b>	<b>43,098</b>	<b>45,178</b>	<b>46,813</b>	<b>47,188</b>	<b>54,815</b>	<b>40,812</b>

Compensation shown above is 1999 compensation.

## Section 4.1

### C. Inactive Participants

Age	Participants With Deferred Benefits		Participants Receiving Benefits	
	Count	Total Monthly Benefits	Count	Total Monthly Benefits
Under 40	7	\$ 5,900	28	\$ 12,277
40-44	10	11,575	24	15,513
45-49	25	22,962	60	70,443
50-54	33	33,268	230	386,472
55-59	33	31,822	286	548,980
60-64	2	1,761	580	998,651
65-69	3	675	675	1,089,650
70-74	1	123	698	1,000,946
75-79	2	450	715	906,529
80-84			465	479,991
85-89			300	278,052
90-94			102	88,373
95-104			21	19,921
<b>Total</b>	<b>116</b>	<b>\$ 108,536</b>	<b>4,184</b>	<b>\$ 5,895,798</b>

## Section 4.2

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### Actuarial Basis

#### A. Aggregate Cost Method

Liabilities and contributions shown in this report are computed using the Aggregate Cost method of funding.

The objective under this method is to fund all participant's benefits under the Plan as payments which are level as a percentage of salary, starting at the valuation date and continuing until the assumed retirement, termination, disability or death. The method does not distinguish between benefits credited for past and future service, or between liabilities created before and after the introduction of the funding method.

A detailed description of the calculation follows:

- The **present value of projected benefits** is the present value of all benefits expected to be paid from the Plan to its current participants, including active and retired members, beneficiaries and terminated members with vested rights.
- The **present value of future normal costs** is the excess of the present value of projected benefits over the value of the assets of the Plan. This excess is divided by the present value of future salaries to obtain a normal cost percentage, which is applied to the salaries of active participants to obtain each year's normal cost.

The prior method was the Entry Age Normal, Frozen Initial Liability Method. Since the Unfunded Liability was paid off as of December 31, 1998, the method was automatically changed to the Aggregate Cost Method.

## **Section 4.2**

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### **B. Asset Valuation Method**

Prior to 1995, the actuarial value of assets was equal to historical cost value. Effective December 31, 1995, the actuarial value of assets is based on the expected actuarial value of assets. The prior year's actuarial value of assets is adjusted for employer and employee contributions, expenses (starting in 1996), benefit payments, transfers to and from the plan and expected investment return during the year to determine the expected actuarial value of assets.

If the ratio of the expected actuarial value of assets to the market value of assets is less than 90% or greater than 110%, then the expected actuarial value of assets is adjusted by 50% of the difference between the 90%/110% corridor around market value and the expected actuarial value of assets.

### **C. Valuation Procedures**

The limitations of Internal Revenue code Section 415(b) have been incorporated into our calculations.

The plan was amended July 1, 1991 to include part-time employees who were previously excluded. These participants do not exhibit the same turnover pattern as full-time employees. Consequently, the liabilities and costs in this valuation are based upon full-time participants only, except to include the accumulated contributions for part-time employees. The city is contributing at a rate of 3.00% of pay based on the 1995 analysis of experience.

For participants who terminate prior to retirement with less than 15 years of service, the liability held is the value of employee contributions with interest. Seventy-five percent of participants who terminate prior to retirement with 15 years of service or more are assumed to elect a return of employee contributions with interest, while 25% are assumed to elect annuity benefits.

## Section 4.2

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### D. Actuarial Assumptions

- (1) The actuarial assumptions used to determine employer contributions to the plan are as follows:

Investment Return: 8-3/4% per year, prior to expenses, compounded annually.

Mortality:

Non-disabled lives: Uninsured Pensioner 1994 Mortality Table projected to 2009.

Disabled retirees: Pension Benefit Guarantee Corporation Disabled Mortality Table.

Turnover: 1995 City of Cincinnati Rate of Termination Experience Table. The turnover assumption during the first three years of service is as follows:

Years of Service	Rate
1	.15
2	.09
3	.06

Specimen rates after the first three years of service are as follows:

Attained Age	Rate
25	.054
30	.052
40	.037
50	.011
60	.000



## Section 4.2

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### D. Actuarial Assumptions (Continued)

Disability: The 1995 City of Cincinnati Disability Retirement Experience Table. Specimen rates are as follows:

Attained Age	Rate per 1,000 Lives
25	1.2
30	1.4
40	2.8
50	6.6
60	0.0

Salary: Salary increases are assumed to be 4.50%. For those participants who had not elected the 2.50% formula an additional 10% increase in average salary is used to reflect final lump sum payments. (This was 9% last year.) Additionally, for the first three years of service, the following rates are used in place of the 4.50% described above:

Years of Service	Salary Increase
1	9.50%
2	7.00%
3	5.50%

Salary for valuation purposes is total pay for year multiplied by:

- (1) 1.0027 if year has 26 pay periods
- (2) 0.9656 if year has 27 pay periods.

Retirement Age: Rates of retirement are assumed to be in accordance with the following table for participants who are age 60 with 5 years of service or are any age with 30 years of service:

Age	Rate
47-54	10%
55-59	15%
60-64	20%
65	50%
66-69	33%
70 and above	100%

## Section 4.2

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### D. Actuarial Assumptions (Continued)

- Expenses: Expenses will be paid by the system assets. Expenses are assumed to be the prior year's expenses rounded to the next \$100,000.
- Medical benefits: Adjusted premium costs are projected to increase 7% per year except for Medicare Part B. Adjusted premiums are based on experience for recent years adjusted to current year by assumed annual increase in premium costs. Medicare Part B premiums are assumed to increase in accordance with estimates from the 1999 Annual Report of the Board of Trustees (previously the Congressional Budget Office) until the year 2007 and then increase at 7% per year thereafter.
- Option Electives: 75% of male participants and 25% of female participants will have a spouse who is covered under the medical benefits portion of the plan. Of these participants with a covered spouse, 85% will elect a Joint & Survivor option.

- (2) For computing the value of vested and non-vested benefits, the following modifications were made to the above assumptions:

No future increases in salaries were assumed. Accumulated plan benefits were calculated using estimated Average Monthly Earnings in effect on the valuation date.

## Section 4.3

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### Summary of Plan Provisions

#### Average Compensation:

The average compensation used in the calculation of benefits depends on whether the participant elects the 2.50% formula which uses the average highest base compensation or the 2.22% formula which uses the average highest total compensation.

#### Average Highest Base Compensation:

The term "average highest base compensation" means the average annual compensation earned by a member during his most highly compensated period of three consecutive years of service. It excludes overtime pay, payment for compensatory time, earnings from any additional part-time employment in City service, and lump sum terminal leave pay.

#### Average Highest Total Compensation:

The term "average highest total compensation" means the average annual compensation earned by a member during his most highly compensated period of three consecutive years of service. It includes that portion of lump sum terminal leave pay which could be accumulated in the final three years of active service, except that the payment for unused sick leave shall not exceed an amount equal to the compensation at the hourly rate last earned by a member for 312 hours.

#### Service Retirement Allowance:

Condition for Allowance: Any member in service may retire upon:

- a. attaining age 60, regardless of length of creditable service if he was enrolled prior to January 1, 1969, or with at least 5 years of creditable service if he was enrolled January 1, 1969 or later, or
- b. completing 30 or more years of creditable service at any age, with a retirement allowance commencing immediately; or
- c. completing 5 years of creditable service before age 60 and then may retire with a retirement allowance commencing at age 60, provided, however, at the time of election of the deferred annuity there is no loan outstanding against his contributions.

Amount of Allowance: The annual retirement allowance consists of:

- a. An annuity provided by the number equal in value to his contributions with interest at the time of his retirement; and
- b. A pension which together with his annuity produces a total annual retirement allowance equal to 2.50% of his average highest base compensation or 2.22% of his average highest total compensation multiplied by the number of years of his membership service, whichever is applicable.

### **Section 4.3**

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- c. For members with credit for service rendered prior to the establishment of the System, an additional pension of 2.50% of his average highest base compensation or 2.22% of his average highest total compensation multiplied by the number of years of such prior service, whichever is applicable.
- d. Annual increases of 3% compounded annually commencing 1 year after retirement.

In no event shall the retirement allowance be less than \$4.00 per month multiplied by his years of credited service not in excess of 25 years.

In no event shall the retirement allowance be greater than that permitted by Section 415 of the Internal Revenue Code.

#### **Advanced Service Retirement Allowance:**

Condition for Allowance: Any member who has attained age 55 and has 25 but less than 30 years of membership service may retire on an advanced service retirement allowance.

Amount of Allowance: The annual retirement allowance consists of:

- a. An annuity provided by the number equal in value to his contributions with interest at the time of his retirement.
- b. A pension which shall be the actuarial equivalent at his age at the date of retirement, of the pension which would have been payable had he attained the age of sixty on said date.

#### **Disability Retirement Allowance:**

Condition for Allowance: Any member in service who (1) is disabled as the result of an accident which occurs in the performance of his duties as an employee regardless of age or length of service, or (2) having completed five years of service, is disabled by reason of either accidental or non-accidental cause, may be retired on a disability retirement allowance, provided he is found to be permanently incapacitated, either mentally or physically, for the further performance of duty.

Amount of Allowance: Upon disability retirement a member receives a service retirement allowance if he has attained age 60 or any age with 30 years of creditable service, otherwise he receives a disability retirement annual allowance which consists of:

- a. An annuity provided by the number equal in value to his contributions with interest at the time of his retirement.

### Section 4.3

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- b. A pension which together with his annuity produces a total annual retirement allowance equal to 90% of the sum of 2.50% of his average highest base compensation or 2.22% of his average highest total compensation, whichever is applicable, multiplied by the number of years of his creditable service, except that such allowance shall not be less than smaller of:
  - (1) 25% of his average highest compensation; or
  - (2) 90% of the service retirement allowance to which he would have become entitled had he continued in service to age 60 without further change in average highest compensation but in any event not less than \$43.20 for each year of his service not in excess of 25.
  
- c. Annual increases of 3% compounded annually commencing 1 year after retirement.

#### **Ordinary Death Benefit:**

Condition for Benefit: Upon the death of a member in service, a benefit is paid to the designated beneficiary, if living, otherwise to the surviving spouse, children or certain other dependents.

Amount of Benefit: In the event of death, all contributions made by the member with interest are returned to the estate or designated beneficiary. In addition, a lump sum payment is made from the contributions of the City equal to 50% of the compensation received by the member during the year immediately preceding his death provided the member had at least eighteen months of service.

## Section 4.3

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### Survivor Death Benefits:

Condition for Benefit: Upon the death of a member in service with survivors, including a member on leave of absence without pay for a period of not more than one year, with eighteen months or more of service, a monthly benefit is paid unless the member is in the building crafts. Building crafts participants are not entitled to Survivor Death Benefits.

<u>Amount of Monthly Benefit:</u>	<u>2000</u>	<u>1999</u>
Unmarried widow (or widower) and one child under 18	\$463.50	\$450.00
Unmarried widow (or widower) and two or more unmarried children under 18	\$628.30	\$610.00
Widow (or widower) at age 50 (if spouse had 15 or more years of service)	\$231.75	\$225.00
Widow (or widower) at age 62 (if spouse had less than 15 years of service)	\$231.75	\$225.00
One unmarried orphan under 18	\$231.75	\$225.00
Two unmarried orphans under 18	\$463.50	\$450.00
Three or more unmarried orphans under 18	\$628.30	\$610.00
One dependent parent	\$164.80 Min. \$231.75 Max.	\$160.00 Min. \$225.00 Max.
Two dependent parents	\$231.75 Min. \$463.50 Max.	\$225.00 Min. \$450.00 Max.

Beginning in 1999 the survivor benefits are indexed annually by cost of living, not to exceed 3% per year. The increase for 1999 was 3.0%.

## Section 4.3

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### **Retirement Death Benefit:**

Upon the death of a retired member, a lump sum benefit of \$7,500 is paid to the designated beneficiary, if living, otherwise to the surviving spouse, children or certain other dependents.

In addition, all contributions made by the member together with interest prior to retirement, in excess of retirement allowance payments received prior to death, are paid to such beneficiary, provided, however, the member has not elected an optional retirement allowance as hereinafter described.

### **Return of Contribution:**

Upon the withdrawal of a member prior to retirement, the entire amount of the contributions with interest at 2% per annum is returned to him.

### **Special Privileges:**

Upon retirement a member may elect to receive the actuarial equivalent of the retirement allowance in any one of the optional forms described below. Effective December 22, 1971 members over age 60 and members who have completed 20 years of service, including members on deferred retirement, may elect, prior to retirement, any one of the optional forms. In the event of death before retirement the person designated shall receive the same benefit as would have been received if the member had retired the day before death. However, in event of such death, the optionee will not be entitled to an optional allowance until the date the deceased member would have reached age 55 with 25 years of service or age 60 with 20 years of service.

**Option 1:** Reduced retirement allowance payment with the provisions that, at death, the amount of the allowance shall be continued throughout the life of the designated beneficiary at the time of this election of the option.

**Option 2:** Reduced retirement allowance payments with the provision that, at death, one-half of the amount of the allowance shall be continued throughout the life of the designated beneficiary at the time of the election of this option.

## Section 4.3

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**Option 3:** Reduced retirement allowance payments with the provision that, at the first death of the member or the designated beneficiary at the time of the election of this option, two-thirds of the amount of the allowance shall be continued throughout the life of the survivor.

**Option 4:** Reduced retirement allowance payments with the provisions that, at the first death of the member or designated beneficiary at the time of the election of this option, 80% of the amount of the allowance shall be continued throughout the life of the survivor.

In the event of the death of a member in service who was eligible to retire and who is survived by a spouse who was designated as sole primary beneficiary, such spouse may elect to receive the Option 1 allowance described above.

### **Hospital and Surgical Insurance:**

All retired members and those who are receiving survivor benefits are entitled to have their Anthem Blue Cross-Blue Shield premiums paid by the System. Upon the death of a retired member for whom an option 1, 2, 3, or 4 is in effect, the designated beneficiary shall continue to be covered for such hospital and surgical benefits.

Moreover, when benefits under this coverage would be reduced by reason of the retired member's eligibility for hospital and medical benefits under federal Social Security laws, the System will pay whatever additional fees are required for the federal Medicare coverage.

To be eligible for these benefits, the member must have earned 15 years credited service at the time of termination, or terminate after age 60 with 5 years credited service.

For members who are hired after January 8, 1997, the plan will provide medical benefits in accordance with the following schedule:

- 100% of full cost if age plus service at termination exceeds 90
- 75% of full cost if age plus service at termination exceeds 80 but is less than 90
- 50% of full cost if age plus service at termination exceeds 70 but is less than 80
- 25% of full cost if age plus service at termination exceeds 60 but is less than 70
- 0% of full cost if age plus service at termination is less than 60



## Section 4.3

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### Contributions:

By Member: Each member, commencing January 1, 1978, contributes at a rate of 7% of the salary used to compute retirement benefits until his retirement.

By Employers: The sponsoring employer makes annual contributions based on member's salaries so that, when members become eligible for benefits, reserves will have been accumulated adequate to provide the pension and other benefits payable by the plan on account of creditable service.

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