

REPORT ON
ACTUARIAL VALUATION OF THE
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
JUNE 30, 1979

TOWERS, PERRIN, FORSTER & CROSBY
ONE CENTURY PLAZA
LOS ANGELES, CALIFORNIA 90067
(213) 553-3470

February 13, 1980

Board of Administration
City Employees' Retirement System
Room 505, City Hall South
111 E. First Street
Los Angeles, California 90012

Gentlemen:

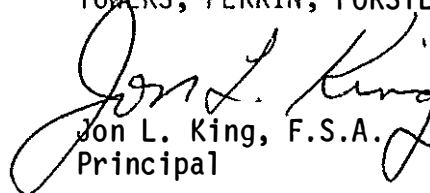
We are pleased to transmit herewith our Report setting forth the results of the valuation of your Retirement System as of June 30, 1979.

The valuation was based upon financial statements and employee data furnished by the Retirement Office.

We would like to take this opportunity to express our appreciation for the courtesy and cooperation accorded us by the Retirement Office during the course of our work.

Respectfully submitted,

TOWERS, PERRIN, FORSTER & CROSBY


Jon L. King, F.S.A.
Principal

JLK:kki

REPORT ON
ACTUARIAL VALUATION OF THE
LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
JUNE 30, 1979

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REPORT ON
ACTUARIAL VALUATION OF THE
CITY EMPLOYEES' RETIREMENT SYSTEM
OF THE
CITY OF LOS ANGELES

In accordance with our agreement we have completed the actuarial valuation of the City Employees' Retirement System as of June 30, 1979.

In order to complete this valuation, the office of the Retirement System furnished us with a magnetic tape which contains all of the pertinent information for each member of the System as of June 30, 1979, including such information as current compensation, years of service credited, rates of contribution, and accumulated contributions. In addition to the above information on active members, we were also furnished a tape for persons currently receiving an allowance from the Retirement System, together with such data as was necessary to determine the value of the allowance already entered upon. A summary of the active and retired membership of the System as of June 30, 1979 is shown in the following table.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

SUMMARY OF MEMBERSHIP OF SYSTEM
AS OF JUNE 30, 1979

ACTIVE MEMBERS

	<u>Number</u>	<u>Annual Salary</u>	<u>Age</u>	<u>Average</u> <u>Monthly Salary</u>
Total 6-30-79	20,917	\$355,947,876	42	1,418
Total 6-30-78	23,713	373,638,840	40	1,313
Percent Increase	- 11.8%	- 4.7%	--	8.0%

PENSIONERS

	<u>Number</u>	<u>Annual Allowance</u>	<u>Average</u> <u>Monthly Allowance</u>
Total 6-30-79	6,502	\$ 42,369,216	543
Total 6-30-78	5,995	36,636,171	509
Percent Increase	8.5%	15.6%	6.7%

The Retirement Office also furnished us with an accounting balance sheet setting forth the assets and liabilities of the System as of June 30, 1979. No physical audit of these assets was made by us and our calculations are based upon the balance sheet as submitted.

The Board of Administration considered the question as to the appropriate interest rate and salary scale to be used in the current valuation. We concur with the Board's decision to use a 6-1/2% interest assumption and a 4% rate of salary increase. The previous valuation was based on an assumption of 5-3/4% for interest and 3-1/2% for salary scale. The current valuation was also based on various probabilities of occurrence and post-retirement mortality rates as developed in the last investigation done as of June 30, 1977. These probabilities are given in Section V.

SECTION II
MEMBER CONTRIBUTIONS

At the direction of the Board of Administration and with our concurrence the actuarial interest and salary assumptions have been changed from 5-3/4% / 3-1/2% for the previous valuations to 6-1/2% / 4% for this valuation. This change impacted both employee and employer contributions. No other review or investigation of actuarial assumptions was made, so the only change to the employee contributions was caused by the change to the interest and salary assumptions on the basic employee contributions.

Comparison of Present and Proposed
Member Rates of Contribution Including 15% Factor for COL

<u>Age</u>	<u>Proposed Rate</u>			<u>Present Rate</u>			<u>Ratio of Total Rates</u>
	<u>Normal</u>	<u>Continuance</u>	<u>Total</u>	<u>Normal</u>	<u>Continuance</u>	<u>Total</u>	
20	7.25%	.37%	7.62%	8.20%	.44%	8.64%	88%
25	7.64	.56	8.20	8.58	.63	9.21	89
30	8.12	.67	8.79	9.06	.75	9.81	90
35	8.68	.75	9.43	9.61	.83	10.44	90
40	9.26	.83	10.09	10.19	.91	11.10	91
45	9.86	.88	10.74	10.76	.97	11.73	92
50	10.44	.96	11.40	11.34	1.03	12.37	92
55	10.97	1.01	11.98	11.85	1.09	12.94	93
59	11.35	1.06	12.41	12.19	1.14	13.33	93

The sole reason for the decrease is the change in the interest and salary assumptions.

The schedules on the following pages show the new rates which continue the 15% cost-of-living factor.

LOS ANGELES CITY EMPLOYEES' RETIREMENT PLAN
APPLICABLE TO MEMBERS COVERED UNDER "BETA" FORMULA
115% NORMAL CONTRIBUTION RATES

<u>Age</u>	<u>"Normal"</u> <u>Contribution Rates</u>	<u>Age</u>	<u>"Normal"</u> <u>Contribution Rates</u>
		40	9.26%
16	7.03%	41	9.36
17	7.06	42	9.49
18	7.13	43	9.60
19	7.18	44	9.72
20	7.25	45	9.86
21	7.31	46	9.98
22	7.38	47	10.10
23	7.48	48	10.21
24	7.56	49	10.33
25	7.64	50	10.44
26	7.72	51	10.55
27	7.82	52	10.65
28	7.92	53	10.76
29	8.03	54	10.88
30	8.12	55	10.97
31	8.23	56	11.06
32	8.35	57	11.17
33	8.46	58	11.27
34	8.57	59 and over	11.35
35	8.68		
36	8.80		
37	8.92		
38	9.03		
39	9.15		

71 GAM
6-1/2%
4% S/S

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
APPLICABLE TO MEMBERS COVERED UNDER "BETA" FORMULA
115% SURVIVOR CONTRIBUTION RATES

<u>Age</u>	<u>"Survivor"</u> <u>Contribution Rates</u>	<u>Age</u>	<u>"Survivor"</u> <u>Contribution Rates</u>
16	.18%	40	.83%
17	.24	41	.84
18	.29	42	.85
19	.34	43	.87
		44	.87
20	.37	45	.88
21	.43	46	.90
22	.47	47	.91
23	.49	48	.92
24	.52	49	.93
25	.56	50	.96
26	.57	51	.96
27	.60	52	.98
28	.62	53	.99
29	.64	54	1.00
30	.67	55	1.01
31	.69	56	1.03
32	.71	57	1.03
33	.73	58	1.05
34	.73	59 and over	1.06
35	.75		
36	.77		
37	.79		
38	.79		
39	.81		

71 GAM
6-1/2%
4% S/S

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM
APPLICABLE TO MEMBERS COVERED UNDER "BETA" FORMULA
115% NORMAL PLUS SURVIVOR CONTRIBUTION RATES

Applicable Only to Employees Whose Normal and Survivor
Contribution Rates Are Assigned by the Same Age

<u>Age</u>	<u>Total Contribution Rate</u>	<u>Age</u>	<u>Total Contribution Rate</u>
16	7.21%	40	10.09
17	7.30	41	10.20
18	7.42	42	10.34
19	7.52	43	10.47
		44	10.59
20	7.62	45	10.74
21	7.74	46	10.88
22	7.85	47	11.01
23	7.97	48	11.13
24	8.08	49	11.26
25	8.20	50	11.40
26	8.29	51	11.51
27	8.42	52	11.63
28	8.54	53	11.75
29	8.67	54	11.88
30	8.79	55	11.98
31	8.92	56	12.09
32	9.06	57	12.20
33	9.19	58	12.32
34	9.30	59 and over	12.41
35	9.43		
36	9.57		
37	9.71		
38	9.82		
39	9.96		

71 GAM
6-1/2%
4% S/S

SECTION III
RESULTS OF VALUATION

Introduction

The purpose of the actuarial valuation is to analyze the financial condition of the system and to recommend any necessary changes in City contributions. The calculations are based on the actuarial assumptions as discussed in Section I. The "Beta" Formula was applied to all active members.

Entry Age Normal Funding Method

This method defines the Normal Cost as the level percent of salary necessary to fund the projected future benefits over the period from the date of participation to the date of retirement. The Supplemental Present Value is equal to the excess of total liabilities over the present value of future member contributions and the present value of future Normal Costs. The excess of the Supplemental Present Value over the assets is called the Unfunded Supplemental Present Value and is funded over a fixed period of years. This method is being used by the City of Los Angeles for most benefits. The Supplemental Present Value is generally being amortized over the period ending June 30, 2004 by contributions that will increase in accordance with the salary scale, i.e., 4% per year. Certain small liabilities are being amortized over shorter periods by level dollar amounts.

Term Cost Basis

Under this method, the amount contributed in any one year is the present value of expected claims arising during the year. This method is being used to fund the Family Death Benefit.

Our valuation of the Retirement System as of June 30, 1979 was based upon the following accounting balance sheet furnished by the Retirement Office. As indicated earlier in this Report, this statement of assets of the System was accepted by us without audit.

CITY OF LOS ANGELES
CITY EMPLOYEES' RETIREMENT SYSTEM
ACCOUNTING BALANCE SHEET

June 30, 1979

ASSETS:

Cash						\$ 319,804
Receivables:						
Accrued interest and dividend income	\$	9,825,304				
Due from other funds		833,425				
Proceeds from sale of investments		<u>456,317</u>				11,115,046
 Investments:						
Temporary short term		143,100,000				
Bonds		469,363,941				
Common stocks		<u>91,826,075</u>				<u>704,290,016</u>
						\$ 715,724,866
 ACCOUNTS PAYABLE, ACCRUED EXPENSES AND DEFERRED INCOME						(3,373,038)
 NET ASSETS AVAILABLE FOR PLAN BENEFITS						<u><u>712,351,828</u></u>
 LIABILITIES:						
 MEMBERS' CONTRIBUTIONS						\$ 195,760,630
 RESERVE FOR RETIREMENT ALLOWANCE FOR RETIRED AT ACTUARIAL VALUATION						484,471,178
 CITY CONTRIBUTIONS (DEFICITS) AVAILABLE FOR FUTURE RETIREES						<u>32,120,020</u>
 TOTAL						<u><u>\$ 712,351,828</u></u>

An actuarial valuation of the Retirement System was made as of June 30, 1979 on the basis of the assumptions developed during the course of the June 30, 1977 investigation and upon a 6-1/2% interest assumption and a 4% salary increase assumption. The resulting values of assets and liabilities developed by the valuation are set forth in the following Actuarial Balance Sheet. It is to be noted that the valuation reflects 3% future cost-of-living increases and member cost-of-living contributions equal to 15% of their normal plus survivor contributions.

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET

AS OF JUNE 30, 1979

ASSETS

1.	Total Assets from Accounting Balance Sheet			\$ 712,351,828
2.	Present Value of Future Contributions of Members			297,849,136
3.	Present Value of Future Contributions by the City on Account of:			
	a. Basic Pensions:			
	i. Normal Cost		\$146,878,106	
	ii. Amortization of Certain Liabilities:			
	-Prior Service Pensions	\$ 7,625,576		
	-Increase due to 1965 Amendments	4,664,380		
	-Supplemental Present Value	<u>318,337,296</u>	330,627,252	
	b. Cost-of-Living Pensions:			
	i. Normal Cost		73,238,904	
	ii. Amortization of Certain Liabilities:			
	-Increase due to 1967 Amendments	18,742,415		
	-Supplemental Present Value	<u>217,004,395</u>	<u>235,746,810</u>	<u>786,491,072</u>
4.	Total Assets			<u>\$1,796,692,036</u>

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

ACTUARIAL BALANCE SHEET

AS OF JUNE 30, 1979

LIABILITIES

5. Present Value of Benefits Already Granted:		
a. Basic	\$ 358,891,650	
b. Cost-of-Living	<u>176,456,371</u>	535,348,021
6. Present Value of Benefits to be Granted:		
a. Basic	\$ 973,322,504	
b. Cost-of-Living	<u>286,492,282</u>	1,259,814,786
7. Reserve for Gain or Loss on Equities		(4,989,065)
8. Undistributed Earnings Reserve		524,394
9. Family Death Benefit Insurance Reserve		5,914,226
10. Fund Balance		<u>79,674</u>
11. Total Liabilities		<u><u>\$1,796,692,036</u></u>

Comments on Actuarial Balance Sheet

The Actuarial Balance Sheet has been prepared in a condensed format and we have utilized some terminology that we hope will aid in its review and discussion.

"Cost-of-Living Pensions" are the postretirement increases provided by Section 510.1 of Article XXXIV of the City Charter, and related Ordinances.

"Basic Pensions" are all benefits other than "Cost-of-Living Pensions" and Family Death Benefits provided by Article XXXIV of the City Charter, and related Ordinances.

"Amortization of Certain Past Service Liabilities" refers to those liabilities of the System being amortized over fixed periods of time pursuant either to Charter, Ordinance, or Board authorization.

Items 7, 8, 9 and 10 were provided by the Retirement Office.

Funding Ratios

The schedule below compares the assets on hand with the present value of benefits earned to date. We have shown these figures for the current and previous valuations to acquaint you with the funding progress.

A funding ratio of over 100% would mean that monies had already been paid for benefits yet to be earned and this may not be appropriate in a public retirement system.

The present value of benefits earned to date is calculated on the basis of an ongoing system, i.e., reflecting all actuarial assumptions including future salary increases. Death and Disability benefits are prorated by years of service to normal retirement age. This is sometimes referred to as the "Plan Continuation Liability."

	<u>June 30, 1979</u> (new assumptions)	<u>June 30, 1978</u> (old assumptions)
1. Present Value of Benefits Earned to Valuation Date		
(a) Basic Benefits	\$ 859,807,659	\$ 865,299,232
(b) Cost-of-Living Benefits	<u>325,422,426</u>	<u>318,858,753</u>
(c) Total	\$1,185,230,085	\$1,184,157,985
2. Applicable Assets on Hand		
(a) Basic Benefits	595,709,868	542,432,427
(b) Cost-of-Living Benefits	<u>115,112,731</u>	<u>90,056,029</u>
(c) Total	710,822,599	632,488,456
3. Funding Ratio		
(a) Basic Benefits	69%	63%
(b) Cost-of-Living Benefits	35%	28%
(c) Total	60%	53%

A large measure of the increase in the funding ratio is because of the change in assumptions.

Vested Liability

We estimate that the liability for vested benefits as of June 30, 1979 amounts to \$1,156,000,000. At the request of the Retirement Board's Auditor this calculation was also done on the basis of projected salaries as described under "funding ratios." Applicable assets on hand amount to \$710,822,599. Thus, as of June 30, 1979, there was an excess of vested liability over applicable assets on hand amounting to \$445,534,275. It is to be noted that applicable assets on hand amount to 61% of the vested liability. The corresponding figure for June 30, 1978 was 55%.

Again, the change in assumptions was the primary factor in increasing the ratio of assets to vested liabilities.

SECTION IV
RECOMMENDATIONS

Based on the actuarial valuation of the Retirement System as of June 30, 1979, we respectfully submit the following recommendations in accordance with the provisions of Article XXXIV of the City Charter and related ordinances.

Based on the entry age normal cost funding method, members will make cost-of-living contributions equal to 15% of their normal plus survivor contributions, and upon the assumption that all members will contribute on the basis of the full rates recommended in Section II, we recommend that the City contributions for the fiscal year 1980-81 be made up as follows:

		<u>Recommended City Contributions For 1980-1981</u>	
		<u>Percentage of Salary</u>	<u>Fixed Dollar Amount</u>
		plus	
a.	For Basic Pensions:		
i.	Normal Cost	4.36%	---
ii.	Prior Service-Minimum Pensions (Charter-Period ending June 30, 1997)	---	\$ 730,947
iii.	Increase due to 1965 Amendments (Charter-Period ending June 30, 1990)	---	606,627
iv.	Supplemental Present Value	<u>4.80%</u>	<u>---</u>
v.	Total Basic Pensions:	9.16%	\$1,337,574

	<u>Recommended City Contributions For 1980-1981</u>	
	<u>Percentage of Salary</u>	<u>plus Fixed Dollar Amount</u>
b. For Cost-of-Living Pensions:		
i. Normal Cost	2.18%	\$ ---
ii. Increase due to 1967 Amendment (Charter-Period ending June 30, 1997)	---	1,796,547
iii. Supplemental Present Value (Period ending June 30, 2004)	<u>3.27%</u>	<u>---</u>
iv. Total Cost-of-Living Pensions	5.45%	\$1,796,547
c. Total Basic and Cost-of-Living Pensions	14.61%	\$3,134,121
d. For Family Death Benefits: \$5.14 per month for each participating member in the Family Death Benefit Insurance Plan.		

The following table compares present City Percentage of Salary Contribution rates with those proposed.

	<u>City Percentage of Salary Contributions</u>		
	<u>Proposed</u>	<u>Present</u>	<u>Ratio</u>
Basic Benefits	9.16	9.92	92%
Cost-of-Living Benefits	5.45	5.77	94
Total	14.61	15.69	93

The primary reason for the decrease in City contribution rates is the same as the reason for the decrease in employee contribution rates. The increase in the interest rate assumption decreased contribution rates. The increase in the salary increase assumption increased contribution rates. However, since the increase in the interest rate assumption exceeded the increase in the salary increase assumption, and the interest rate is a more powerful assumption than salary increase, the net effect was to decrease contributions.

The new ordinance that became effective in October of 1975 permits the City to "subsidize" a portion of employee contributions. Since the portion that will be subsidized by the City will not be refunded to the member upon his termination of employment prior to retirement, the City does not have to pay into the System the total amount of employee contributions that it subsidizes.

Based upon the actuarial valuation carried out as of June 30, 1979 we recommend that the City contribute to the System 72.07% of the employee contribution it subsidizes - i.e., for each \$10,000 the City subsidizes, the City should contribute \$7,207 to the System.

We believe that if the recommendations contained herein are adopted, the System will be maintained on a sound basis in accordance with the actuarial assumptions and funding methods underlying the calculations.

SECTION V
STATISTICAL INFORMATION

- Mortality after Service Retirement

- Mortality after Disability Retirement

- Probability of Occurrence (of Decrements from Active Service)
 - Male
 - Female

- Distribution of Active Members by Age and Service

- Distribution of Pensioners by Age and Year of Retirement

- Summary of Major Plan Provisions

EXPECTATION OF LIFE

1971 Group Annuity
(x-0)(x-6)

<u>Age</u>	<u>Male</u>	<u>Female</u>
15	60.13 years	65.97 years
20	55.26	61.10
25	50.40	56.23
30	45.57	51.37
35	40.76	46.53
40	36.01	41.72
45	31.36	36.96
46	30.45	36.01
47	29.55	35.07
48	28.66	34.13
49	27.78	33.20
50	26.91	32.28
51	26.05	31.36
52	25.20	30.45
53	24.36	29.55
54	23.53	28.66
55	22.71	27.78
56	21.90	26.91
57	21.10	26.05
58	20.31	25.20
59	19.53	24.36
60	18.76	23.53
61	18.00	22.71
62	17.26	21.90
63	16.53	21.10
64	15.81	20.31
65	15.11	19.53
66	14.43	18.76
67	13.77	18.00
68	13.13	17.26
69	12.50	16.53
70	11.91	15.81

EXPECTATION OF LIFE

1971 Group Annuity
(x-0)(x-6)

<u>Age</u>	<u>Male</u>	<u>Female</u>
71	11.33 years	15.11 years
72	10.79	14.43
73	10.26	13.77
74	9.74	13.13
75	9.24	12.50
76	8.76	11.91
77	8.28	11.33
78	7.83	10.79
79	7.41	10.26
80	7.00	9.74
81	6.63	9.24
82	6.27	8.76
83	5.94	8.28
84	5.63	7.83
85	5.34	7.41
86	5.06	7.00
87	4.80	6.63
88	4.55	6.27
89	4.31	5.94
90	4.08	5.63
91	3.87	5.34
92	3.66	5.06
93	3.46	4.80
94	3.26	4.55
95	3.07	4.31
96	2.89	4.08
97	2.71	3.87
98	2.54	3.66
99	2.37	3.46
100	2.20	3.26
101	2.04	3.07
102	1.88	2.89
103	1.72	2.71
104	1.55	2.54
105	1.38	2.37
106	1.21	2.20
107	1.04	2.04
108	.88	1.88
109	.71	1.72
110	.50	1.55

EXPECTATION OF LIFE

1973 DISABILITY

<u>Age</u>		<u>Age</u>		<u>Age</u>	
20	33.87	50	18.50	80	6.35
21	33.37	51	18.06	81	6.02
22	32.86	52	17.61	82	5.70
23	32.34	53	17.18	83	5.39
24	31.82	54	16.75	84	5.11
25	31.29	55	16.32	85	4.84
26	30.76	56	15.90	86	4.59
27	30.22	57	15.48	87	4.35
28	29.67	58	15.07	88	4.12
29	29.13	59	14.66	89	3.90
30	28.58	60	14.25	90	3.70
31	28.03	61	13.84	91	3.50
32	27.48	62	13.44	92	3.31
33	26.94	63	13.03	93	3.12
34	26.40	64	12.62	94	2.95
35	25.87	65	12.22	95	2.77
36	25.34	66	11.81	96	2.61
37	24.82	67	11.40	97	2.44
38	24.30	68	10.99	98	2.28
39	23.78	69	10.58	99	2.13
40	23.27	70	10.17	100	1.98
41	22.77	71	9.77	101	1.83
42	22.28	72	9.36	102	1.68
43	21.78	73	8.95	103	1.53
44	21.30	74	8.55	104	1.38
45	20.82	75	8.15	105	1.22
46	20.34	76	7.77	106	1.05
47	19.88	77	7.40	107	.92
48	19.41	78	7.04	108	.75
49	18.96	79	6.69	109	.50

LOS ANGELES CITY EMPLOYEES
 MALE GENERAL MEMBERS
 PROBABILITY OF OCCURENCE(INCLUDING ELIGIBILITY)

11/05/75
 19.38.51

AGE NEAREST	ORDINARY WITHDRAW	VESTED WITHDRAW	ORDINARY DEATH	ORDINARY DISABLTY	SERVICE RETIRE	SERVICE DISABLTY	SERVICE DEATH	DWE SVC RET	DWE DIS RET
18	0.0	0.0	3.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.2380	0.0	0.0003	0.0	0.0	0.0	0.0	0.0	0.0
21	0.2180	0.0	0.0003	0.0	0.0	0.0	0.0	0.0	0.0
22	0.1980	0.0	0.0004	0.0	0.0	0.0	0.0	0.0	0.0
23	0.1780	0.0	0.0004	0.0	0.0	0.0	0.0	0.0	0.0
24	0.1600	0.0	0.0004	0.0	0.0	0.0	0.0	0.0	0.0
25	0.1450	0.0	0.0005	0.0001	0.0	0.0	0.0	0.0	0.0
26	0.1310	0.0	0.0005	0.0001	0.0	0.0	0.0	0.0	0.0
27	0.1190	0.0	0.0006	0.0001	0.0	0.0	0.0	0.0	0.0
28	0.1080	0.0	0.0006	0.0001	0.0	0.0	0.0	0.0	0.0
29	0.0980	0.0	0.0007	0.0002	0.0	0.0	0.0	0.0	0.0
30	0.0890	0.0	0.0007	0.0003	0.0	0.0	0.0	0.0	0.0
31	0.0800	0.0	0.0008	0.0003	0.0	0.0	0.0	0.0	0.0
32	0.0730	0.0	0.0009	0.0004	0.0	0.0	0.0	0.0	0.0
33	0.0660	0.0	0.0009	0.0005	0.0	0.0	0.0	0.0	0.0
34	0.0600	0.0	0.0010	0.0006	0.0	0.0	0.0	0.0	0.0
35	0.0540	0.0	0.0011	0.0007	0.0	0.0	0.0	0.0	0.0
36	0.0490	0.0	0.0012	0.0008	0.0	0.0	0.0	0.0	0.0
37	0.0450	0.0	0.0013	0.0009	0.0	0.0	0.0	0.0	0.0
38	0.0410	0.0	0.0015	0.0010	0.0	0.0	0.0	0.0	0.0
39	0.0380	0.0	0.0016	0.0011	0.0	0.0	0.0	0.0	0.0
40	0.0350	0.0	0.0018	0.0013	0.0	0.0	0.0	0.0	0.0
41	0.0320	0.0	0.0020	0.0014	0.0	0.0	0.0	0.0	0.0
42	0.0300	0.0	0.0021	0.0015	0.0	0.0	0.0	0.0	0.0
43	0.0280	0.0	0.0022	0.0017	0.0	0.0	0.0	0.0	0.0
44	0.0260	0.0	0.0024	0.0018	0.0	0.0	0.0	0.0	0.0
45	0.0240	0.0	0.0026	0.0020	0.0	0.0	0.0	0.0	0.0
46	0.0230	0.0	0.0029	0.0022	0.0	0.0	0.0	0.0	0.0
47	0.0220	0.0	0.0031	0.0024	0.0	0.0	0.0	0.0	0.0
48	0.0210	0.0	0.0033	0.0026	0.0	0.0	0.0	0.0	0.0
49	0.0200	0.0	0.0036	0.0028	0.0	0.0	0.0	0.0	0.0
50	0.0190	0.0	0.0041	0.0030	0.0	0.0	0.0	0.0	0.0
51	0.0180	0.0	0.0044	0.0032	0.0	0.0	0.0	0.0	0.0
52	0.0180	0.0	0.0048	0.0034	0.0	0.0	0.0	0.0	0.0
53	0.0170	0.0	0.0054	0.0036	0.0	0.0	0.0	0.0	0.0
54	0.0170	0.0	0.0059	0.0039	0.0	0.0	0.0	0.0	0.0
55	0.0160	0.0	0.0040	0.0042	0.0600	0.0	0.0	0.0026	0.0
56	0.0150	0.0	0.0044	0.0044	0.0250	0.0	0.0	0.0030	0.0
57	0.0150	0.0	0.0049	0.0047	0.0300	0.0	0.0	0.0032	0.0
58	0.0140	0.0	0.0053	0.0050	0.0550	0.0	0.0	0.0035	0.0
59	0.0130	0.0	0.0059	0.0052	0.0900	0.0	0.0	0.0040	0.0
60	0.0120	0.0	0.0066	0.0055	0.1150	0.0	0.0	0.0044	0.0
61	0.0110	0.0	0.0074	0.0058	0.1100	0.0	0.0	0.0049	0.0
62	0.0090	0.0	0.0082	0.0061	0.1250	0.0	0.0	0.0054	0.0
63	0.0070	0.0	0.0090	0.0064	0.1450	0.0	0.0	0.0060	0.0
64	0.0040	0.0	0.0100	0.0067	0.1700	0.0	0.0	0.0066	0.0
65	0.0	0.0	0.0110	0.0	0.2450	0.0	0.0	0.0074	0.0
66	0.0	0.0	0.0122	0.0	0.2150	0.0	0.0	0.0081	0.0
67	0.0	0.0	0.0135	0.0	0.2150	0.0	0.0	0.0090	0.0
68	0.0	0.0	0.0145	0.0	0.2150	0.0	0.0	0.0097	0.0
69	0.0	0.0	0.0150	0.0	0.4500	0.0	0.0	0.0107	0.0
70	0.0	0.0	0.0	0.0	1.0000	0.0	0.0	0.0	0.0

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LOS ANGELES CITY EMPLOYEES
 FEMALE GENERAL MEMBERS
 PROBABILITY OF OCCURENCE(INCLUDING ELIGIBILITY)

11/05/79
 19.38.51

AGE NEAREST	ORDINARY WITHDRAW	VESTED WITHDRAW	ORDINARY DEATH	ORDINARY DISABLTY	SERVICE RETIRE	SERVICE DISABLTY	SERVICE DEATH	DWE SVC RET	DWE DIS RET
18	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
19	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0	0.0
20	0.1720	0.0	0.0002	0.0	0.0	0.0	0.0	0.0	0.0
21	0.1660	0.0	0.0002	0.0	0.0	0.0	0.0	0.0	0.0
22	0.1600	0.0	0.0002	0.0	0.0	0.0	0.0	0.0	0.0
23	0.1540	0.0	0.0002	0.0	0.0	0.0	0.0	0.0	0.0
24	0.1480	0.0	0.0003	0.0	0.0	0.0	0.0	0.0	0.0
25	0.1420	0.0	0.0004	0.0	0.0	0.0	0.0	0.0	0.0
26	0.1360	0.0	0.0004	0.0	0.0	0.0	0.0	0.0	0.0
27	0.1300	0.0	0.0005	0.0	0.0	0.0	0.0	0.0	0.0
28	0.1240	0.0	0.0005	0.0	0.0	0.0	0.0	0.0	0.0
29	0.1180	0.0	0.0006	0.0	0.0	0.0	0.0	0.0	0.0
30	0.1120	0.0	0.0006	0.0001	0.0	0.0	0.0	0.0	0.0
31	0.1060	0.0	0.0007	0.0001	0.0	0.0	0.0	0.0	0.0
32	0.0990	0.0	0.0007	0.0001	0.0	0.0	0.0	0.0	0.0
33	0.0930	0.0	0.0008	0.0001	0.0	0.0	0.0	0.0	0.0
34	0.0860	0.0	0.0009	0.0001	0.0	0.0	0.0	0.0	0.0
35	0.0800	0.0	0.0009	0.0002	0.0	0.0	0.0	0.0	0.0
36	0.0760	0.0	0.0010	0.0002	0.0	0.0	0.0	0.0	0.0
37	0.0710	0.0	0.0010	0.0002	0.0	0.0	0.0	0.0	0.0
38	0.0670	0.0	0.0011	0.0003	0.0	0.0	0.0	0.0	0.0
39	0.0620	0.0	0.0012	0.0003	0.0	0.0	0.0	0.0	0.0
40	0.0580	0.0	0.0013	0.0004	0.0	0.0	0.0	0.0	0.0
41	0.0540	0.0	0.0014	0.0005	0.0	0.0	0.0	0.0	0.0
42	0.0510	0.0	0.0015	0.0006	0.0	0.0	0.0	0.0	0.0
43	0.0490	0.0	0.0015	0.0008	0.0	0.0	0.0	0.0	0.0
44	0.0460	0.0	0.0016	0.0010	0.0	0.0	0.0	0.0	0.0
45	0.0440	0.0	0.0017	0.0012	0.0	0.0	0.0	0.0	0.0
46	0.0420	0.0	0.0018	0.0014	0.0	0.0	0.0	0.0	0.0
47	0.0400	0.0	0.0019	0.0014	0.0	0.0	0.0	0.0	0.0
48	0.0380	0.0	0.0020	0.0016	0.0	0.0	0.0	0.0	0.0
49	0.0360	0.0	0.0021	0.0018	0.0	0.0	0.0	0.0	0.0
50	0.0340	0.0	0.0022	0.0020	0.0	0.0	0.0	0.0	0.0
51	0.0320	0.0	0.0024	0.0024	0.0	0.0	0.0	0.0	0.0
52	0.0310	0.0	0.0026	0.0028	0.0	0.0	0.0	0.0	0.0
53	0.0300	0.0	0.0028	0.0032	0.0	0.0	0.0	0.0	0.0
54	0.0280	0.0	0.0030	0.0036	0.0	0.0	0.0	0.0	0.0
55	0.0260	0.0	0.0033	0.0040	0.0950	0.0	0.0	0.0	0.0
56	0.0240	0.0	0.0036	0.0040	0.0450	0.0	0.0	0.0	0.0
57	0.0220	0.0	0.0039	0.0040	0.0700	0.0	0.0	0.0	0.0
58	0.0210	0.0	0.0043	0.0040	0.0700	0.0	0.0	0.0	0.0
59	0.0190	0.0	0.0047	0.0040	0.0800	0.0	0.0	0.0	0.0
60	0.0170	0.0	0.0052	0.0	0.1000	0.0	0.0	0.0	0.0
61	0.0130	0.0	0.0057	0.0	0.0350	0.0	0.0	0.0	0.0
62	0.0100	0.0	0.0065	0.0	0.0850	0.0	0.0	0.0	0.0
63	0.0060	0.0	0.0073	0.0	0.0850	0.0	0.0	0.0	0.0
64	0.0030	0.0	0.0081	0.0	0.1200	0.0	0.0	0.0	0.0
65	0.0	0.0	0.0091	0.0	0.5000	0.0	0.0	0.0	0.0
66	0.0	0.0	0.0105	0.0	0.1600	0.0	0.0	0.0	0.0
67	0.0	0.0	0.0121	0.0	0.1600	0.0	0.0	0.0	0.0
68	0.0	0.0	0.0139	0.0	0.1600	0.0	0.0	0.0	0.0
69	0.0	0.0	0.0159	0.0	0.3800	0.0	0.0	0.0	0.0
70	0.0	0.0	0.0	0.0	1.0000	0.0	0.0	0.0	0.0

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LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

AGE	** SERVICE **		AGE/SERVICE DISTRIBUTION										TOTAL MEMBERS		6/30/79	
	0-1	1-2	2-3	3-4	4-5	5-7	10-14	15-19	20-24	25-29	30-34	35-	TOTAL			
15-19	*NO.*	24	3	0	0	0	0	0	0	0	0	0	27			
	TOT.AMT	221626	24972	0	0	0	0	0	0	0	0	0	246598			
	AVE.AMT*	9234	8324	0	0	0	0	0	0	0	0	0	9133			
20-24	*NO.*	184	533	103	60	164	43	0	0	0	0	0	1087			
	TOT.AMT	1901379	5827227	1164905	728287	2052347	514503	0	0	0	0	0	12188648			
	AVE.AMT*	10334	10933	11310	12138	12514	11965	0	0	0	0	0	11213			
25-29	*NO.*	254	758	225	153	648	830	53	0	0	0	0	2521			
	TOT.AMT	3196069	9605525	2933753	2184147	9046655	11514211	713976	0	0	0	0	39194336			
	AVE.AMT*	12583	12672	13039	14275	13961	13873	13471	0	0	0	0	15418			
30-34	*NO.*	154	581	187	161	522	1273	471	14	0	0	0	3363			
	TOT.AMT	2088488	8037833	3215104	2827379	8304061	22226348	7735286	246795	0	0	0	54681294			
	AVE.AMT*	13562	13834	17193	17561	15908	17469	16423	17628	0	0	0	16260			
35-39	*NO.*	114	287	87	85	289	831	764	193	8	0	0	2658			
	TOT.AMT	1671120	4055736	1413594	1545877	4863498	15129771	14883769	3540321	138201	0	0	47245887			
	AVE.AMT*	14659	14131	16248	18234	16829	18207	19481	18344	17275	0	0	17775			
40-44	*NO.*	62	217	55	75	201	503	609	341	207	5	0	2270			
	TOT.AMT	923864	2947239	955441	1309698	3250921	9272167	11227262	6884133	3941707	106757	0	40621459			
	AVE.AMT*	14901	13902	17372	17463	16174	18936	18436	20188	19042	21351	0	17895			
45-49	*NO.*	41	134	56	50	137	411	461	395	472	92	1	2250			
	TOT.AMT	667878	1916140	958068	989630	2114433	7019973	8071246	7849276	9645219	1889663	24805	41186339			
	AVE.AMT*	16250	14300	17823	19793	15434	17080	17508	19872	20435	20540	24805	18305			
50-54	*NO.*	53	121	50	43	120	389	391	344	489	321	149	2468			
	TOT.AMT	821345	1683498	848003	886516	1836140	6761821	7217901	6690921	9871838	7105922	3542838	47326667			
	AVE.AMT*	15497	13913	16960	18469	15301	17794	18469	19450	20188	22137	23777	19176			
55-59	*NO.*	25	96	31	36	101	315	369	307	387	277	288	2236			
	TOT.AMT	408663	1414820	554454	682285	1555286	5659663	6431937	5667685	7430359	6004795	7072617	43171045			
	AVE.AMT*	16347	14738	17886	18952	15399	17967	17867	18462	19200	21678	24558	19307			
60-64	*NO.*	12	40	14	24	66	202	195	204	195	120	121	1213			
	TOT.AMT	197186	610151	254353	386338	1122984	3534077	3404722	3896133	3417447	2388855	2639034	22334000			
	AVE.AMT*	16432	15254	18168	16097	17015	17500	17371	19099	17525	19907	21810	18412			
65-	*NO.*	4	9	7	3	16	74	65	94	63	37	43	424			
	TOT.AMT	44505	168571	137219	51593	296715	1358664	1110981	1768992	1164002	656048	871414	7753873			
	AVE.AMT*	12376	12063	19603	17198	18745	18350	17092	18819	18476	17731	20265	18287			
TOTAL	*NO.*	927	2774	815	695	2264	4862	5379	1892	1821	852	602	20917			
	TOT.AMT	12147123	36231728	12474874	11595759	34443840	82792098	60797130	36544256	35608773	18152040	14150708	355947876			
	AVE.AMT*	13104	13061	15307	16685	15213	17028	18041	19315	19555	21305	23506	17017			

AVERAGE AGE * 41.6 * AVERAGE SERVICE * 9.7 *

LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

DISTRIBUTION OF PENSIONERS BY YEAR OF RETIREMENT AND BY ATTAINED AGE AS OF 6/79

TOTAL OF ALL MEMBERS

ATTAINED AGE *****	PRE '59 ***	** YEAR OF RETIREMENT **																			TOTAL *****	AVG AMT *****		
		'59 ***	'60 ***	'61 ***	'62 ***	'63 ***	'64 ***	'65 ***	'66 ***	'67 ***	'68 ***	'69 ***	'70 ***	'71 ***	'72 ***	'73 ***	'74 ***	'75 ***	'75 ***	'77 ***			'78 ***	
0- 29	5	0	0	0	0	0	0	0	1	0	1	0	0	0	0	0	0	0	0	0	0	7	2183	
30- 34	0	0	0	0	0	0	0	0	0	0	0	0	0	1	0	0	2	3	1	3	10	4424		
35- 39	0	0	0	0	0	0	0	0	0	1	0	0	0	1	3	1	5	3	7	6	36	4165		
40- 44	0	0	0	0	0	0	0	0	0	1	0	2	3	4	3	6	5	4	15	10	4	57	4671	
45- 49	0	0	0	0	0	0	0	1	0	3	0	0	2	7	7	5	4	11	11	7	4	62	4452	
50- 54	1	0	0	0	1	0	0	0	2	3	3	3	4	13	9	16	14	17	22	29	27	164	5435	
55- 59	4	1	1	2	1	3	3	1	7	4	4	7	7	18	13	12	31	55	93	142	168	555	7812	
60- 64	4	1	2	3	2	7	3	1	6	17	13	16	23	46	67	89	101	155	195	192	199	1144	8537	
65- 69	9	6	2	7	8	9	4	29	25	48	51	51	51	68	79	156	114	174	176	144	119	1330	7062	
70- 74	23	11	24	21	27	49	26	57	69	73	70	76	6	91	104	128	84	93	58	34	33	1218	6080	
75- 79	99	20	38	39	47	73	39	86	62	77	66	49	57	61	41	52	15	1	2	1	1	926	5534	
80- 84	149	45	40	38	40	55	40	82	43	41	43	11	2	1	1	1	0	0	0	0	0	532	4915	
85- 89	118	29	17	32	21	28	16	0	0	2	1	1	0	1	0	1	0	0	0	0	0	267	4400	
90- 94	62	2	0	0	0	2	0	2	0	0	0	0	0	0	1	0	0	0	0	0	0	69	3431	
95- 99	14	0	0	1	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	15	3536	
100-104	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
105-999	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	0	
TOT NUM	488	115	124	143	147	226	131	259	215	270	252	216	209	311	329	467	373	523	375	567	561	5502		
AVG AMT	3416	4377	4290	4413	4773	4589	4266	5620	4984	5254	5331	5062	5095	5709	5613	7497	7053	8137	8002	9750	9149			

* AVG AMT * 6515

* TOT.PEN. 42369216 *

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LOS ANGELES CITY EMPLOYEES' RETIREMENT SYSTEM

SUMMARY OF MAJOR PLAN PROVISIONS

1. Membership Requirements

First of month following employment.

2. Final Monthly Compensation

Highest 12-month average salary.

3. Service Retirement

A. Eligibility

10 years of service and age 55, or 30 years of service any age, or age 70.

B. Allowance

"Beta" Formula - 2.16% of Final Monthly Compensation for each year of service (reduced if retirement prior to age 60).

Prior Formula - 2% of Final Monthly Compensation for each year of service (reduced if retirement prior to age 58-3/4).

C. Form of Payment

Monthly allowance payable for life with 50% continuance to eligible spouse. Larger continuance available as option with reduced allowance.

4. Disability Retirement

A. Eligibility

Five or more years of continuous service and physically or mentally incapacitated so that unable to perform duties of position.

B. Allowance

1/70 of Final Monthly Compensation for each year of continuous service. If service is less than 23-1/3 years, then service is projected to retirement, with a maximum total service (actual plus projected) of 23-1/3 years.

C. Form of Payment

Monthly allowance payable for life, with 50% continuance to eligible surviving spouse if employee had that coverage at time of retirement.

5. Deferred Service Retirement

A. Eligibility

Terminate City service with 5 or more years of retirement credit, apply in writing within 3 years after termination, and agree to leave accumulated contributions on deposit.

Application required for retirement at any time after attaining age 55 provided at least 10 years have elapsed when employee first became a member, or at age 70 without any elapsed time requirement.

5. Deferred Service Retirement (continued)

B. Allowance

Same as Service Retirement.

C. Form of Payment

Same as Service Retirement.

6. Death prior to Retirement

A. Not Eligible to Retire

The sum of

- i. accumulated contributions,

- ii. a monthly pension to the surviving spouse, minor children, or dependent parents of the deceased member, payable for a period equal to 2 months times the number of completed years of service credit of 12 months at the rate of 1/2 of the average monthly salary for the year prior to death, and

- iii. if deceased member was a qualified member of the Family Death Benefit Insurance Plan, such benefits as are payable under that Plan.

B. Eligibility for Disability Retirement or Duty Related Death

The sum of the following:

- i. 60% of the allowance the member would have received had he been granted a disability retirement allowance the day before he died, payable for the lifetime of the member's surviving spouse, and
- ii. if the deceased member was a qualified member of the Family Death Benefit Insurance Plan, such benefits as are payable under the Plan.

C. Eligible for Retirement

Surviving spouse receives a lifetime survivorship allowance based upon an actuarially computed percentage of the retirement allowance the member would have been entitled to had he been granted an Option 1 service retirement the day before he died. Benefits under the Family Death Benefit Insurance Plan, if any, are not payable. The surviving spouse may elect A or B above in lieu of C.

7. Death After Retirement

- A. 50% continuance to surviving eligible spouse, if covered under the plan.
- B. Upon the death of both the member and surviving spouse, designated beneficiary receives any unused contributions which may remain (provided the normal cash refund annuity was selected) and any accrued but unpaid retirement allowance due at time of death.
- C. \$500 death benefit paid to designated beneficiary of deceased member for assumption of obligation to pay expense of burial.

8. Postretirement Cost-of-Living Benefits

As of each July 1 benefits being paid increased (proportionately if paid less than 12 months) by increase in Consumer Price Index (to a maximum of 3%). Increases in CPI above 3% are "banked" to apply in years when CPI increase is less than 3%.

9. Employee Contributions

Each member contributes through payroll deduction at a rate of contribution established by the Board of Administration. For those covered by the "BETA" formula, rates are approximately 8% higher than the rates for members not covered under the "BETA" formula. (At the present time, the City is paying 1/2 of contributions of "BETA" formula members.) Included in these rates is an additional amount to provide a 50% continuance of member's retirement allowance to his surviving spouse; if member is not married, additional contributions are refunded or applied to increase retirement allowance. Members are now paying 15% of the foregoing contributions for cost-of-living benefits.

10. Family Death Benefit Insurance Plan

A. Eligibility

Employee may elect coverage after 18 months of City retirement service credit.

B. Benefits

Benefits similar to those provided by Survivors Insurance under Social Security payable if member dies in active service after 18 months of Plan membership.

C. Cost

Member and City share cost of Plan (currently \$5.14 per month contribution for each).