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Report on the Actuarial Valuation of the General Retirement System for Employees of Jefferson County

Prepared as of October 1, 2016

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January 19, 2017

Pension Board
The General Retirement System
for Employees of Jefferson County
716 Richard Arrington Jr., Boulevard, N., Suite 430
Birmingham, AL 35203

Ladies and Gentlemen:

Section 2.4(c) of Act No. 2013-415 governing the operation of the General Retirement System for Employees of Jefferson County provides that the actuary shall make valuations of the assets and liabilities of the Retirement System. We submit herewith the report giving the results of the valuation of the System prepared as of October 1, 2016. The report indicates that County contributions at the rate of 6.00% of compensation are sufficient to support the benefits of the System as in effect as of the valuation. In preparing the valuation, the actuary relied on data provided by the System. While not verifying data at the source, the actuary performed tests for consistency and reasonableness.

The System is funded on an actuarial reserve basis. The actuarial assumptions recommended by the actuary and adopted by the Board are both individually and in the aggregate reasonably related to the experience under the System and to reasonable expectations of anticipated experience under the System. The funding objective of the plan is that contribution rates over time will remain level as a percent of payroll. The valuation method used in the most recent valuation is the entry age normal cost method. The normal contribution rate to cover current cost has been determined as a level percent of payroll. Gains and losses are reflected in the unfunded accrued liability which is being amortized by regular contributions as a level percent of payroll.

The Plan is required to comply with the financial reporting requirements under GASB statement No. 67. In addition, the employer is required to comply with the financial reporting requirements under GASB statement No. 68. The necessary disclosure information has been provided in separate supplemental reports.

In our opinion the System is operating on an actuarially sound basis and the sufficiency of the retirement funds to provide the benefit called for by the System may be safely anticipated. The normal cost rate of the System continues to be in excess of the current total rate of contributions which will require a sufficient surplus (assets greater than liabilities) in order to ensure ongoing actuarial soundness.

This is to certify that the independent consulting actuary is a member of the American Academy of Actuaries and has experience in performing valuations for public retirement systems, that the valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board, and that the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonably based on the actual experience of the System.

Future actuarial results may differ significantly from the current results presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Since the potential impact of such factors is outside the scope of a normal annual actuarial valuation, an analysis of the range of results is not presented herein.

Sincerely yours,

John Garrett

John J. Garrett, ASA, FCA, MAAA
Principal and Consulting Actuary

Cathy Turcot

Cathy Turcot
Principal and Managing Director

JJG/CGT:dw

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REPORT ON THE ACTUARIAL VALUATION OF
THE GENERAL RETIREMENT SYSTEM
FOR EMPLOYEES OF JEFFERSON COUNTY
PREPARED AS OF OCTOBER 1, 2016

SECTION I – SUMMARY OF PRINCIPAL RESULTS

1. For convenience of reference, the principal results of the valuation and a comparison with the results of the previous valuation are summarized below:

VALUATION DATE	10/01/2016	10/01/2015
Number of active members	2,263	2,116
Annual compensation	$ 124,769,019	$ 113,089,076
Number of retired members and beneficiaries	2,293	2,249
Annual benefits	$ 59,660,444	$ 57,502,728
Number of former members entitled to deferred vested benefits	101*	110**
Annual deferred vested benefits	$ 1,986,242	$ 2,110,462
Assets:		
Actuarial value	$ 1,084,886,713	$ 1,038,953,354
Market value	1,083,037,350	1,031,304,271
Unfunded accrued liability	$ (77,711,745)	$ (68,277,729)
Amortization period	48 years	41 years
Funded Percent	107.7%	107.0%
CONTRIBUTION RATES		
Annual required contribution (ARC) of County:		
Normal	8.74%	8.84%
Unfunded accrued liability	(2.74)	(2.84)
Total	6.00%	6.00%
Total contribution rates:		
Normal	14.74%	14.84%
Unfunded accrued liability	(2.74)	(2.84)
Total	12.00%	12.00%

* In addition, there are 165 former members who had terminated as of the valuation date and who had not received a refund of their contributions (totaling $2,279,766).

** In addition, there are 151 former members who had terminated as of the valuation date and who had not received a refund of their contributions (totaling $2,082,614).

2. Comments on the valuation results as of October 1, 2016 are given in Section V and further discussion of the contribution levels is set out in Section VI.

3. Schedule C shows the development of the actuarial value of assets. Schedule E of this report outlines the full set of actuarial assumptions and methods employed. There have been no changes since the previous valuation.

4. Schedule F of this report outlines the main System provisions employed. There have been no changes since the previous valuation.

SECTION II – MEMBERSHIP

1. The following table shows the number of active members and their annual compensation as of October 1, 2016 on the basis of which the valuation was prepared.

THE NUMBER AND ANNUAL COMPENSATION OF ACTIVE MEMBERS AS OF OCTOBER 1, 2016

NUMBER	ANNUAL COMPENSATION
2,263	$124,769,019

2. The following table shows the number and annual retirement allowances payable to retired members and beneficiaries as of the valuation date.

THE NUMBER AND ANNUAL RETIREMENT BENEFITS OF RETIRED MEMBERS AND BENEFICIARIES AS OF OCTOBER 1, 2016

GROUP	NUMBER	ANNUAL RETIREMENT BENEFITS
Service Retirements	1,998	$ 55,404,955
Beneficiaries of Deceased Members	222	3,124,314
Disability Retirements	73	1,131,175
Total	2,293	$ 59,660,444

In addition, there are 101 former members entitled to deferred vested retirement benefits totaling $1,986,242 and 165 former members who had terminated as of the valuation date but who had not received a refund of their contributions.

3. Table 1 of Schedule G gives a distribution by age and service groups of the number and average pay of active members included in the valuation. Tables 2, 3, 4 and 5 give the number and annual benefits of retired members and beneficiaries included in the valuation, distributed by age.

SECTION III – ACTUARIAL COST METHOD

1. The valuation is prepared on the projected benefit basis, under which the present value, at the interest rate assumed to be earned in the future (currently 7.00%), of each member's expected benefit payable at retirement or death is determined, based on his age, service, sex and compensation. The calculations take into account the probability of a member's death or termination of employment prior to becoming eligible for a benefit, as well as the probability of his terminating with a service, disability or survivor's benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active members is added to the present value of the expected future payments to retired members and beneficiaries to obtain the present value of all expected benefits payable from the System on account of the present group of members and beneficiaries.

2. The contributions required to support the benefits of the System are determined following a level funding approach, and consist of a normal contribution and an accrued liability contribution.

3. The normal contribution is determined using the “entry age normal” method. Using this method, a calculation is made to determine the uniform and constant percentage rate of County contribution which, if applied to the compensation of each member during the entire period of his anticipated covered service, would be required in addition to the contributions of the member to meet the cost of all benefits payable on his behalf.

4. The present value of future unfunded accrued liability contributions is determined by subtracting the present value of prospective County normal contributions (currently 8.74%) and member contributions (currently 6.00%), together with the current assets held, from the present value of expected benefits to be paid from the System.

SECTION IV – ASSETS

1. The amount of assets taken into account in this valuation was based on information provided by the auditors. As of October 1, 2016, the market value of assets amounted to $1,083,037,350. Schedule B shows a reconciliation of market value of assets for the two years prior to the valuation date. As of October 1, 2016, the market related actuarial value of assets used for valuation purposes was $1,084,886,713, as developed in Schedule C.

SECTION V – COMMENTS ON VALUATION

1. Schedule D of this report contains the valuation balance sheet which shows the present and prospective assets and liabilities of the System as of October 1, 2016.

2. The valuation balance sheet shows that the System has total prospective liabilities of $1,143,114,868. Of this amount, $604,826,262 is for the prospective benefits payable on account of present retired members, beneficiaries of deceased members and former members entitled to deferred vested benefits or a refund of contributions, and $538,288,606 is for the prospective benefits payable on account of present active members. Against these liabilities, the System has total present assets of $1,084,886,713 as of October 1, 2016. The difference of $58,228,155

between the total liabilities and the total present assets represents the present value of future contributions.

3. The contributions to the System consist of normal contributions and accrued liability contributions. The valuation indicates that normal contributions at the rate of 14.74% of payroll are sufficient to pay the normal costs of the System. Of this amount, 6.00% is paid by the members and the remaining 8.74% is required by the County.

4. Prospective normal contributions at the rate of 14.74% have a present value of $135,939,900. When this amount is subtracted from $58,228,155, which is the present value of total future contributions, there remains $(77,711,745) as the amount of unfunded accrued liability (UAL) contributions. The surplus UAL is expected to be fully amortized within 48 years at a rate of (2.74)% of payroll. The development of the unfunded accrued liability is shown in Schedule A. The funded ratio of the System is the ratio of assets to the actuarial accrued liability. This ratio as of October 1, 2016, based on actuarial value of assets which recognizes gains and losses over a five year period, is 107.7%.

5. It is important to note that since the normal cost contribution rate of 14.74% for the annual benefits earned is greater than the total rate of contributions of 12.00% to the System, an objective of the System should be to maintain a surplus UAL that would be expected to never be fully amortized (infinite amortization period). Attaining and maintaining this objective would ensure the actuarial soundness of System's funding for both current and future retirees.

6. The UAL based on the current market value of assets, assuming the immediate recognition of all deferred asset gains and losses, is $(75,862,382). On this basis, the funded ratio is 107.5%.

SECTION VI – CONTRIBUTIONS PAYABLE BY COUNTY

It is recommended on the basis of the present valuation that the County make contributions to the System according to the rates shown in the following table:

CONTRIBUTION	PERCENTAGE OF MEMBERS' COMPENSATION
Normal	8.74%
Unfunded accrued liability	(2.74)
Total	6.00%

SECTION VII – ACCOUNTING INFORMATION

The information required under the Governmental Accounting Standards Board (GASB) Statements No. 67 and 68 for the Plan and the County will be issued in separate reports. The following is provided for informational purposes only.

1. The following is a distribution of the number of employees by type of membership.

NUMBER OF ACTIVE AND RETIRED MEMBERS
AS OF OCTOBER 1, 2016

GROUP	NUMBER
Retirees and beneficiaries currently receiving benefits	2,293
Terminated members entitled to benefits but not yet receiving them	266
Active members	2,263
Total	4,822

2. The schedule of funding progress is shown below.

SCHEDULE OF FUNDING PROGRESS
Dollar Amounts in Thousands

Actuarial Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b – a)	Funded Ratio (a / b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b – a) / c)
10/01/2011	$949,368,266	$899,515,895	$(49,852,371)	105.5%	$138,971,377	(35.9)%
10/01/2012	931,092,938	913,822,368	(17,270,570)	101.9	118,895,660	(14.5)
10/01/2013	955,105,311	929,234,406	(25,870,905)	102.8	107,002,185	(24.2)
10/01/2014	1,005,020,061	952,157,824	(52,862,237)	105.6	109,723,029	(48.2)
10/01/2015	1,038,953,354	970,675,625	(68,277,729)	107.0	113,089,076	(60.4)
10/01/2016	1,084,886,713	1,007,174,968	(77,711,745)	107.7	124,769,019	(62.3)

3. The information presented above was determined as part of the actuarial valuation at October 1, 2016. Additional information as of the latest actuarial valuation follows.

Valuation date	10/01/2016
Actuarial cost method	Entry age
Amortization method	Level percent open
Remaining amortization period	48 years
Asset valuation method	5-year market related value
Actuarial assumptions:	
Investment rate of return*	7.00%
Projected salary increases*	4.25 – 7.25%
Cost-of-living adjustments	None
*Includes inflation at	3.25%

SECTION VIII – EXPERIENCE

1. The last experience investigation was prepared for the five-year period ending September 30, 2009, and based on the results of the investigation, various assumptions and methods were adopted by the Board on April 28, 2010.
2. The following table shows the estimated gain or loss from various factors that resulted in a decrease of 9,434,016 in the unfunded accrued liability from (68,277,729) to (77,711,745) during the fiscal year ending September 30, 2016.

ANALYSIS OF THE INCREASE IN UNFUNDED ACCRUED LIABILITY
(in thousands of dollars)

ITEM	AMOUNT OF INCREASE/ (DECREASE)
Interest (7.00) added to previous unfunded accrued liability	$ (4,779.4)
Accrued liability contribution	1,898.9
Experience:	
Valuation asset growth	(20,483.5)
Pensioners' mortality	(1,111.6)
Turnover and retirements	5,169.7
New Entrants	412.1
Salary increases	9,906.7
Method changes	0.0
Amendments (COLAs)	0.0
Assumption changes	0.0
Miscellaneous changes	(446.9)
Total	(9,434.0)

SCHEDULE A

DEVELOPMENT OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY AS OF OCTOBER 1, 2016

(1)	Present Value of Future Benefits:		
	(a)	Present Active Members	$ 538,288,606
	(b)	Present Retired Members, Beneficiaries and Former Members Entitled to Deferred Vested Benefits or Refunds of Contributions	604,826,262
	(c)	Total	$ 1,143,114,868
(2)	Present Value of Future County and Member Normal Contributions		135,939,900
(3)	Actuarial Accrued Liabilities [1(c) – (2)]		$ 1,007,174,968
(4)	Actuarial Value of Assets		1,084,886,713
(5)	Unfunded Actuarial Accrued Liabilities (UAAL) [(3) – (4)]		$ (77,711,745)
(6)	Amortization of UAAL		$ (3,418,671)
(7)	Contribution Rate as a % of Payroll		
	(a)	Normal Cost	14.74%
	(b)	UAAL	(2.74)
	(c)	Total	12.00%

SCHEDULE B

RECONCILIATION OF MARKET VALUE OF ASSETS

	October 1, 2016	October 1, 2015
Market Value of Assets as of October 1 of Previous Year	$ 1,031,304,271	$ 1,077,606,445
Expenditures		
- Benefit Payments	$ (58,760,060)	$ (57,020,620)
- Refunds of Employee Contributions	(902,237)	(984,517)
- Administrative Expenses	(1,299,879)	(997,802)
- Total	$ (60,962,176)	$ (59,002,939)
Contributions		
- Employer	$ 7,392,949	$ 6,731,915
- Employee	7,384,907	6,715,640
- Other	583,893	439,191
- Total	$ 15,361,749	$ 13,886,746
Investment Income	$ 97,411,214	$ (1,108,273)
Transfer to 415 Account	$ (77,708)	$ (77,708)
Market Value of Assets as of October 1 of Current Year	$ 1,083,037,350	$ 1,031,304,271
Investment Rate of Return	9.65%	(0.11%)

SCHEDULE C

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS
AS OF OCTOBER 1, 2016

(1)	Actuarial Value Beginning of Year		$ 1,038,953,354
(2)	Market Value End of Year		$ 1,083,037,350
(3)	Market Value Beginning of Year		$ 1,031,304,271
(4)	Cash Flow		
	a.	Contributions	$ 15,361,749
	b.	Benefit Payments and Administrative Expense	(60,962,176)
	c.	Transfer to 415 Account	(77,708)
	d.	Investment Expenses	(3,401,888)
	e.	Net	$ (49,080,023)
(5)	Investment Income		
	a.	Market total [(2) – (3) – (4)e]	$ 100,813,102
	b.	Assumed Rate	7.00%
	c.	Amount for Immediate Recognition [(3) x (5)b] + [((4)a + (4)b + (4)c) * (5)b * 0.5] – (4)d	$ 73,994,452
	d.	Amount for Phased-In Recognition [(5)a – (5)c]	$ 26,818,650
(6)	Phased-In Recognition of Investment Income		
	a.	Current Year [0.20 * (5)d]	$ 5,363,730
	b.	First Prior Year	(14,991,788)
	c.	Second Prior Year	7,224,812
	d.	Third Prior Year	7,221,452
	e.	Fourth Prior Year	16,200,724
	f.	Total Recognized Investment Gain	$ 21,018,930
(7)	Actuarial Value End of Year [(1) + (4)e + (5)c + (6)f]		$ 1,084,886,713
(8)	Difference Between Market & Actuarial Values [(2) – (7)]		$ (1,849,363)

SCHEDULE D

VALUATION BALANCE SHEET
SHOWING THE PRESENT AND PROSPECTIVE ASSETS AND LIABILITIES OF THE GENERAL RETIREMENT SYSTEM FOR EMPLOYEES OF JEFFERSON COUNTY
PREPARED AS OF OCTOBER 1, 2016

ASSETS		
Present Assets of the System		$1,084,886,713
Present Value of Prospective Contributions:		
County and Members Normal Contributions	$ 135,939,900	
Unfunded Accrued Liability Contributions	(77,711,745)	
Total Prospective Contributions		58,228,155
Total Assets		$1,143,114,868
LIABILITIES		
Present Value of Benefits Payable on Account of Retired Members, Beneficiaries and Former Members Entitled to Deferred Vested Benefits or Refunds of Contributions		$ 604,826,262
Present Value of Prospective Benefits payable on Account of Present Active Members		538,288,606
Total Liabilities		$1,143,114,868

SCHEDULE E

OUTLINE OF ACTUARIAL ASSUMPTIONS AND METHODS

The assumptions and methods used in the valuation are effective beginning October 1, 2010 and were selected based on the experience investigation for the five year period ending September 30, 2009 adopted by the Board on April 28, 2010.

INVESTMENT RATE OF RETURN: 7.00% per annum, compounded annually.

SALARY INCREASES: Representative values of the assumed annual rates of future salary increases are as follows and include inflation at 3.25% per annum:

Annual Rate of Salary Increase	
Years of Service	Rate
0	7.25%
2	7.00
4	6.75
6	6.25
8	5.00
10+	4.25

SEPARATIONS FROM ACTIVE SERVICE: Mortality rates are according to the RP-2000 Employee Mortality Table. Representative values of the assumed annual rates of death, disability, withdrawal and service retirement are as follows:

		Annual Rate of	
Age	Death – Male	Death – Female	Disability*
20	0.03%	0.02%	0.04%
25	0.04	0.02	0.04
30	0.04	0.03	0.04
35	0.08	0.05	0.08
40	0.11	0.07	0.08
45	0.15	0.11	0.12
50	0.21	0.17	0.20
55	0.30	0.25	0.24
60	0.49	0.39	0.28
65	0.76	0.58	
69	0.95	0.73	

*10% of disabilities are assumed to be due to service related causes and 90% to non-service related causes.

Annual Rate of Service Withdrawal	
Years of Service	Rate
0	13.0%
2	11.0
4	8.0
6	6.0
8	3.5
10+	3.0

Annual Rate of Service Retirement	
Age	Rate
50	5.0%
55	15.0
60	30.0
62	40.0
65	45.0
70	100.0

75% are assumed to retire when first eligible for 30 year unreduced service retirement and for each year with 31 or more years of service.

DEATHS AFTER RETIREMENT: According to the RP-2000 Combined Mortality Table with Projection Scale AA, set forward 1 year for males for service retirements. Special rates are used for the period after disability retirement. Representative values of the assumed annual rates of death after retirement for 2013 are as follows:

	Annual Rate of Death After			
	Service Retirement		Disability Retirement	
Age	Male	Female	Male	Female
40	0.1%	0.1%	2.3%	1.7%
50	0.2	0.1	3.3	2.5
55	0.3	0.2	4.0	3.0
60	0.6	0.5	5.0	3.8
65	1.2	0.9	6.2	4.7
70	2.0	1.6	6.8	5.1
75	3.5	2.5	8.6	6.5
80	6.3	4.2	11.4	8.6
85	11.2	7.2	15.2	11.4
90	19.0	12.7	20.3	15.2
95	27.7	19.0	29.5	22.1

LOADING: The average monthly compensation was increased 4.50% to allow for the practice of including a portion of unused vacation pay in the benefit calculations.

PERCENT MARRIED: 95% of active members are assumed to be married, with husbands three years older than their wives.

ACTUARIAL COST METHOD: Entry age normal. Gains and losses are reflected in the unfunded accrued liability.

ASSET VALUATION METHOD: Actuarial value as developed in Schedule C. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value.

SCHEDULE F

SUMMARY OF MAIN PROVISIONS OF THE SYSTEM AS INTERPRETED FOR VALUATION PURPOSES

The following summary gives the main membership, benefit and contribution provisions of the System as interpreted in preparing the actuarial valuation. "Average monthly compensation" means the average earnable compensation of a member during the highest thirty-six consecutive months of service. "Paid membership service" is service during which the member made contributions to either this System or the previous systems.

MEMBERSHIP

All regular employees and officers of Jefferson County who were members of the previous retirement systems became members of this System as of September 1, 1965. All other employees and officers of the County as of September 1, 1965 could elect to join the System. Any person becoming an employee after September 1, 1965 whose employment is subject to the Civil Service System is required to join. Employees whose employment is not subject to the Civil Service System or those who are officers may elect to join.

BENEFITS

Superannuation Retirement

Condition for Retirement	Age 60 and completion of 10 years of paid membership service, or 30 years of paid membership service, or age 55 with 30 years of service of which 20 years must be paid membership service.
Amount of Benefit	(a) The monthly pension is equal to 2-1/2% of the member's average monthly compensation multiplied by the number of years of his paid membership service, not in excess of 30 years; plus

(b) 5/8% of average monthly compensation, multiplied by the number of years of his unpaid service.

No member shall receive a benefit in excess of 75% of average monthly compensation.

Early Retirement

Regular Early Retirement Benefit

Any member who has completed 30 years of service, including 10 years of paid membership service, may elect to receive a Regular Early Retirement Benefit.

The Regular Early Retirement Benefit is determined by multiplying the pension based on service and average monthly salary at the date of early retirement, by the percentage shown in the following table, according to the member's age on the birthday preceding retirement.

Age	Percentage
59	93%
58	87%
57	82%
56	77%
55	72%
54	68%
53	64%
52	60%
51	57%
50	54%
49	51%
48	48%

25-Year Early Retirement Benefit

Any member who has completed at least 25 years of paid membership service may elect to receive a 25-Year Early Retirement Benefit.

The 25-Year Early Retirement Benefit is determined by multiplying the pension based on service and average monthly salary at the date of early retirement by 7% per year for each year less than 30 years of paid membership.

Non-Service Connected Disability

Condition for Retirement

Any member who becomes disabled for reasons not connected with service after 10 or more years of paid membership service is entitled to receive a disability pension (full or partial).

Amount of Benefit

The monthly disability pension is computed in the same manner as the superannuation retirement benefit, reduced for early commencement by the percentage shown in the following table. The early retirement factor is based on the number of years until the member would have been eligible for unreduced retirement benefits assuming continued employment.

Years Early	Percentage	Years Early	Percentage
1	93%	7	64%
2	87	8	60
3	82	9	57
4	77	10	54
5	72	11 or more	50
6	68		

Service Connected Disability

Condition for Retirement

Any member who becomes incapacitated for further performance of duty by reason of personal injury received as the result of an accident arising out of and in the course of employment is entitled to receive monthly disability benefits.

Amount of Benefit

The monthly disability pension is equal to 60% of the part of the member's monthly salary subject to deductions for pension purposes at the commencement of disability, reduced by workers compensation benefits.

Deferred Retirement

Condition for Retirement

(a) Any member whose service is involuntarily terminated before eligibility for voluntary retirement who has 18 years of service, including 10 years of paid membership service, is eligible to receive a deferred pension payable either at age 60 or on the date the member would have completed 30 years of service if the member had remained employed by the County, provided the member makes contributions to the system between the termination date and retirement date equal to those both the member and the County would have made during that time on the basis of the member's salary subject to deductions for pension purposes at termination date.

(b) Any member whose service is involuntarily terminated before eligibility for voluntary retirement who has 20 years of service, including at least 10 years of paid membership service, is eligible to receive a pension, commencing immediately, if the member has attained age 55 at retirement or a deferred pension commencing at age 55 if the member is less than age 55 at retirement. No contributions are required of the member after involuntary retirement.

(c) Any member who has completed 10 years of paid membership service and who upon separation from service, whether voluntary or involuntary, is not eligible to receive a superannuation retirement benefit, is eligible to receive a deferred pension payable at age 60.

Amount of Benefit

The monthly pension described under (a) above is payable upon the earlier of (1) the date the member reaches age 60, or (2) the date on which the member would have completed 30 years of service had the member continued employment, and is calculated using the Superannuation Retirement Benefit formula, which is reduced in the same manner as an Early Retirement Benefit if the member has not reached age 60 at the time payment commences.

The monthly pension described under (b) above is payable upon retirement if the member has reached age 55, or, if the member has not reached age 55, payment is delayed until the member attains age 55, and is calculated in accordance with the formula used for a Superannuation Retirement Benefit.

The monthly pension described under (c) above Is payable when the member reaches age 60, and is calculated by multiplying the Superannuation Retirement Benefit that the member would have been entitled to receive had the member been age 60 when service terminated by the applicable percentage below:

Years of Paid Membership Time	Percentage
10	50%
11	60
12	70
13	80
14	90
15	100

Instead of receiving a deferred pension, the member may elect to receive a refund of the member's contributions with interest less one-half of any disability benefits paid.

Return of Contributions

Upon Termination of Service	Upon termination of service for reasons other than death, before meeting the eligibility requirements for a deferred retirement benefit, a member is entitled to the return of the member's contributions less one-half of any disability benefits paid.
Death of Member Before Eligibility for a Deferred Retirement Benefit	Upon death before retirement and before the member is eligible for a deferred retirement benefit, the member's contributions without interest, less any disability benefit payments, are paid to the member's beneficiary, spouse, or legal representative.

Death of Member After Eligibility For Deferred Retirement

Condition for Benefit	Upon death in active service of a member who has completed 10 years of paid membership service, an allowance is payable to the member's surviving spouse, or if an unmarried member so elects, to the member's designated beneficiary.
Amount of Benefit	The pre-retirement survivorship benefit is 100% of the reduced retirement pension the member would have received had retirement occurred on the day of death. Upon actual retirement, an unmarried member who had elected the pre-retirement joint and survivorship benefit will have his benefit reduced by an amount which is of equivalent actuarial value to the actuarial cost of the coverage for the pre-retirement joint survivorship benefit under such election. A refund of contributions plus interest is made in lieu of a survivor's benefit if the surviving spouse or dependent so elects.

Optional Benefits	A member may elect to have the superannuation, early retirement or deferred retirement benefit otherwise payable converted to a smaller pension payable during the member's lifetime with the provision that, upon the member's death after pension payments commence, a specified part of such reduced pension will be continued to the member's designated beneficiary. In addition, a member may elect to have the member's benefit converted to a further reduced pension payable as above but with the additional provision that, if the member's designated beneficiary predeceases the member, benefit payments will revert to the unreduced amount and will be payable until the member's death.

Increases to Retired Members and Beneficiaries

The following increases to pensions in pay status have been made:

3% per year (simple interest) with the calculation period beginning on the later of the date of retirement and October 1, 1977, and ending on September 30, 1982. (The maximum increase was 15%.)

3% per year (simple interest) with the calculation period beginning on the later of the date of retirement and October 1, 1982, and ending on September 30, 1984. (The maximum increase was 6%.)

2% per year (simple interest) with the calculation period beginning on the later of the date of retirement and October 1, 1984, and ending on September 30, 1986. (The maximum increase was 4%.)

2% per year (simple interest) with the calculation period beginning on the later of the date of retirement and October 1, 1986, and ending on September 30, 1992. (The maximum increase was 12%.)

2% per year (simple interest) retroactive to October 1, 1992 with a maximum increase of 12%.

2% per year (simple interest) retroactive to October 1, 1998 with a maximum increase of 6%.

1% per year (simple interest) retroactive to October 1, 2001.

2% per year retroactive to October 1, 2004, with the calculation period beginning on the later of the date of retirement and October 1, 2006, and ending September 30, 2007. (The maximum increase was 4%.)

CONTRIBUTIONS

By Members

Each member contributes 6% of compensation.

A member who has accrued the maximum retirement benefit of 75% of basic average salary may elect to terminate contributions.

By County

The County pays an amount equal to member's contributions.

SCHEDULE G

TABLE 1

AGE – SERVICE TABLE

Distribution of Active Members as of October 1, 2016 by Age and Service Groups

Attained Age	Completed Years of Service									
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 & Over	Total
Under 25	48	22								70
Avg Pay	33,049	35,511								33,823
25 to 29	53	74	5	1						133
Avg Pay	36,459	39,896	46,275	52,920						38,864
30 to 34	32	55	39	29	3					158
Avg Pay	38,915	44,263	50,877	50,821	53,590					46,194
35 to 39	38	52	48	63	59					260
Avg Pay	43,487	49,253	52,048	61,052	53,426					52,732
40 to 44	30	34	36	56	80	33	3			272
Avg Pay	39,942	46,786	49,714	63,183	59,520	56,907	54,773			54,856
45 to 49	24	47	30	50	82	81	31			345
Avg Pay	38,149	52,979	57,984	67,545	61,740	62,006	66,099			59,874
50 to 54	26	29	58	45	67	54	86	3		368
Avg Pay	40,225	52,067	51,648	61,541	59,184	65,735	65,561	54,504		58,798
55 to 59	14	29	56	50	71	52	79	7	1	359
Avg Pay	33,061	48,398	61,005	63,527	61,091	58,386	64,396	73,400	69,825	59,898
60 to 64	6	14	38	40	39	38	32	8	4	219
Avg Pay	37,510	55,999	59,246	57,824	57,570	62,971	60,248	64,436	93,777	59,498
65 to 69		2	19	8	13	5	8		4	59
Avg Pay		19,979	47,949	53,462	54,000	51,536	77,057		77,703	55,350
70 & Over	1	2	4		5	5	1		2	20
Avg Pay	32,376	43,786	38,949		60,813	84,647	102,969		51,788	60,479
Total Count	272	360	333	342	419	268	240	18	11	2,263
Avg Pay	37,854	46,208	53,974	61,330	58,929	61,791	64,943	66,267	78,120	55,134

Average Age	47.37
Average Service	12.71

TABLE 2

NUMBER OF RETIRED MEMBERS
AND THEIR BENEFITS BY AGE

SERVICE RETIREMENTS

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefit
50 and Under	1	$ 43,646	$ 43,646
51 – 55	51	1,880,588	36,874
56 – 60	185	6,767,617	36,582
61 – 65	459	14,952,040	32,575
66 – 70	489	14,129,885	28,896
71 – 75	362	8,822,434	24,371
76 – 80	204	4,669,305	22,889
Over 80	247	4,139,440	16,759
Total	1998	$ 55,404,955	$ 27,730

TABLE 3

NUMBER OF RETIRED MEMBERS
AND THEIR BENEFITS BY AGE

DISABILITY RETIREMENTS

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefit
50 and Under	1	$ 23,293	$ 23,293
51 – 55	5	87,564	17,513
56 – 60	24	422,679	17,612
61 – 65	18	306,158	17,009
Over 65	25	291,481	11,659
Total	73	$ 1,131,175	$ 15,496

TABLE 4

NUMBER OF RETIRED MEMBERS AND THEIR BENEFITS BY AGE

BENEFICIARIES OF DECEASED MEMBERS

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefit
50 and Under	10	$ 124,394	$ 12,439
51 – 55	5	117,172	23,434
56 – 60	15	268,235	17,882
61 – 65	16	281,725	17,608
66 – 70	38	700,447	18,433
71 – 75	42	566,719	13,493
76 – 80	37	456,242	12,331
Over 80	59	609,379	10,329
Total	222	$ 3,124,314	$ 14,073

TABLE 5

NUMBER OF DEFERRED FORMER MEMBERS AND THEIR BENEFITS BY AGE

Attained Age	Number of Members	Total Annual Benefits	Average Annual Benefit
50 and Under	32	$ 569,171	$ 17,787
51 – 55	33	703,552	21,320
56 – 60	36	713,520	19,820
Total	101	$ 1,986,242	$ 19,666