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### ***Mortality Risk***

The mortality assumption is a significant assumption for valuation results, second only to the investment assumption in most situations. The System's mortality assumption utilizes a mortality table (with separate rates for males and females, as well as different rates by status) and a projection scale for how the mortality table is expected to improve through time. This approach is the current state of the art in retirement actuarial practice, made possible by the increase in computational power over the past 20 years.

The future, however, is not known, and actual mortality improvements may occur at a faster rate than expected, or at a slower rate than expected (or even decline). Although changes in mortality will affect the benefits paid, this assumption is carefully studied during the regular experience studies that the System conducts so that incremental changes can be made to smoothly reflect unfolding experience.

### ***Contribution Risk***

The System is primarily funded by member and employer contributions to the trust fund, together with the earnings on those accumulated contributions. Each year in the valuation, the Required Contribution Rate is determined, based on the System's funding policy. This rate is the sum of the rates for the normal cost for the plan, the amortization of the UAAL, and the administrative expenses. Since the System is obligated to make 100% of the Required Contribution Rate by statute, there is no contribution risk.



## Schedule A – Valuation Results

### VALUATION RESULTS AS OF JUNE 30, 2020

(1)	Actuarial Accrued Liability:	
(a)	Plan B	
(i)	Actives and Transfers	\$ 2,179,623
(ii)	Retired, Beneficiaries, Disabled, Terminated	<u>174,555,126</u>
(iii)	Total = (i) + (ii)	\$ 176,734,749
(b)	Plan A	
(i)	Actives and Transfers	\$ 292,381,266
(ii)	Retired, Beneficiaries, Disabled, Terminated	<u>409,801,770</u>
(iii)	Total = (i) + (ii)	\$ 702,183,036
(c)	Plan C	
(i)	Actives and Transfers	\$ 447,097,890
(ii)	Retired, Beneficiaries, Disabled, Terminated	<u>494,471,738</u>
(iii)	Total = (i) + (ii)	\$ 941,569,628
(d)	Plan D	
(i)	Actives and Transfers	\$ 55,943,973
(ii)	Retired, Beneficiaries, Disabled, Terminated	<u>3,108,322</u>
(iii)	Total = (i) + (ii)	\$ 59,052,295
(e)	Total = (a)iii + (b)iii + (c)iii + (d)iii	\$ 1,879,539,708
(2)	Actuarial Value of Assets	\$ 1,345,108,203
(3)	Unfunded Actuarial Accrued Liability: (1(e) – 2)	\$ 534,431,505



## Schedule B – Development of the Actuarial Value of Assets

(1)	Actuarial Value of Assets as of June 30, 2019	\$ 1,302,528,448
(2)	Market Value of Assets as of June 30, 2020	\$ 1,178,569,154
(3)	Market Value of Assets as of June 30, 2019	\$ 1,224,240,111
(4)	Net Cash Flow During Plan Year	
(a)	Contributions	\$ 76,665,484
(b)	Benefit Payments and Refunds	(101,084,611)
(c)	Administration Expenses	<u>(989,791)</u>
(d)	Net Cash Flow: (a) + (b) + (c)	\$ (25,408,918)
(5)	Investment Income	
(a)	Market Total: (2) – (3) – (4)d	\$ (20,262,039)
(b)	Assumed Rate	7.00%
(c)	Amount for Immediate Recognition	\$ 84,822,537
(d)	Amount for Phased-In Recognition: (5)a – (5)c	\$ (105,084,576)
(6)	Recognized Amounts for Plan Year	
(a)	Current Year: 0.10 x (5)d	\$ (10,508,458)
(b)	First Prior Year	(3,130,913)
(c)	Second Prior Year	(648,242)
(d)	Third Prior Year	4,548,463
(e)	Fourth Prior Year	(11,328,646)
(f)	Fifth Prior Year	(8,343,352)
(g)	Sixth Prior Year	7,712,483
(h)	Seventh Prior Year	4,391,650
(i)	Eighth Prior Year	(11,572,814)
(j)	Ninth Prior Year	<u>12,045,965</u>
(k)	Total Recognized Investment Gain/(Loss)	\$ (16,833,864)
(7)	Actuarial Value of Assets as of June 30, 2020 (1) + (4)d + (5)c + (6)k	\$ 1,345,108,203
(8)	Rate of Return on Actuarial Value	5.27%



## Schedule C – Asset Information

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<i>Receipts</i>	
(1) Employee Contributions	\$ 17,887,341
(2) Employer Contributions	58,778,143
(3) Investment Income	<u>(20,262,039)</u>
(4) Total Receipts	\$ 56,403,445
<i>Disbursements</i>	
(5) Retirement	\$ 94,034,561
(6) Refunds and Cashouts	7,050,050
(7) Administrative Expenses	<u>989,791</u>
(8) Total Disbursements	\$ 102,074,402
(9) Excess of Receipts Over Disbursements: (4) - (8)	\$ (45,670,957)
<i>Reconciliation of Asset Balances</i>	
(10)Market Value at June 30, 2019	\$1,224,240,111
(11)Excess of Receipts Over Disbursements	<u>(45,670,957)</u>
(12)Market Value at June 30, 2020	\$1,178,569,154
(13)Estimated Rate of Return on Market Value of Assets	(1.67)%



## ***Schedule D – Outline of Actuarial Assumptions and Methods***

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Actuarial assumptions and methods adopted by the Board October 2, 2018. Valuation investment return assumption, price inflation and salary increases adopted by the Board December 1, 2020.

**INVESTMENT RATE OF RETURN:** 6.80% per year (net of investment expenses only), including price inflation at 2.40% per annum.

**SALARY INCREASES:**

Service	Increase per year
Less than 5	5.15%
5-9	4.15
10-14	3.65
15-19	3.40
20-24	3.15
25 or more	2.65

**EXPENSES:** Estimated budgeted administrative expenses of 0.55% of payroll are added to the normal cost rate.

**COST-OF-LIVING ADJUSTMENT:** 1.00% per year, compounded for Plan B. 2.75% per year, compounded for Plan A and Plan C. 2.00% per year, compounded for Plan D. COLA is payable January 1 of each year.

**DEATH ASSUMPTION:** 90% of active member deaths are assumed to occur as a result of non-hazardous duty and 10% of active member deaths are assumed to occur as a result of hazardous duty.

**PERCENT MARRIED:** 65% of male active members and 40% of female active members are assumed to be married with the male three years older than his spouse.

**ASSETS:** 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 market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 10% of the difference between market value and expected market value.

**VALUATION METHOD:** Entry Age Normal actuarial cost method.





## ***Schedule D – Outline of Actuarial Assumptions and Methods***

**RATES OF WITHDRAWAL AND DISABILITY:** Representative values of the assumed rates of withdrawal and disability are as follows:

Age	Annual Rate of			
	Withdrawal			Disability
	Less than 4 years of service	4 to 7 years of service	8 or more years of service	
20	15.0%	15.0%	10.0%	0.12%
25	15.0	15.0	10.0	0.12
30	13.0	10.0	10.0	0.12
35	12.0	8.5	6.0	0.12
40	11.0	7.0	5.0	0.17
45	10.0	5.0	4.0	0.22
50	9.0	4.5	3.5	0.27
55	8.0	4.5	3.5	0.32
60	8.0	4.5	3.5	0.37
65	8.0	4.5	3.5	0.42

**RATES OF RETIREMENT:** Representative values of the assumed rates of retirement are as follows:

### **Plan B**

Age	Non-Public Safety	Public Safety
60	20.00%	100.0%
61	5.00	100.0
62	7.50	100.0
63	5.00	100.0
64	5.00	100.0
65	100.00	100.0



## Schedule D – Outline of Actuarial Assumptions and Methods

### Plan A

Age	0 – 7 years of service	8 or more years of service
55		7.5%
56		6.5
57		6.0
58		6.5
59		7.0
60		7.5
61		8.5
62		12.5
63		11.0
64		14.0
65	22.0%	22.0
66	20.0	20.0
67	20.0	20.0
68	20.0	20.0
69	20.0	20.0
70	100.0	100.0

### Plan C

Age	Non-Public Safety			Public Safety		
	0 – 7 years of service	8 – 24 years of service	25 or more years of service	0 – 7 years of service	8 – 24 years of service	25 or more years of service
50			18.0%			16.0%
55		7.0%	18.0		7.0%	16.0
56		6.0	18.0		6.0	16.0
60		7.5	18.0		10.0	20.0
61		10.0	18.0		11.0	20.0
62		11.0	18.0		11.0	20.0
63		11.0	18.0		11.0	20.0
64		11.0	21.5		11.0	20.0
65	15.0%	15.0	25.0	100.0%	100.0	100.0
66	12.0	12.0	25.0	100.0	100.0	100.0
70	100.0	100.0	100.0	100.0	100.0	100.0



## Schedule D – Outline of Actuarial Assumptions and Methods

### Plan D

Age	Non-Public Safety	Public Safety	
		Less than 20 years of service	20 or more years of service
50			7.0%
51			6.0
55		10.0%	16.0
56		11.0	16.0
60		11.0	20.0
62	11.0%	11.0	20.0
65	15.0	100.0	100.0
66	12.0	100.0	100.0
67	40.0	100.0	100.0
70	100.0	100.0	100.0

**RATES OF DEATHS BEFORE RETIREMENT:** The RP-2014 Mortality Table with Blue Collar Adjustment and projected to 2020 with projection scale MP-2017 is used for both males and females while in active service. Representative values of the assumed rates of death while in active service are as follows:

Age	Male	Female
20	0.0486%	0.0186%
25	0.0630	0.0208
30	0.0653	0.0262
35	0.0788	0.0371
40	0.0908	0.0510
45	0.1280	0.0752
50	0.2137	0.1204
55	0.3590	0.1969
60	0.6311	0.3027
65	1.1325	0.4355



## ***Schedule D – Outline of Actuarial Assumptions and Methods***

**RATES OF DEATH AFTER RETIREMENT:** The RP-2014 Mortality Table with Blue Collar Adjustment and projected to 2020 with projection scale MP-2017, set forward two years for males and set forward three years for females, with rates at ages 70 and below adjusted by 125% for both males and females and rates at ages above 70 adjusted by 85% for females only is used for the period after retirement and for dependent beneficiaries. The RP-2014 Disabled Mortality Table projected to 2020 with projection scale MP-2017 is used for the period after disability retirement. There is a margin for future mortality improvement in the tables used by the System. Based on the results of the most recent experience study adopted by the Board on October 2, 2018, the numbers of expected future deaths are 7-11% less than the actual number of deaths that occurred during the study period for service retirements and beneficiaries. Representative values of the assumed rates of death after service and disability retirement are as follows:

Age	Annual Rate of Death After			
	Service Retirement		Disability Retirement	
	Male	Female	Male	Female
50	0.5843%	0.4434%	1.9977%	1.1596%
55	0.8686	0.6783	2.3252	1.5198
60	1.2970	0.9881	2.7672	1.8787
65	1.9648	1.4628	3.3502	2.1917
70	3.0106	2.3581	4.1376	2.8342
75	3.9060	2.7112	5.5115	4.1428
80	6.5624	4.7309	7.8620	6.3510
85	11.1563	8.3054	11.7706	9.7144



## **Schedule E – Summary of Main System Provisions – Plan B**

Eligibility	All salaried employees hired prior to December 1, 1978 were eligible at date of employment and had to apply for membership as a condition of such employment. "Employee" means any person employed on a regular full-time basis, excluding officials or employees of the Board of Education of Shelby County. Entry in the System was optional for individuals employed on a per diem basis. Employees not able to complete the required number of years of service prior to mandatory retirement age could not join the plan.
Final Average Earnings	<p>If a participant had 10 years of credited service on October 1, 1977, the greater of:</p> <ol style="list-style-type: none"><li>1) Average monthly earnings for the five consecutive years of County Service during which earnings was the highest or,</li><li>2) Average monthly earnings for the 12 months preceding the date of retirement.</li></ol> <p>If the participant did not have 10 years of service on October 1, 1977, the average monthly earnings for the 36 consecutive months during which the employee received his highest earnings.</p>
Normal Retirement Benefit	
Eligibility	25 years of credited service or age 60 (age 55 if Deputy Sheriff) and 10 years of credited service.
Benefit	2.7% of final average earnings multiplied by years of credited service not in excess of 25 plus 1% of final average earnings multiplied by years of credited service greater than 25 but less than 35. The maximum benefit is 77.5% of final average earnings. The minimum monthly benefit is \$300 (\$150 monthly if jointly employed by the City and County).
Disability Retirement	
Eligibility	After January 1, 2007, only participants who are disabled in the line-of-duty are eligible to receive a disability pension.
Benefit	The greater of: <ol style="list-style-type: none"><li>1) The Normal Retirement Benefit (if participant is then eligible for a Normal Retirement Benefit) or,</li><li>2) 50% of Final Average Earnings.</li></ol>
Termination of Employment	If employment is terminated prior to the completion of 10 years of credited service, a refund of the participant's contributions, without interest, is payable.



## ***Schedule E – Summary of Main System Provisions – Plan B***

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Death Benefit	<p>If employment is terminated after completion of 10 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 60. Benefits are payable to the surviving spouse after age 60 of the participant. The participant may elect to withdraw his contributions, without interest, instead of receiving the deferred monthly benefit at age 60.</p>
	<p>If a participant dies before completing 10 years of credited service and does not die in line-of-duty, his beneficiary will receive a refund of the participant's contributions, without interest.</p>
	<p>If a participant dies after completing 10 years of credited service or after retirement the member's eligible spouse will receive the participant's accrued benefit until death.</p>
	<p>If death occurs in line-of-duty, a benefit of 50% of the participant's final average earnings will be paid to the spouse until death.</p>
Contributions	<p>Each year the County contributes an amount determined actuarially to sustain the plan on an actuarially determined funding basis. Employees contribute 8% of earnings to the retirement plan for the first 35 years. After 35 years, employees contribute 8% of any increases in pay.</p>
Cost of Living Adjustment	<p>A maximum of 1% annual adjustment payable January 1 of each year based on CPI changes for the following:</p> <ol style="list-style-type: none"><li data-bbox="581 1150 1435 1268">1) Retired participants who have attained age 65, completed 25 years of credited service prior to termination, have been retired and receiving benefits for 5 years, and have a monthly pension for the first month in which they are eligible for the COLA less than \$3,000.</li><li data-bbox="581 1272 1435 1327">2) Disability retired participants who have a monthly pension for the first month in which they are eligible for the COLA less than \$3,000.</li><li data-bbox="581 1331 1435 1541">3) Surviving Spouses who have attained age 65, where the original participant completed 25 years of credited service prior to termination or whose death was a line of duty death or whose pension had been a disability pension, where the original participant's termination was at least 5 years prior to receiving the COLA, and who have a monthly pension for the first month in which they are eligible for the COLA less than \$3,000.</li><li data-bbox="581 1545 1435 1730">4) Surviving children where the original participant completed 25 years of credited service prior to termination or whose death was a line of duty death or whose pension had been a disability pension, where the participant's termination was at least 5 years prior to receiving the COLA, and who have a monthly pension for the first month in which they are eligible for the COLA less than \$3,000.</li></ol> <p>In no event, however, will the Plan B benefits exceed 100% of final average pay.</p>



## ***Schedule E – Summary of Main System Provisions – Plan A***

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**Eligibility** All employees hired after December 1, 1978 and prior to March 1, 2005 including all full-time, part-time and elected employees, and members of Plan B electing to transfer to Plan A and employees of all joint City/County agencies administered by Shelby County participate. CETA employees, Board of Education employees, employees electing Social Security coverage, and Joint City/County agencies not administered by Shelby County cannot participate.

**Public Safety Employees** Public Safety Employees, hired prior to March 1, 2005, who did not elect to transfer to Plan C, effective September 1, 2005, are no longer eligible to retire under the 25 year-and-out program and no longer contribute to Plan A.

**Final Average Earnings** The average over the three highest consecutive years of earnings.

### **Normal Retirement Benefit**

**Eligibility** Age 65 regardless of amount of credited service.

**Benefit** Final average earnings multiplied by a percentage from Table A, which is included in the appendix to the plan. Listed below is a summary of Table A:

Years of Service	Benefit Accrual Per Year
1 – 7	1.5%
8 – 13	2.0
14 – 20	2.5
21 – 25	3.0
26 – 30	3.0
31 – 35	2.5
36 – 38	2.5
39 and above	0.0

### **Early Retirement Benefit**

**Eligibility** Age 55 and completion of 7.5 years of credited service.

**Benefit** The Normal Retirement Benefit reduced 2.5% for each year less than age 65.

### **Disability Retirement**

**Eligibility** After January 1, 2002, no disability benefits are provided by the Plan. Upon reaching age 65, a disabled participant will have any disability benefit recomputed as a normal retirement benefit payable by the Plan.



## ***Schedule E – Summary of Main System Provisions – Plan A***

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Benefit	The Normal Retirement Benefit calculated with credited service including time while disabled.
Termination of Employment	<p>If employment is terminated prior to the completion of 7.5 years of credited service, no benefit is payable.</p> <p>If employment is terminated after completion of 7.5 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 65. Alternatively, the participant may elect a vested early benefit payable beginning at age 55 which is actuarially equivalent.</p>
Death Benefit	<p>If a participant dies, the participant's eligible spouse shall receive 45% of final average earnings for two years after the participant's death.</p> <p>If death occurs in line-of-duty, or, if not line-of-duty, the participant before death was age 55 and completed 15 years of credited service, the participant's eligible spouse shall receive 75% of the participant's pension calculated as if the participant had retired immediately before death. This benefit shall be payable when the spouse reaches age 65. The participant's final average earnings is adjusted by the COLA from the participant's death until the spouse reaches age 65.</p>
Contributions	Employees contribute 0.5% of earnings in 2011, 1.0% of earnings in 2012, 1.5% of earnings in 2013 and 2.0% of earnings in 2014 and thereafter.
Cost of Living Adjustment	<p>A maximum of 4% annual adjustment payable January 1 of each year based on CPI changes applies to the following benefits:</p> <ol style="list-style-type: none"> <li>1) Retired participants after age 65</li> <li>2) Disabled participants</li> <li>3) Survivor benefits for dependent children</li> <li>4) Survivor benefits for spouses under age 65 receiving the two year temporary benefit</li> <li>5) Survivor benefits for spouses age 65 and over.</li> </ol> <p>In no event, however, will the Plan A benefits exceed 100% of final average pay except as follows for an employee who retires with 40 or more years of service:</p>

Final Average Earnings	Maximum Benefit
Less than \$1,200	124%
\$1,200 to \$2,800	115%
More than \$2,800	106%





## **Schedule E – Summary of Main System Provisions – Plan C**

Eligibility	All employees participate who are hired on or after March 1, 2005 but before July 1, 2011, including all full-time, part-time and elected employees, and employees of all joint City/County agencies administered by Shelby County, and members of Plan A electing to transfer to Plan C. CETA employees, Board of Education employees, employees electing Social Security coverage, and Joint City/County agencies not administered by Shelby County cannot participate.
Final Average Earnings	The average over the three highest consecutive years of earnings.
Alternate Benefit Accrual Account	Participants contribute 6% of earnings prior to 2011, 6.5% of earnings in 2011, 7.0% of earnings in 2012, 7.5% of earnings in 2013 and 8.0% of earnings in 2014 and thereafter to fund the Plan. Participants are always fully vested in these contributions. Prior to January 1, 2011, the employer matches 50% of each contribution the participant makes to the plan. Effective January 1, 2011, employer matching contributions are frozen at 3%. The participant becomes fully vested in the employer contributions upon reaching 7.5 years of credited service. The total of these two contribution amounts will comprise the participant's Alternate Benefit Accrual Account. The investment return on these contributions and match is 2% per annum.
Optional Cash Distribution	A participant who is entitled to a retirement benefit, whether such benefit is immediate or not, may elect to receive an Optional Cash Distribution (OCD). Any OCD must be in an amount that is a multiple of \$10,000.00 (current maximum is \$60,000.00). If the elected OCD reduces the Participant's Accrued Benefit to less than \$200.00 per month, the Participant will receive the Present Value of his Accrued Benefit at the relevant time.
Normal Retirement Benefit	
Eligibility	Age 65 or upon completion of 25 years of credited service.
Benefit	The greater of: 1) 2.35% of final average earnings multiplied by credited service (up to 35 years) or, 2) The life annuity equivalent of the participant's Alternate Benefit Accrual Account.
Early Retirement Benefit	
Eligibility	Age 55 and completion of 7.5 years of credited service.
Benefit	The greater of: 1) Final average earnings multiplied by credited service (up to 35 years) and a percentage from Table ERP, which is included as part of the plan, or 2) The life annuity equivalent of the participant's Alternate Benefit Accrual Account.



## ***Schedule E – Summary of Main System Provisions – Plan C***

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### Disability Retirement

Eligibility	No disability benefits are provided by the Plan except for transfers. Upon reaching age 65, a disabled participant will have any disability benefit recomputed as a normal retirement benefit payable by the Plan.
Benefit	The Normal Retirement Benefit calculated with credited service including time while disabled.

### Termination of Employment

If employment is terminated prior to the completion of 7.5 years of credited service, the participant is entitled to receive the vested portion of the participant's alternate benefit accrual account as a lump sum payment.

If employment is terminated after completion of 7.5 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 65. Alternatively, the participant may elect a vested early benefit payable beginning at age 55 which is actuarially equivalent.

### Death Benefit

If a participant dies before completion of 15 years of credited service and the death occurs in line-of-duty, or, if not line of duty, the participant had completed 7.5 years of credited service before death, the participant's eligible beneficiary shall receive the vested portion of the participant's alternate benefit accrual account as a lump sum payment.

If a participant dies after completion of 15 years of credited service the participant's eligible spouse shall receive 75% of the participant's pension calculated as if the participant had retired immediately before death. This benefit shall be payable when the spouse reaches age 65. The participant's final average earnings is adjusted by the COLA from the participant's death until the spouse reaches age 65.

### Contributions

See Alternate Benefit Accrual Account.

### Cost of Living Adjustment

A maximum of 4% annual adjustment payable January 1 of each year based on CPI changes applies to the following benefits:

- 1) Retired participants after age 65
- 2) Disabled participants
- 3) Survivor benefits for dependent children
- 4) Survivor benefits for spouses age 65 and over.

In no event, however, will the Plan C benefits exceed 100% of final average pay.



## ***Schedule E – Summary of Main System Provisions – Plan D***

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Eligibility	All employees participate who are hired on or after July 1, 2011, including all full-time, part-time and elected employees, and employees of all joint City/County agencies administered by Shelby County. CETA employees, Board of Education employees, employees electing Social Security coverage, and Joint City/County agencies not administered by Shelby County cannot participate.
Final Average Earnings	The average over the 5 highest consecutive years of earnings.
Normal Retirement Benefit	
Eligibility	Age 67 with at least 7.5 years of credited service for general employees and age 55 with at least 7.5 years of credited service for public safety employees.
Benefit	Final average earnings multiplied by credited service multiplied by 2.175%.
Early Retirement Benefit	
Eligibility	Age 62 with at least 7.5 years of credited service for general employees and age 50 with the last 20 years of credited service being in a public safety classification for public safety employees.
Benefit	Final average earnings multiplied by credited service and a percentage from Table ERP-S and Table ERP-PS, which is included as part of the plan.
Disability Retirement	
Eligibility	No disability benefits are provided by the Plan except for transfers. Upon reaching age 65, a disabled participant will have any disability benefit recomputed as a normal retirement benefit payable by the Plan.
Benefit	The Normal Retirement Benefit calculated with credited service including time while disabled.
Termination of Employment	<p>If employment is terminated prior to the completion of 7.5 years of credited service, the participant is entitled to receive the vested portion of the participant's alternate benefit accrual account as a lump sum payment.</p> <p>For general employees, if employment is terminated after completion of 7.5 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 67. Alternatively, the participant may elect a vested early benefit payable beginning at age 62 which is actuarially equivalent.</p>



## ***Schedule E – Summary of Main System Provisions – Plan D***

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For public safety employees, if employment is terminated after completion of 7.5 years of credited service, a deferred vested benefit equal to the participant's accrued benefit at date of termination is paid commencing at age 55. Alternatively, the participant may elect a vested early benefit payable beginning at age 50 which is actuarially equivalent.

### **Death Benefit**

If a participant dies before completion of 15 years of credited service and the death occurs in line-of-duty, or, if not line of duty, the participant had completed 7.5 years of credited service before death, the participant's eligible beneficiary shall receive the amount of the participant contribution account.

If a participant dies after completion of 15 years of credited service the participant's eligible spouse shall receive 75% of the participant's pension calculated as if the participant had retired immediately before death. This benefit shall be payable when the spouse reaches age 67. The participant's final average earnings is adjusted by the COLA from the participant's death until the spouse reaches age 67.

### **Contributions**

Employees contribute 8.0% of earnings.

### **Cost of Living Adjustment**

A maximum of 2% annual adjustment payable January 1 of each year based on CPI changes applies to the following benefits:

- 1) Retired participants after age 65
- 2) Disabled participants
- 3) Survivor benefits for dependent children
- 4) Survivor benefits for spouses age 65 and over.

In no event, however, will the Plan D benefits exceed 100% of final average pay.



**Schedule F – Tables of Membership Data**

**TABLE 1  
RECONCILIATION OF DATA**

	<u>Actives</u>	<u>County to City Transfers</u>	<u>Retirees</u>	<u>Disabled</u>	<u>Beneficiaries</u>	<u>Vested Terms</u>	<u>Total</u>
1. Headcounts as of June 30, 2019	5,053	158	3,372	41	627	210	9,461
2. Change in status during the year:							
a. Death	(12)		(107)	(4)	(34)	(3)	(160)
c. Disabled							
d. Retired	(133)	(5)	159	(1)		(20)	
e. Terminated Vested	(17)	(1)				18	
f. Terminated Not Vested	(314)	(12)					(326)
g. Benefits Expired/Refund					(3)	(3)	(6)
h. Transfer to/from City							
3. New member due to:							
a. New Hires	427						427
b. Rehires	22	(2)	(3)				17
c. Death of Participant					45		45
d. Adjustments			1		1	11	13
4. Headcounts as of June 30, 2020	5,026	138	3,422	36	636	213	9,471

In addition, there are 431 terminated participants entitled to a refund of contributions.



**Schedule F – Tables of Membership Data**

**TABLE 2**

**PLAN A**

**SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE  
AS OF JUNE 30, 2020**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	≥ 40	No.	Payroll
Under 25												
25 to 29												
30 to 34												
35 to 39					1						1	29,924
40 to 44					34	18					52	2,758,381
45 to 49					81	75	7				163	8,872,109
50 to 54					73	98	42	13			226	12,383,561
55 to 59					79	93	49	39	4		264	14,104,651
60 to 64					46	65	33	31	9	5	189	10,174,948
65 to 69					27	37	28	24	8	5	129	7,046,650
70 & up					10	8	16	14	3	2	53	3,470,129
Total					351	394	175	121	24	12	1,077	58,840,353

Average Age 56.6

Average Service 23.0



**Schedule F – Tables of Membership Data**

**TABLE 3**

**PLAN C**

**SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE  
AS OF JUNE 30, 2020**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	≥ 40	No.	Payroll
Under 25												
25 to 29												
30 to 34			6	9							15	753,282
35 to 39			17	85	15	1					118	6,604,071
40 to 44			14	98	60	29					201	11,605,419
45 to 49			19	96	85	92	15	2			309	18,195,827
50 to 54			5	90	71	100	67	25			358	20,669,708
55 to 59			6	79	31	59	65	69	7		316	18,398,001
60 to 64			6	66	15	19	26	32	14	7	185	10,542,363
65 to 69			6	35	15	13	7	9	6	1	92	6,042,843
70 & up			2	6	5	7	2	1	1	1	25	1,881,362
<b>Total</b>			81	564	297	320	182	138	28	9	1,619	94,692,876

Average Age 51.8

Average Service 18.8



**Schedule F – Tables of Membership Data**

**TABLE 4**

**PLAN D**

**SCHEDULE OF ACTIVE MEMBERS BY AGE AND SERVICE  
AS OF JUNE 30, 2020**

Attained Age	Completed Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	≥ 40	No.	Payroll
Under 25	22	54									76	2,892,518
25 to 29	35	320	39								394	16,621,188
30 to 34	32	277	183								492	23,101,327
35 to 39	24	192	130								346	16,854,537
40 to 44	15	134	88								237	11,868,100
45 to 49	18	127	75								220	10,881,169
50 to 54	10	115	85								210	10,788,205
55 to 59	10	92	74								176	9,436,254
60 to 64	9	58	37								104	5,532,432
65 to 69	2	23	25								50	2,653,698
70 & up	1	11	11								23	1,645,832
<b>Total</b>	<b>178</b>	<b>1,403</b>	<b>747</b>								<b>2,328</b>	<b>112,275,260</b>

Average Age 40.2

Average Service 3.4





## Schedule F – Tables of Membership Data

TABLE 5

PLAN B

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES  
AS OF JUNE 30, 2020

<u>Attained Age</u>	<u>Number of Members</u>	<u>Total Annual Benefits</u>	<u>Average Annual Benefit</u>
Under 50	-	\$ -	\$ -
50 – 54	-	-	-
55 – 59	4	67,232	16,808
60 – 64	34	981,956	28,881
65 – 69	98	3,218,952	32,846
70 – 74	168	4,860,578	28,932
75 – 79	169	4,775,425	28,257
80 – 84	139	3,141,210	22,599
85 – 89	94	1,950,400	20,749
90 & Over	104	1,716,238	16,502
Total	810	\$ 20,711,991	\$ 25,570



## Schedule F – Tables of Membership Data

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TABLE 6

PLAN A

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES  
AS OF JUNE 30, 2020

<u>Attained Age</u>	<u>Number of Members</u>	<u>Total Annual Benefits</u>	<u>Average Annual Benefit</u>
Under 50	25	\$ 504,139	\$ 20,166
50 – 54	9	129,997	14,444
55 – 59	68	933,155	13,723
60 – 64	232	3,687,394	15,894
65 – 69	466	8,860,746	19,014
70 – 74	505	10,269,877	20,336
75 – 79	346	6,729,193	19,449
80 – 84	220	3,409,836	15,499
85 – 89	101	1,617,549	16,015
90 & Over	45	670,208	14,894
Total	2,017	\$ 36,812,094	\$ 18,251

In addition, there are 134 participants entitled to deferred annual benefits totaling \$3,186,458.



## Schedule F – Tables of Membership Data

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TABLE 7

PLAN C

SCHEDULE OF RETIRED MEMBERS AND BENEFICIARIES  
AS OF JUNE 30, 2020

<u>Attained Age</u>	<u>Number of Members</u>	<u>Total Annual Benefits</u>	<u>Average Annual Benefit</u>
Under 50	14	\$ 299,331	\$ 21,381
50 – 54	87	2,579,695	29,652
55 – 59	249	7,507,876	30,152
60 – 64	331	10,098,736	30,510
65 – 69	346	10,446,463	30,192
70 – 74	186	5,593,177	30,071
75 – 79	37	870,832	23,536
80 – 84	10	193,926	19,393
85 – 89	3	51,194	17,065
90 & Over	-	-	-
Total	1,263	\$ 37,641,230	\$ 29,803

In addition, there are 71 participants entitled to deferred annual benefits totaling \$1,859,857.



## ***Schedule G – Analysis of Financial Experience***

**Gains & Losses in Accrued Liabilities  
Resulting from Difference Between  
Assumed Experience & Actual Experience  
(\$ Thousands)**

Type of Activity	\$ Gain (or Loss) For Year Ending 6/30/2020	\$ Gain (or Loss) For Year Ending 6/30/2019
<b>Age &amp; Service Retirements.</b> If members retire at older ages, there is a gain. If younger ages, a loss.	\$ 3,104.2	\$ (1,626.4)
<b>Disability Retirements.</b> If disability claims are less than assumed, there is a gain. If more claims, a loss.	(214.9)	(306.5)
<b>Death-in-Service Benefits.</b> If survivor claims are less than assumed, there is a gain. If more claims, there is a loss.	1,003.9	505.6
<b>Withdrawal From Employment.</b> If more liabilities are released by withdrawals than assumed, there is a gain. If smaller releases, a loss.	(1,090.4)	(1,396.6)
<b>Pay Increases.</b> If there are smaller pay increases than assumed, there is a gain. If greater increases, a loss.	5,490.6	(9,425.9)
<b>New Members.</b> Additional unfunded accrued liability will produce a loss.	(1,550.5)	(2,161.9)
<b>Investment Income.</b> If there is a greater investment income than assumed, there is a gain. If less income, a loss.	(22,314.0)	(4,353.5)
<b>Death After Retirement.</b> If retirants live longer than assumed, there is a loss. If not as long, a gain.	(751.1)	(760.9)
<b>Other.</b> Miscellaneous gains and losses resulting from changes in valuation software, data adjustments, timing of financial transactions, etc.	<u>318.3</u>	<u>(4,566.8)</u>
<b>Gain (or Loss) During Year From Financial Experience</b>	<u>\$ (16,003.9)</u>	<u>\$ (24,092.9)</u>
<b>Non-Recurring Items.</b> Adjustments for plan amendments, assumption changes, or method changes.	<u>(37,759.7)</u>	<u>0.0</u>
<b>Composite Gain (or Loss) During Year</b>	<u>\$ (53,763.6)</u>	<u>\$ (24,092.9)</u>



## ***Schedule H – 10-Year Projection of Funded Ratio and Employer Contribution Rates***

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The results of actuarial valuations are a “snapshot” of the financial position on the valuation date, based on the assumed number of active employees and current beneficiaries. Projections simulate future actuarial valuation results over a forecast period (ten years in this case) by “creating” future new hires and performing valuations using the projected membership. The following items are assumed for the projected results provided on the following page.

- Active Employee Growth Rate: 0%
- Valuation Discount Rate: 6.80%
- Investment Rate of Return: 6.80% each year
- Actuarial Value of Assets: 10-year smoothing, No Corridor
- Amortization Method: Level Dollar, Closed
- June 30, 2020 Amortization Period: Weighted 18.4-year period
- Future Contributions: Based on Expected Actuarially Determined Contributions

All other demographic and economic changes are assumed to occur in accordance with the actuarial assumptions used for the actuarial valuation.



**Schedule H – 10-Year Projection of Funded Ratio and Employer Contribution Rates**

