City of Delray Beach Firefighters' Retirement System

ACTUARIAL VALUATION REPORT
AS OF OCTOBER 1, 2019

ANNUAL EMPLOYER CONTRIBUTION FOR THE FISCAL YEAR
ENDING SEPTEMBER 30, 2021

GRS

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June 8, 2020

Board of Trustees
City of Delray Beach Firefighters'
Retirement System
Delray Beach, Florida

Re: City of Delray Beach Firefighters' Retirement System
Actuarial Valuation as of October 1, 2019

Dear Board Members:

The results of the October 1, 2019 Annual Actuarial Valuation of the City of Delray Beach Firefighters' Retirement System are presented in this report. This report does not reflect the recent and still developing impact of COVID-19, which may significantly impact demographic and economic experience.

This report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This report may be provided to parties other than the System only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the System's funding progress, to determine the employer contribution rate for the fiscal year ending September 30, 2021, and to determine the actuarial information for Governmental Accounting Standards Board (GASB) Statement No. 67. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section B of this report. This report includes risk metrics on page 4 but does not include a more robust assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The findings in this report are based on data and other information through October 1, 2019. The valuation was based upon information furnished by the Plan Administrator concerning Retirement System benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

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This report was prepared using certain assumptions approved by the Board as authorized under Florida Statutes and prescribed by the Florida Statutes as described in the section of this report entitled Actuarial Assumptions and Cost Method. The assumed mortality rates detailed in the Actuarial Assumptions and Cost Method section were prescribed by Chapter 112.63, Florida Statutes. All actuarial assumptions used in this report are reasonable for purposes of this valuation.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the City of Delray Beach Firefighters' Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board, and with applicable statutes.

Jeffrey Amrose and Trisha Amrose are members of the American Academy of Actuaries. These actuaries meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

This actuarial valuation and/or cost determination was prepared and completed by us or under our direct supervision, and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate. In our opinion, the techniques and assumptions used are reasonable, meet the requirements and intent of Part VII, Chapter 112, Florida Statutes, and are based on generally accepted actuarial principles and practices. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and Report with the Board of Trustees and to answer any questions pertaining to the valuation.

Respectfully submitted,

GABRIEL, ROEDER, SMITH & COMPANY

By ______________________ ______________________

Jeffrey Amrose, MAAA
Enrolled Actuary No. 20-6599
Senior Consultant and Actuary

Trisha Amrose, MAAA
Enrolled Actuary No. 20-8010
Consultant and Actuary

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SECTION A

DISCUSSION OF VALUATION RESULTS

DISCUSSION OF VALUATION RESULTS

Comparison of Required Employer Contributions

The required employer contribution this year compared with the preceding year is as follows:

	For FYE 9/30/2021 Based on 10/1/2019 Valuation	For FYE 9/30/2020 Based on 10/1/2018 Valuation	Increase (Decrease)
Required Contribution	$ 9,230,484	$ 8,748,165	$ 482,319
As % of Contr. Year Payroll	73.79 %	74.33 %	(0.54) %
Estimated State Contribution	1,129,759	1,129,759 *	0
As % of Contr. Year Payroll	9.03 %	9.60 %	(0.57) %
Net Employer Contribution**	8,100,725	7,618,406	482,319
As % of Contr. Year Payroll	64.76 %	64.73 %	0.03 %

* Updated from the prior year's valuation report to reflect the State contribution received for the fiscal year ending September 30, 2019.

** Contribution may be offset by the $435,051 prepaid City contribution.

Payment of Required Contribution

The contribution developed in this valuation has been calculated as though payments are made at the end of each biweekly pay period. **If the full contribution for the fiscal year ending September 30, 2021 is paid on October 1, 2020, the net required employer contribution is $7,798,004 or 62.34% of covered payroll.**

Further, the required Employer contribution has been computed with the assumption that the amount to be received from the State in 2020 and 2021 will be equal to the amount received in 2019 of $1,129,759. If the actual payment from the State falls below this amount, then the Employer must increase its contribution by the difference.

Actual contributions for the fiscal year ending September 30, 2019 were $6,452,812 from the City plus $1,129,759 of annual State revenue, for a total of $7,582,571. The total annual required contribution was $7,582,571.

Revisions in Benefits

In compliance with newly adopted Florida Statutes Chapter 112.1816, the following additional provisions are reflected:

> As provided and subject to the limitations in Section 112.1816, Florida Statutes, effective July 1, 2019, a firefighter who is diagnosed with certain specified cancers is presumed to have contracted those cancers while in the line of duty for purposes of determining the disability or death benefit payable from the Plan.

In conjunction with the benefit changes, the proportion of firefighter disabilities and pre-retirement deaths that are assumed to be service-connected (versus non-service connected) was increased from 75% to 85%.

The impact of this change was an increase in the contribution requirement of 0.11% of covered payroll.

Revisions in Actuarial Assumptions and Methods

Subsequent to the previous valuation an experience investigation was performed for the 7 years ending September 30, 2019. Following this study, the Board of Trustees approved changing rates of retirement, withdrawal, and salary increases. The investment return assumption was also lowered from 7.0% last valuation to 6.75% this valuation. For more information see the report titled “Experience Investigation for the 7 Years Ended September 30, 2019” dated May 20, 2020.

Also reflected in this valuation is a change in mortality tables and improvement scales. These were updated to reflect updated mortality assumptions used in the July 1, 2019 Florida Retirement System (FRS) Actuarial Valuation. Refer to the Actuarial Assumptions and Cost Method section of this report for details.

The net effect of all the assumption changes described above was an increase in the required employer contribution by $178,671, or 0.90% of pay.

Actuarial Experience

There was a net actuarial loss of $318,669 since the last valuation which means that actual experience was less favorable than expected. The loss was primarily due to higher than expected average salary increases (8.1% compared to 5.6% expected) and more than expected retirements (7 actual compared to 4 expected). The liability loss was partially offset by gains due to a recognized investment return above the assumed rate of 7.00%. The investment rate of return was 4.6% based on market value of assets and 7.3% based on actuarial value of assets. The net loss caused the required employer contribution to increase by 0.23% of covered payroll.

Funded Ratio

This year’s funded ratio is 63.7% compared to 61.6% last year. The funded ratio was 63.5% before the benefit and assumption changes described above. The ratio is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability.

Analysis of Change in Employer Contribution

The components of change in the required Employer contribution are as follows:

Contribution Rate Last Year	64.73	%
Experience (Gains) or Losses	0.23	
Revision in Assumptions/Methods	0.90	
Amortization Payment on UAAL	(1.50)	
Normal Cost Rate	(0.58)	
Administrative Expense	0.38	
Benefit Changes	0.11	
Change in State Contribution Rate	0.49	
Contribution Rate This Year	64.76	%

Variability of Future Contribution Rates

The Actuarial Cost Method used to determine the required contribution is intended to produce contribution rates which are generally level as a percent of payroll. Even so, when experience differs from the assumptions, as it often does, the employer's contribution rate can vary significantly from year-to-year. Over time, if the year-to-year gains and losses offset each other, the contribution rate would be expected to return to the current level, but this does not always happen.

The Actuarial Value of Assets exceeds the Market Value of Assets by $43,840 as of the valuation date (see Section C). This difference will be gradually recognized in the absence of offsetting gains and losses. In turn, the computed employer contribution rate will increase by approximately 0.03% of covered payroll.

Relationship to Market Value

If Market Value had been the basis for the valuation, the City contribution rate would have been 64.79% and the funded ratio would have been 63.7%. In the absence of other gains and losses or changes, the City contribution rate should increase to that level over the next several years.

Conclusion

It is important to note that system assets are not sufficient to cover the liabilities for current retirees. As of October 1, 2019, the assets are $98.4 million (after reflecting the $10.1 million reserve which is earmarked for future COLAs) and the liability for current retirees is $115.6 million. Some steps have been taken to address these issues, such as shortening the amortization period and lowering the investment return assumption. Given the low funded ratio, it is advisable to consider further steps, such as making contributions in excess of the minimum required amount. For each additional $5 million contributed, the funded ratio will increase by 2.9%.

The remainder of this Report includes detailed actuarial valuation results, information relating to the pension fund, financial accounting information, miscellaneous employee data and a summary of plan provisions.

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY AND ACTUARIALLY DETERMINED CONTRIBUTION

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements 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 due to changing conditions; 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. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution rate shown on page 1 may be considered as a minimum contribution rate that complies with the Board's funding policy. The timely receipt of the actuarially determined contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

PLAN MATURITY MEASURES

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	2019	2018
Ratio of the market value of assets to total payroll*	8.3	8.4
Ratio of the actuarial accrued liability to payroll*	13.5	13.8
Ratio of actives to retirees and beneficiares	1.0	1.0
Ratio of net cash flow to market value of assets	0.0%	-0.4%

* *Net of the COLA reserve*

RATIO OF MARKET VALUE OF ASSETS TO PAYROLL

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 2.0 times the payroll, a return on assets 5% different than assumed would equal 10% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

RATIO OF ACTUARIAL ACCRUED LIABILITY TO PAYROLL

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 2.5 times the payroll, a change in liability 2% other than assumed would equal 5% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

RATIO OF ACTIVES TO RETIREES AND BENEFICIARIES

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

RATIO OF NET CASH FLOW TO MARKET VALUE OF ASSETS

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

ADDITIONAL RISK ASSESSMENT

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

CHAPTER REVENUE

Actuarial Confirmation of the Use of State Chapter Money	
1. Base Amount Previous Plan Year	$ 1,074,825
2. Amount Received for Previous Plan Year	1,129,759
3. Benefit Improvements	0
4. Excess Funds for Previous Plan Year	0
5. Accumulated Excess at Beginning of Previous Year	0
6. Prior Excess Used in Previous Plan Year	0
7. Accumulated Excess as of Valuation Date (Available for Benefit Improvements): (4) + (5) - (6)	0 *
8. Base Amount This Plan Year	$ 1,129,759

* Not including the COLA Account, which is shown on the following page.

The Accumulated Excess shown in line 7 is being held in reserve and is subtracted from Plan assets (see Section C of this Report). The Base Amount in line 8 is the amount the employer may take as a credit against its required contribution; however, in no event may the employer take credit for more than the actual amount of Chapter revenue received.

Under the mutual agreement between the City and the Union, the City may use up to $1,206,994 to offset the required contribution. Any excess Chapter 175 revenue above this amount will be applied to the COLA Account. Please see the following page for the development of the COLA Account.

COLA ACCOUNT

ANALYSIS OF EXCESS STATE CONTRIBUTIONS

	October 1, 2019	October 1, 2018
A. COLA Account at Beginning of Year	$10,138,685	$9,784,311
B. Investment Return	4.59%	8.16%
C. Investment Earnings	465,366	798,400
D. Chapter 175 Regular Revenue	1,129,759	1,074,825
E. Chapter 175 Supplemental Revenue	0	0
F. Total Chapter 175 Revenue	1,129,759	1,074,825
G. Chapter Revenue in Excess of $1,206,994	0	0
H. Benefit Enhancement Percentage	0.50%	0.50%
I. Total Present Value of Benefit Enhancement	505,352	444,026
J. COLA Account at End of Year (A. + C. + G. - I.)	$10,098,699	$10,138,685

SECTION B

VALUATION RESULTS

PARTICIPANT DATA			
	October 1, 2019 *After Changes*	**October 1, 2019** *Before Changes*	**October 1, 2018**
ACTIVE MEMBERS			
Number	141	141	139
Covered Annual Payroll	$ 11,851,375	$ 11,752,574	$ 11,150,507
Average Annual Payroll	$ 84,052	$ 83,352	$ 80,219
Average Age	34.9	34.9	35.4
Average Past Service	8.1	8.1	8.5
Average Age at Hire	26.8	26.8	26.9
RETIREES, BENEFICIARIES & DROP			
Number	135	135	130
Annual Benefits	$ 8,632,500	$ 8,632,500	$ 8,030,319
Average Annual Benefit	$ 63,944	$ 63,944	$ 61,772
Average Age	60.7	60.7	60.4
DISABILITY RETIREES			
Number	4	4	4
Annual Benefits	$ 137,705	$ 137,705	$ 136,524
Average Annual Benefit	$ 34,426	$ 34,426	$ 34,131
Average Age	62.4	62.4	61.4
TERMINATED VESTED MEMBERS (EXCLUDING NON-VESTED REFUNDS PAYABLE)			
Number	1	1	0
Annual Benefits	$ 28,716	$ 28,716	0
Average Annual Benefit	$ 28,716	$ 28,716	0
Average Age	34.6	34.6	0.0

ACTUARIALLY DETERMINED CONTRIBUTION (ADC)				
A. Valuation Date	October 1, 2019 *After All Changes*	October 1, 2019 *After Plan Change*	October 1, 2019 *Before Changes*	October 1, 2018
B. ADC to Be Paid During Fiscal Year Ending	9/30/2021	9/30/2021	9/30/2021	9/30/2020
C. Assumed Dates of Employer Contributions	Biweekly	Biweekly	Biweekly	Biweekly
D. Annual Payment to Amortize Unfunded Actuarial Liability	$ 5,756,932	$ 5,889,711	$ 5,889,209	$ 5,724,692
E. Employer Normal Cost	2,701,414	2,394,687	2,382,857	2,282,165
F. ADC if Paid on the Valuation Date: D+E	8,458,346	8,284,398	8,272,066	8,006,857
G. ADC Adjusted for Frequency of Payments	8,745,507	8,575,677	8,562,912	8,288,378
H. ADC as % of Covered Payroll	73.79 %	72.97 %	72.86 %	74.33 %
I. Assumed Rate of Increase in Covered Payroll to Contribution Year	5.55 %	5.55 %	5.55 %	5.55 %
J. Covered Payroll for Contribution Year	12,509,126	12,404,842	12,404,842	11,769,360
K. ADC for Contribution Year: H x J	9,230,484	9,051,813	9,038,168	8,748,165
L. Estimated Credit for State Revenue in Contribution Year	1,129,759	1,129,759	1,129,759	1,129,759
M. Required Employer Contribution (REC) in Contribution Year	8,100,725	7,922,054	7,908,409	7,618,406
N. REC as % of Covered Payroll in Contribution Year: M/J	64.76 %	63.86 %	63.75 %	64.73 %

ACTUARIAL VALUE OF BENEFITS AND ASSETS				
A. Valuation Date	October 1, 2019 *After All Changes*	October 1, 2019 *After Plan Change*	October 1, 2019 *Before Changes*	October 1, 2018
B. Actuarial Present Value of All Projected Benefits for				
1. Active Members				
a. Service Retirement Benefits	$ 75,079,512	$ 73,729,516	$ 73,729,512	$ 72,731,896
b. Vesting Benefits	3,232,842	1,100,362	1,100,362	1,121,487
c. Disability Benefits	1,828,071	1,838,722	1,742,728	1,609,170
d. Preretirement Death Benefits	851,138	1,054,294	1,015,360	940,676
e. Return of Member Contributions	520,945	444,376	446,107	391,371
f. Total	81,512,508	78,167,270	78,034,069	76,794,600
2. Inactive Members				
a. Service Retirees & Beneficiaries	114,123,095	114,776,313	114,776,313	107,023,528
b. Disability Retirees	1,503,100	1,477,098	1,477,098	1,489,171
c. Terminated Vested Members*	121,244	114,284	114,284	16,284
d. COLA Account	10,098,699	10,098,699	10,098,699	10,138,685
e. Total	125,846,138	126,466,394	126,466,394	118,667,668
3. Total for All Members	207,358,646	204,633,664	204,500,463	195,462,268
C. Actuarial Accrued (Past Service) Liability under Entry Age Normal	170,306,017	170,919,931	170,913,717	164,163,274
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	148,095,900	147,288,757	147,175,823	142,479,073
E. Plan Assets				
1. Market Value	108,468,348	108,468,348	108,468,348	103,733,220
2. Actuarial Value	108,512,188	108,512,188	108,512,188	101,123,590
F. Unfunded Actuarial Accrued Liability	61,793,829	62,407,743	62,401,529	63,039,684
G. Actuarial Present Value of Projected Covered Payroll	126,439,343	123,438,438	123,438,426	112,974,649
H. Actuarial Present Value of Projected Member Contributions	11,247,948	10,913,712	10,913,711	10,017,420
I. Accumulated Contributions of Active Members	6,338,976	6,338,976	6,338,976	6,179,116

* Terminated Vested liability includes refunds payable for terminated non-vested members.

CALCULATION OF EMPLOYER NORMAL COST				
A. Valuation Date	October 1, 2019 *After All Changes*	October 1, 2019 *After Plan Change*	October 1, 2019 *Before Changes*	October 1, 2018
B. Normal Cost for				
1. Service Retirement Benefits	$ 3,141,047	$ 2,923,009	$ 2,923,008	$ 2,830,652
2. Vesting Benefits	200,191	95,247	95,247	93,161
3. Disability Benefits	124,813	121,352	113,087	108,687
4. Preretirement Death Benefits	65,089	70,482	66,679	64,222
5. Return of Member Contributions	76,767	82,198	82,437	77,692
6. Total for Future Benefits	3,607,907	3,292,288	3,280,458	3,174,414
7. Assumed Amount for Administrative Expenses	160,131	160,131	160,131	111,297
8. Total Normal Cost	3,768,038	3,452,419	3,440,589	3,285,711
C. Expected Member Contribution	1,066,624	1,057,732	1,057,732	1,003,546
D. Employer Normal Cost: B8-C	2,701,414	2,394,687	2,382,857	2,282,165
E. Employer Normal Cost as a % of Covered Payroll	22.79%	20.38%	20.28%	20.47%

A. UAAL AMORTIZATION PERIOD AND PAYMENTS							
Original UAAL			Current UAAL				
					Payment		
Date Established	Base Established	Amortization Period (Years)	Years Remaining	Amount	After All Changes	After Plan Change	Before Changes
10/1/2015	Initial Unfunded Liability	18	14	$ 36,614,954	$ 3,622,116	$ 3,670,023	$ 3,670,023
10/1/2015	Benefit Change	20	16	(1,070,831)	(97,108)	(98,560)	(98,560)
10/1/2016	Assumption Change	20	17	3,883,725	339,165	344,524	344,524
10/1/2016	Actuarial Loss	20	17	6,705,344	585,576	594,829	594,829
10/1/2017	Actuarial Gain	20	18	(1,575,285)	(132,910)	(135,119)	(135,119)
10/1/2017	Assumption Change	20	18	11,603,901	979,042	995,314	995,314
10/1/2017	Method Change	20	18	(11,747)	(991)	(1,008)	(1,008)
10/1/2018	Actuarial Loss	20	19	1,486,915	121,552	123,669	123,669
10/1/2018	Assumption Change	20	19	4,445,884	363,441	369,772	369,772
10/1/2019	Actuarial Loss	20	20	318,669	25,305	25,765	25,765
10/1/2019	Benefit Change	20	20	6,214	493	502	N/A
10/1/2019	Assumption Change	20	20	(613,914)	(48,749)	N/A	N/A
				$ 61,793,829	$ 5,756,932	$ 5,889,711	$ 5,889,209

B. <u>Amortization Schedule</u>

The UAAL is being amortized as a level percentage of covered annual payroll over the number of years remaining in the amortization period. The following schedule illustrates the expected amortization of the UAAL:

Amortization Schedule	
Year	Expected UAAL
2019	$ 61,793,829
2020	59,819,398
2021	57,639,780
2022	55,240,294
2023	52,605,247
2024	49,717,879
2029	30,825,190
2034	6,904,411
2039	-

ACTUARIAL GAINS AND LOSSES

The assumptions used to anticipate mortality, employment turnover, investment income, expenses, salary increases, and other factors have been based on long range trends and expectations. Actual experience can vary from these expectations. The variance is measured by the gain and loss for the period involved. If significant long term experience reveals consistent deviation from what has been expected and that deviation is expected to continue, the assumptions should be modified. The net actuarial gain (loss) for the past year is computed as follows:

1. Last Year's UAAL	63,039,684
2. Last Year's Employer Normal Cost	2,282,165
3. Last Year's Contributions	
a. Employer Contribution	6,452,812
b. State Contribution Used to Offset Required Contribution	1,129,759
c. Total Contributions	7,582,571
4. Interest at the Assumed Rate on:	
a. 1 and 2 for one year	4,572,529
b. 3 from dates paid	228,947
c. a - b	4,343,582
5. This Year's Expected UAAL Prior to Revision: 1 + 2 - 3c + 4c	62,082,860
6. Change in UAAL Due to Plan Amendments and/or Changes in Actuarial Assumptions and Methods	(607,700)
7. This Year's Expected UAAL (after changes): 5 + 6	61,475,160
8. This Year's Actual UAAL (after changes)	61,793,829
9. Net Actuarial Gain/(Loss): 7 - 8	(318,669)
10. Gain/(Loss) Due to Investment	337,022
11. Gain/(Loss) Due to Other Sources	(655,691)

Net actuarial gains/(losses) since October 1, 2016 have been as follows:

Year Ending	Actuarial Gain / (Loss)
9/16	$ (6,763,388)
9/17	1,589,255
9/18	(1,495,646)
9/19	(318,669)

The fund earnings and salary increase assumptions have considerable impact on the cost of the plan so it is important that they are in line with the actual experience. The following table shows the actual fund earnings and salary increase rates compared to the assumed rates for the last few years:

Year Ending	Investment Return		Salary Increases	
	Actual*	Assumed	Actual**	Assumed
9/30/2014	9.4 %	8.0 %	0.8 %	5.7 %
9/30/2015	8.8	8.0	9.8	5.6
9/30/2016	7.1	8.0	28.1	5.6
9/30/2017	7.1 ***	8.0	(4.5)	5.3
9/30/2018	8.1	7.25	10.7	5.5
9/30/2019	7.3	7.00	8.1	5.6
Average	8.0 %	---	8.4 %	---

** Prior to 9/30/2017, the investment return was based on the combined Police and Fire Retirement System.*
*** Prior to 9/30/2016, the salary increase was based on the combined Police and Fire Retirement System.*
**** Before reflecting fresh start of assets as of 10/1/2016 and new asset smoothing method.*

The actual investment return rates shown above are based on the actuarial value of assets. The actual salary increase rates shown above are the increases received by those active members who were included in the actuarial valuations both at the beginning and end of each period.

Number Added To and Removed from Active Participation

Actual (A) Versus Expected (E) Decrements

Year Ended	Number Added During Year		Service & DROP Retirement		Disability Retirement		Died In Service		Terminations				Active Members End of Year
									Vested	Other	Totals		
	A	E	A	E	A	E	A	E	A	A	A	E	
9/30/2017	25	4	2	4	0	0	0	0	0	2	2	3	133
9/30/2018	14	8	5	2	0	0	0	0	0	3	3	4	139
9/30/2019	13	11	7	4	0	0	0	0	1	3	4	5	141
9/30/2020				1		0		0				5	

RECENT HISTORY OF VALUATION RESULTS									
	Number of			Actuarial		Unfunded		Employer Normal Cost	
Valuation Date	Active Members	Inactive Members	Covered Annual Payroll	Value of Assets	Accrued Liability	Accrued Liability	Funded Ratio	Amount	% of Payroll
10/1/2015	110	116	$8,019,724	$83,276,890	$121,406,576	$38,129,686	68.6 %	$1,366,029	17.03 %
10/1/2016	112	127	9,536,432	89,529,663	136,953,691	47,424,028	65.4	1,563,454	16.39
10/1/2017	133	128	9,960,429	93,945,622	151,453,131	57,507,509	62.0	1,990,286	19.98
10/1/2018	139	134	11,150,507	101,123,590	164,163,274	63,039,684	61.6	2,282,165	20.47
10/1/2019	141	140	11,851,375	108,512,188	170,306,017	61,793,829	63.7	2,701,414	22.79

Results before October 1, 2017 were determined by the Retirement System’s prior actuary, Foster & Foster.

RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS										
	End of Year To Which Valuation Applies	Required Contributions						Actual Contributions		
		Employer & State		Estimated State		Net Employer				
Valuation Date		Amount	% of Payroll	Amount	% of Payroll	Amount	% of Payroll	Employer	State	Total
10/1/2015	9/30/2017	$5,332,347	62.99 %	$1,193,140	14.09 %	$4,139,207	48.90 %	$4,197,643	$1,134,704	$5,332,347
10/1/2016	9/30/2018	6,538,017	64.95	1,134,704	11.27	5,403,313	53.68	$5,463,192	$1,074,825	$6,538,017
10/1/2017	9/30/2019	7,582,571	72.12	1,074,825	10.22	6,507,746	61.90	$6,452,812	$1,129,759	$7,582,571
10/1/2018	9/30/2020	8,748,165	74.33	1,129,759	9.60	7,618,406	64.73	---	---	---
10/1/2019	9/30/2021	9,230,484	73.79	1,129,759	9.03	8,100,725	64.76	---	---	---

Results before October 1, 2017 were determined by the Retirement System's prior actuary, Foster & Foster.

ACTUARIAL ASSUMPTIONS AND COST METHOD

Valuation Methods

Actuarial Cost Method - Normal cost and the allocation of benefit values between service rendered before and after the valuation date were determined using an **Individual Entry-Age Actuarial Cost Method** having the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities - Unfunded Actuarial Accrued Liabilities (full funding credit if assets exceed liabilities) were amortized by level (principal & interest combined) percent-of-payroll contributions over a reasonable period of future years.

Actuarial Value of Assets – The Actuarial Value of Assets phase in the difference between the expected return on actuarial value and actual return on market value of assets at the rate of 20% per year. The Actuarial Value of Assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the Market Value of plan assets and whose upper limit is 120% of the Market Value of plan assets. During periods when investment performance exceeds the assumed rate, Actuarial Value of Assets will tend to be less than Market Value. During periods when investment performance is less than assumed rate, Actuarial Value of Assets will tend to be greater than Market Value.

Valuation Assumptions

The actuarial assumptions used in the valuation are shown in this Section. Both the economic and decrement assumptions were established following an Experience Investigation for the seven years ended September 30, 2019. For detailed information, refer to the Experience Investigation for the 7 Years Ended September 30, 2019, dated May 20, 2020. The covered group is too small to provide statistically significant experience on which to base the mortality assumption. Mortality is based on a commonly used mortality table and projection scale.

Economic Assumptions

The investment return rate assumed in the valuation is 6.75% per year, compounded annually (net after investment expenses). The investment return rate was 7.00% in the previous valuation.

The **Inflation Rate** assumed in this valuation is 2.5% per year. The Inflation Rate is defined to be the expected long-term rate of increases in the prices of goods and services.

The assumed **real rate of return** over inflation is defined to be the portion of total investment return that is more than the assumed inflation rate. Considering other economic assumptions, the 6.75% investment return rate translates to an assumed real rate of return over inflation of 4.25%.

The active member population is assumed to remain constant. For purposes of financing the unfunded liabilities, total payroll is assumed to grow at 1.17% per year (the average growth over the last ten years as determined in 2014).

The rates of salary increase used are based on the member's service and are shown in the table below. This assumption is used to project a member's current salary to the salaries upon which benefits will be based. Part of the assumption for each age is for merit and/or seniority increase, and the other 2.5% recognizes wage inflation, including price inflation, productivity increases, and other macroeconomic forces.

	% Increase in Salary		
Years of Service	Merit and Seniority	Base (Economic)	Total Increase
0 - 4	5.75%	2.5%	8.25%
5 - 9	5.25%	2.5%	7.75%
10 - 14	3.25%	2.5%	5.75%
15 - 19	2.50%	2.5%	5.00%
20+	2.00%	2.5%	4.50%

Demographic Assumptions

The mortality table is the PUB-2010 Headcount Weighted Safety Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Safety Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Safety Healthy Retiree Female Table (post-retirement). These tables use ages set forward one year and mortality improvements to all future years after 2010 using scale MP-2018. These are the same rates used for the Special Risk Class members in the July 1, 2019 Actuarial Valuation of the Florida Retirement System (FRS).

FRS Healthy Post-Retirement Mortality for Special Risk Class Members

Sample Attained	Probability of Dying Next Year		Future Life Expectancy (years)	
Ages (in 2019)	Men	Women	Men	Women
50	0.42 %	0.20 %	32.31	36.15
55	0.56	0.36	27.54	31.12
60	0.93	0.61	22.97	26.35
65	1.32	0.92	18.73	21.86
70	2.10	1.46	14.74	17.61
75	3.58	2.47	11.15	13.69
80	6.41	4.23	8.09	10.25

This assumption is used to measure the probabilities of each benefit payment being made after retirement.

FRS Healthy Pre-Retirement Mortality for Special Risk Class Members

Sample Attained Ages (in 2019)	Probability of Dying Next Year Men	Probability of Dying Next Year Women	Future Life Expectancy (years) Men	Future Life Expectancy (years) Women
50	0.17 %	0.11 %	35.50	39.43
55	0.26	0.16	30.41	34.29
60	0.43	0.22	25.47	29.23
65	0.69	0.30	20.73	24.22
70	1.18	0.55	16.22	19.32
75	2.11	1.09	11.99	14.63
80	6.41	4.23	8.09	10.25

This assumption is used to measure the probabilities of active members dying prior to retirement (85% of pre-retirement deaths are assumed to be service-connected).

For disabled retirees, the male mortality tables are 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Male Table and 20% of the Headcount Weighted Safety Disabled Retiree Male Table, and the female mortality tables are 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Female Table and 20% Headcount Weighted Safety Disabled Retiree Female Table, both with no provision being made for future mortality improvements. These are the same rates used for the Special Risk Class members in the July 1, 2019 Actuarial Valuation of the Florida Retirement System (FRS).

FRS Disabled Mortality for Special Risk Class Members

Sample Attained Ages (in 2019)	Probability of Dying Next Year Men	Probability of Dying Next Year Women	Future Life Expectancy (years) Men	Future Life Expectancy (years) Women
50	1.45 %	1.25 %	24.04	26.84
55	1.91	1.50	20.88	23.54
60	2.37	1.81	17.92	20.32
65	3.00	2.22	15.07	17.17
70	3.91	2.90	12.39	14.10
75	5.30	4.13	9.87	11.22
80	7.66	6.21	7.60	8.67

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Normal Retirement for Members Hired Before October 4, 2016		
Sample Ages	**Years of Service**	**Probability of Normal Retirement**
55+	10 - 19	20.0%
All	20	25.0%
	21	17.5%
	22	17.5%
	23	25.0%
	24	40.0%
	25	100.0%

Normal Retirement for Members Hired After October 4, 2016		
Sample Ages	**Years of Service**	**Probability of Normal Retirement**
55+	10 - 24	20%
All	25	100%

No early retirement rates were assumed.

Rates of separation from active membership were as shown below (rates do not apply to members eligible to retire and do not include separation on account of death or disability). This assumption measures the probabilities of members remaining in employment.

Years of Service	Sample Ages	% of Active Members Separating Within Next Year
0 - 1	All Ages	6.50 %
2 - 3		5.50
4 - 5		5.00
6 - 7		3.75
8 - 9		3.50
10+	0 - 34	1.50
	35 - 39	1.50
	40 - 44	1.00
	45+	1.00

Rates of disability among active members (85% of disabilities are assumed to be service-connected).

Sample Ages	% Becoming Disabled Within Next Year
20	0.07 %
25	0.08
30	0.09
35	0.12
40	0.15
45	0.26
50	0.50
55	0.78

Miscellaneous and Technical Assumptions

Administrative & Investment Expenses	The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the prior year's expenses. Assumed administrative expenses are added to the Normal Cost.
Benefit Service	Service calculated based on completed months is used to determine the amount of benefit payable.
Cost of Living Adjustment	The cost of living adjustment for members who receive future normal retirement benefits is 1.0% starting on the 25th anniversary of the retirees' hire date. Additional increases are available when the revenue under Chapter 175 exceeds $1,206,994. Effective October 4, 2016, the adjustment will begin one year after separating from employment.
Decrement Operation	Disability and mortality decrements operate during retirement eligibility.
Decrement Timing	Decrements of all types are assumed to occur at the beginning of the year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Forfeitures	For vested separations from service, it is assumed that 0% of members separating will withdraw their contributions and forfeit an employer financed benefit. It was further assumed that the liability at termination is the greater of the vested deferred benefit (if any) or the member's accumulated contributions.
Incidence of Contributions	Employer contributions are assumed to be made at the end of each biweekly pay period. Member contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.
Marriage Assumption	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.

Normal Form of Benefit	For married participants, a monthly income payable for life of the member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse. For members who were not eligible for normal retirement on October 4, 2016, the normal form for the benefit based on service after October 4, 2016 is a 10-Year Certain and Life annuity.
Pay Increase Timing	Beginning of fiscal year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
Service Credit Accruals	It is assumed that members accrue one year of service credit per year.

GLOSSARY

Actuarial Accrued Liability (AAL)	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
Actuarial Assumptions	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members; and other items.
Actuarial Cost Method	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
Actuarial Equivalent	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
Actuarial Present Value (APV)	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
Actuarial Present Value of Future Benefits (APVFB)	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits, and inactive, nonretired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
Actuarial Valuation	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67, such as the Funded Ratio and the Actuarially Determined Contribution (ADC).
Actuarial Value of Assets	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the Actuarially Determined Contribution (ADC).

Amortization Method	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
Amortization Payment	That portion of the plan contribution or ADC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
Amortization Period	The period used in calculating the Amortization Payment.
Actuarially Determined Contribution (ADC)	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation, determined under GASB No. 67. The ADC consists of the Employer Normal Cost and Amortization Payment.
Closed Amortization Period	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
Employer Normal Cost	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
Equivalent Single Amortization Period	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
Experience Gain/Loss	A measure of the difference between the normal cost rate from last year and the normal cost rate from this year.
Funded Ratio	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.
GASB	Governmental Accounting Standards Board.
GASB No. 67 and GASB No. 68	These are the governmental accounting standards that set the accounting rules for public retirement systems and the employers that sponsor or contribute to them. Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement systems, while Statement No. 67 sets the rules for the systems themselves.

Normal Cost	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
Open Amortization Period	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
Unfunded Actuarial Accrued Liability	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
Valuation Date	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.

SECTION C

PENSION FUND INFORMATION

Statement of Plan Assets at Market Value

Item	September 30 2019	September 30 2018
A. Cash and Cash Equivalents (Operating Cash)	$ 126,738	$ 2,599
B. Receivables		
1. Member Contributions	$ 36,629	$ 36,014
2. Interest and Dividends	171,986	122,033
3. Due from Broker	278,460	1,106,110
4. Prepaid Expenses and Other	-	-
5. State Contribution	-	1,074,825
6. Total Receivables	$ 487,075	$ 2,338,982
C. Investments		
1. Short Term Investments	$ 1,896,992	$ 2,278,465
2. Domestic Equities	49,533,922	47,651,509
3. International Equities	17,240,138	17,404,123
4. Domestic Fixed Income	22,527,046	16,946,808
5. International Fixed Income	4,057,331	3,840,576
6. Real Estate	9,261,155	8,954,689
7. Other	4,143,503	5,516,025
8. Total Investments	$ 108,660,087	$ 102,592,195
D. Liabilities		
1. Prepaid City Contribution	$ (435,051)	$ (435,051)
2. Accounts Payable	(94,834)	(77,623)
3. Due to Broker	(275,667)	(600,024)
4. Due to Police Officers Retirement System	-	(87,858)
5. Total Liabilities	$ (805,552)	$ (1,200,556)
E. Total Market Value of Assets Available for Benefits	$ 108,468,348	$ 103,733,220
F. Allocation of Investments		
1. Short Term Investments	1.7%	2.2%
2. Domestic Equities	45.7%	46.5%
3. International Equities	15.9%	17.0%
4. Domestic Fixed Income	20.7%	16.5%
5. International Fixed Income	3.7%	3.7%
6. Real Estate	8.5%	8.7%
7. Other	3.8%	5.4%
8. Total Investments	100.0%	100.0%

Note: The asset amounts do not include DROP account balances.

Reconciliation of Plan Assets

Item	September 30 2019		September 30 2018	
A. Market Value of Assets at Beginning of Year	$	103,733,220	$	96,312,093
1. Adjustment for Final Settlement of Legacy Fund Split		-		160,328
2. Market Value of Assets After Adjustment		103,733,220		96,472,421
B. Revenues and Expenditures				
1. Contributions				
a. Member Contributions	$	1,044,994	$	991,333
b. Employer Contributions		6,452,812		5,463,192
c. State Contributions		1,129,759		1,074,825
d. Total	$	8,627,565	$	7,529,350
2. Investment Income				
a. Interest, Dividends, and Other Income	$	3,065,814	$	2,654,297
b. Net Realized/Unrealized Gains/(Losses)*		2,419,035		5,927,177
c. Investment Expenses		(723,561)		(742,107)
d. Net Investment Income	$	4,761,288	$	7,839,367
3. Benefits and Refunds				
a. Regular Monthly Benefits	$	(8,483,028)	$	(7,986,172)
b. Refunds		(10,566)		(10,449)
c. Lump Sum Benefits Paid		-		-
d. Total	$	(8,493,594)	$	(7,996,621)
4. Administrative and Miscellaneous Expenses	$	(160,131)	$	(111,297)
C. Market Value of Assets at End of Year	$	108,468,348	$	103,733,220

** The breakdown between realized and unrealized gain/losses was not provided.*

Note: The asset amounts do not include DROP account balances.

Reconciliation of DROP Accounts

Year Ended 9/30	Balance at Beginning of Year	Credits	Interest	Distributions	Balance at End of Year
2017	$ 10,488,353	$ 1,541,096	$ 741,658	$ (1,680,260)	$ 11,090,847
2018	11,090,847	1,278,933	762,812	(1,716,794)	11,415,798
2019	11,415,798	1,447,552	227,146	(1,508,044)	11,582,452

ACTUARIAL VALUE OF ASSETS

	Valuation Date – September 30	2018	2019	2020	2021	2022	2023
A.	Actuarial Value of Assets Beginning of Year	$ 93,945,622	$ 101,123,590				
B.	Market Value End of Year	103,733,220	108,468,348				
C.	Market Value Beginning of Year	96,312,093	103,733,220				
D.	Non-Investment/Administrative Net Cash Flow	(418,240)	(26,160)				
E.	Investment Income						
	E1. Actual Market Total: B-C-D	7,839,367	4,761,288				
	E2. Assumed Rate of Return	7.25%	7.00%	6.75%	6.75%	6.75%	6.75%
	E3. Assumed Amount of Return	6,795,896	7,077,736				
	E4. Amount Subject to Phase-In: E1–E3	1,043,471	(2,316,448)				
F.	Phased-In Recognition of Investment Income						
	F1. Current Year: 0.2 x E4	208,694	(463,290)				
	F2. First Prior Year	591,618	208,694	(463,290)			
	F3. Second Prior Year	-	591,618	208,694	(463,290)		
	F4. Third Prior Year	-	-	591,618	208,694	(463,290)	
	F5. Fourth Prior Year	-	-	-	591,617	208,695	(463,288)
	F6. Total Phase-Ins	800,312	337,022	337,022	337,021	(254,595)	(463,288)
G.	**Actuarial Value of Assets End of Year**						
	G1. Preliminary Actuarial Value of Assets End of Year: A+D+E3+F6	101,123,590	108,512,188				
	G2. Upper Corridor Limit: 120%*B	124,479,864	130,162,018				
	G3. Lower Corridor Limit: 80%*B	82,986,576	86,774,678				
	G4. Actuarial Value of Assets End of Year	101,123,590	108,512,188				
H.	Difference between Market & Actuarial Value of Assets	2,609,630	(43,840)				
I.	**Actuarial Rate of Return**	8.1%	7.3%				
J.	**Market Value Rate of Return**	8.2%	4.6%				
K.	**Ratio of Actuarial Value of Assets to Market Value**	97.5%	100.0%				

Year Ending September 30th	Investment Rate of Return*	
	Market Value	Actuarial Value
2014	10.0 %	9.4 %
2015	(1.2)	8.8
2016	8.9	7.1
2017	11.4	7.1 **
2018	8.2	8.1
2019	4.6	7.3
Average Returns:		
All Years	6.9 %	8.0 %

** Prior to 9/30/2017, the investment return was based on the combined Police and Firefighter Retirement System.*
*** Before reflecting fresh start of assets as of 10/1/2016 and new asset smoothing method.*

The above rates are based on the retirement system's financial information reported to the actuary. They may differ from figures that the investment consultant reports, in part because of differences in the handling of administrative and investment expenses, and in part because of differences in the handling of cash flows.

SECTION D

FINANCIAL ACCOUNTING INFORMATION

FASB NO. 35 INFORMATION		
A. Valuation Date	October 1, 2019	October 1, 2018
B. Actuarial Present Value of Accumulated Plan Benefits		
1. Vested Benefits		
a. Members Currently Receiving Payments	$ 115,626,195	$ 108,512,699
b. Terminated Vested Members	121,244	16,284
c. Other Members	30,570,423	32,783,228
d. Total	146,317,862	141,312,211
2. Non-Vested Benefits	1,778,038	1,166,862
3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	148,095,900	142,479,073
4. Accumulated Contributions of Active Members	6,338,976	6,179,116
C. Changes in the Actuarial Present Value of Accumulated Plan Benefits		
1. Total Value at Beginning of Year	142,479,073	131,217,061
2. Increase (Decrease) During the Period Attributable to:		
a. Plan Amendment	112,934	0
b. Change in Actuarial Assumptions	807,143	4,169,767
c. Latest Member Data, Benefits Accumulated and Decrease in the Discount Period	13,190,344	15,088,866
d. Benefits Paid	(8,493,594)	(7,996,621)
e. Net Increase	5,616,827	11,262,012
3. Total Value at End of Period	148,095,900	142,479,073
D. Market Value of Assets (Net of COLA Reserve)	98,369,649	93,594,535
E. Actuarial Assumptions - See page entitled Actuarial Assumptions and Methods		

SCHEDULE OF CHANGES IN THE EMPLOYER'S NET PENSION LIABILITY AND RELATED RATIOS GASB Statement No. 67

Fiscal year ending September 30,	2019	2018	2017
Total Pension Liability			
Service Cost	$ 2,996,276	$ 2,325,806	$ 2,278,992
Interest	12,125,368	12,106,606	11,308,126
Benefit Changes	-	-	-
Difference between actual & expected experience	2,766,907	(2,577,793)	4,638,688
Assumption Changes	4,551,070	11,883,072	-
Benefit Payments	(8,543,520)	(8,424,033)	(8,142,089)
Refunds	(10,566)	(10,449)	(6,673)
Net Change in Total Pension Liability	13,885,535	15,303,209	10,077,044
Total Pension Liability - Beginning	168,527,216	153,224,007	143,146,963
Total Pension Liability - Ending (a)	$ 182,412,751	$ 168,527,216	$ 153,224,007
Plan Fiduciary Net Position			
Contributions - Employer	$ 6,452,812	$ 4,374,387	$ 5,721,499
Contributions - Employer (from State)	1,129,759	1,074,825	1,134,704
Contributions - Non-Employer Contributing Entity	-	-	-
Contributions - Member	1,044,994	991,333	903,846
Net Investment Income	4,988,434	8,602,179	10,685,983
Benefit Payments	(8,543,520)	(8,424,033)	(8,142,089)
Refunds	(10,566)	(10,449)	(6,673)
Administrative Expense	(160,131)	(111,297)	(146,391)
Other	-	160,328 *	-
Net Change in Plan Fiduciary Net Position	4,901,782	6,657,273	10,150,879
Plan Fiduciary Net Position - Beginning	115,584,069	108,926,796	98,775,917
Plan Fiduciary Net Position - Ending (b)	$ 120,485,851	$ 115,584,069	$ 108,926,796
Net Pension Liability - Ending (a) - (b)	61,926,900	52,943,147	44,297,211
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	66.05 %	68.58 %	71.09 %
Covered Payroll	$ 11,003,736	$ 10,494,232	$ 8,954,177
Net Pension Liability as a Percentage of Covered Payroll	562.78 %	504.50 %	494.71 %

** Due from Police Pension Fund for final settlement of Legacy Fund split.*

SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY
GASB Statement No. 67

FY Ending September 30,	Total Pension Liability	Plan Net Position	Net Pension Liability	Plan Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2017	$ 153,224,007	$ 108,926,796	$ 44,297,211	71.09%	$ 8,954,177	494.71%
2018	168,527,216	115,584,069	52,943,147	68.58%	10,494,232	504.50%
2019	182,412,751	120,485,851	61,926,900	66.05%	11,003,736	562.78%

NOTES TO SCHEDULE OF THE EMPLOYER'S NET PENSION LIABILITY
GASB Statement No. 67

Valuation Date:	October 1, 2018
Measurement Date:	September 30, 2019

Methods and Assumptions Used to Determine Net Pension Liability:

Actuarial Cost Method	Entry Age Normal
Roll Forward Procedures	The Total Pension Liability was developed by using standard actuarial techniques to roll forward amounts from the October 1, 2018 actuarial valuation one year to the measurement date.
Inflation	2.50%
Salary Increases	5.00% to 6.25% depending on service
Investment Rate of Return	7.00%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality), with mortality improvements projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2017 FRS Valuation, as mandated by Chapter 112.63, Florida Statutes.

Other Information:

Notes	See Section A in the October 1, 2018 Actuarial Valuation Report. Effective as of October 1, 2018, the investment return assumption was lowered from 7.25% to 7.00%.

SCHEDULE OF CONTRIBUTIONS
GASB Statement No. 67

FY Ending September 30,	Actuarially Determined Contribution	Actual Contribution	Contribution Deficiency (Excess)	Covered Payroll	Actual Contribution as a % of Covered Payroll
2017	$ 5,332,347	$ 6,856,203	$ (1,523,856)	$ 8,954,177	76.57%
2018	6,538,017	5,449,212	1,088,805	10,494,232	51.93%
2019	7,582,571	7,582,571	-	11,003,736	68.91%

NOTES TO SCHEDULE OF CONTRIBUTIONS
GASB Statement No. 67

Valuation Date:	October 1, 2017
Notes	Actuarially determined contributions are calculated as of October 1, which is two years prior to the end of the fiscal year in which contributions are reported.

Methods and Assumptions Used to Determine Contribution Rates:

Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percentage of Pay, Closed
Remaining Amortization Period	20 years
Asset Valuation Method	5-year smoothed market
Inflation	2.50%
Salary Increases	5.0% to 6.25% based on service
Investment Rate of Return	7.25%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality), with mortality improvements projected to all future years after 2000 using Scale BB. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. For females, the base mortality rates include a 100% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in the July 1, 2016 FRS Valuation, as mandated by Chapter 112.63, Florida Statutes.

Other Information:

Notes	See Section A in the October 1, 2017 Actuarial Valuation Report. Effective as of October 1, 2017, the investment return assumption was lowered from 8.0% to 7.25%. The mortality assumption for active members prior to retirement was revised in accordance with a revision to the active member pre-retirement mortality assumption used by the Florida Retirement System (FRS) in their July 1, 2016 Actuarial Valuation.

SINGLE DISCOUNT RATE
GASB Statement No. 67

A single discount rate of 7.00% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 7.00%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between the total actuarially determined contribution rates and the member rate. Based on these assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments (7.00%) was applied to all periods of projected benefit payments to determine the total pension liability.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 7.00%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is 1-percentage-point lower or 1-percentage-point higher.

Sensitivity of the Net Pension Liability to the Single Discount Rate Assumption

1% Decrease 6.00%	Current Single Discount Rate Assumption 7.00%	1% Increase 8.00%
$82,641,305	$61,926,900	$44,987,390

Section E

Miscellaneous Information

RECONCILIATION OF MEMBERSHIP DATA		
	From 10/1/18 To 10/1/19	**From 10/1/17 To 10/1/18**
A. Active Members		
1. Number Included in Last Valuation	139	133
2. New Members Included in Current Valuation	13	14
3. Non-Vested Employment Terminations	(3)	(3)
4. Vested Employment Terminations	(1)	0
5. DROP Retirement	(7)	(5)
6. Service Retirements	0	0
7. Disability Retirements	0	0
8. Deaths	0	0
9. Other - Transfer/Rehire	0	0
10. Number Included in This Valuation	141	139
B. Terminated Vested Members		
1. Number Included in Last Valuation	0	0
2. Additions from Active Members	1	0
3. Lump Sum Payments/Refund of Contributions	0	0
4. Payments Commenced	0	0
5. Deaths	0	0
6. Other - Rehire	0	0
7. Number Included in This Valuation	1	0
C. DROP Plan Members		
1. Number Included in Last Valuation	17	16
2. Addition from Active Members	7	5
3. Retirements	(3)	(4)
4. Deaths Resulting in No Further Payments	0	0
5. Other	0	0
6. Number Included in This Valuation	21	17
D. Service Retirees, Disability Retirees and Beneficiaries		
1. Number Included in Last Valuation	117	112
2. Additions from Active Members	0	0
3. Additions from DROP	3	4
4. Additions from Terminated Vested Members	0	0
5. Deaths Resulting in No Further Payments	(2)	(1)
6. Deaths Resulting in New Survivor Benefits	0	1
7. End of Certain Period - No Further Payments	0	0
8. Other - Data Correction	0	1
9. Number Included in This Valuation	118	117

ACTIVE MEMBERS AS OF OCTOBER 1, 2019

	Years of Service to Valuation Date										
Age Group	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25 & Up	**Totals**
20-24 NO	6	4	2	-	-	-	-	-	-	-	12
TOT PAY	337,260	229,184	117,190	-	-	-	-	-	-	-	683,634
AVG PAY	56,210	57,296	58,595	-	-	-	-	-	-	-	56,970
25-29 NO	2	4	7	6	2	3	-	-	-	-	24
TOT PAY	112,420	233,402	414,115	383,767	134,330	208,872	-	-	-	-	1,486,906
AVG PAY	56,210	58,351	59,159	63,961	67,165	69,624	-	-	-	-	61,954
30-34 NO	4	2	7	6	2	9	4	-	-	-	34
TOT PAY	224,840	115,247	417,607	382,266	135,830	690,276	418,948	-	-	-	2,385,014
AVG PAY	56,210	57,624	59,658	63,711	67,915	76,697	104,737	-	-	-	70,147
35-39 NO	1	1	3	3	1	9	6	10	-	-	34
TOT PAY	56,210	58,215	181,741	182,759	67,890	685,335	594,588	1,098,031	-	-	2,924,769
AVG PAY	56,210	58,215	60,580	60,920	67,890	76,148	99,098	109,803	-	-	86,023
40-44 NO	-	-	-	2	-	-	5	13	-	-	20
TOT PAY	-	-	-	128,039	-	-	484,428	1,297,930	-	-	1,910,397
AVG PAY	-	-	-	64,020	-	-	96,886	99,841	-	-	95,520
45-49 NO	-	-	-	-	-	-	-	10	1	-	11
TOT PAY	-	-	-	-	-	-	-	1,068,190	126,033	-	1,194,223
AVG PAY	-	-	-	-	-	-	-	106,819	126,033	-	108,566
50-54 NO	-	1	-	-	-	-	2	2	-	-	5
TOT PAY	-	59,425	-	-	-	-	186,944	201,640	-	-	448,009
AVG PAY	-	59,425	-	-	-	-	93,472	100,820	-	-	89,602
55-59 NO	-	-	-	-	-	-	-	1	-	-	1
TOT PAY	-	-	-	-	-	-	-	95,847	-	-	95,847
AVG PAY	-	-	-	-	-	-	-	95,847	-	-	95,847
60-64 NO	-	-	-	-	-	-	-	-	-	-	-
TOT PAY	-	-	-	-	-	-	-	-	-	-	-
AVG PAY	-	-	-	-	-	-	-	-	-	-	-
65 & Up NO	-	-	-	-	-	-	-	-	-	-	-
TOT PAY	-	-	-	-	-	-	-	-	-	-	-
AVG PAY	-	-	-	-	-	-	-	-	-	-	-
TOT NO	13	12	19	17	5	21	17	36	1	-	141
TOT AMT	730,730	695,473	1,130,653	1,076,831	338,050	1,584,483	1,684,908	3,761,638	126,033	-	11,128,799
AVG AMT	56,210	57,956	59,508	63,343	67,610	75,452	99,112	104,490	126,033	-	78,928

INACTIVE MEMBERS AS OF OCTOBER 1, 2019

	Terminated Vested		Disabled		Retired		Beneficiaries		Grand Total	
		Total		Total		Total		Total		Total
Age	Number	Benefits	Number	Benefits	Number	Benefits	Number	Benefits	Number	Benefits
Under 20	0	-	0	-	0	-	2	7,884	2	7,884
20 - 24	0	-	0	-	0	-	0	-	0	-
25 - 29	0	-	0	-	0	-	0	-	0	-
30 - 34	1	28,716	0	-	0	-	0	-	1	28,716
35 - 39	0	-	0	-	0	-	1	5,337	1	5,337
40 - 44	0	-	0	-	0	-	1	17,081	1	17,081
45 - 49	0	-	0	-	11	870,705	0	-	11	870,705
50 - 54	0	-	0	-	21	1,537,190	0	-	21	1,537,190
55 - 59	0	-	1	39,808	35	2,579,870	0	-	36	2,619,678
60 - 64	0	-	2	72,857	19	1,310,235	0	-	21	1,383,092
65 - 69	0	-	1	25,040	19	1,307,396	1	35,160	21	1,367,596
70 - 74	0	-	0	-	11	613,790	3	49,291	14	663,081
75 - 79	0	-	0	-	6	214,885	1	27,253	7	242,138
80 - 84	0	-	0	-	1	20,868	0	-	1	20,868
85 - 89	0	-	0	-	0	-	1	12,157	1	12,157
90 - 94	0	-	0	-	1	11,153	0	-	1	11,153
95 - 99	0	-	0	-	0	-	1	12,245	1	12,245
100 & Over	0	-	0	-	0	-	0	-	0	-
Total	1	28,716	4	137,705	124	8,466,092	11	166,408	140	8,798,921
Average Age		35		62		61		59		61

SECTION F

SUMMARY OF PLAN PROVISIONS

SUMMARY OF PLAN PROVISIONS

A. Ordinances

The Plan was established under the Code of Ordinances for the City of Delray Beach, Florida, Chapter 33, and was most recently amended under Ordinance No. 17-16 passed and adopted on its second reading on October 4, 2016. The Plan is also governed by certain provisions of Chapter 175, Florida Statutes, Part VII, Chapter 112, Florida Statutes and the Internal Revenue Code.

B. Effective Date

April 22, 1974

C. Plan Year

October 1 through September 30

D. Type of Plan

Qualified, governmental defined benefit retirement plan; for GASB purposes it is a single employer plan.

E. Eligibility Requirements

All full-time firefighters

F. Credited Service

Years and completed months of full-time service with the City during which time prescribed employee contributions are made. No service is credited for any periods of employment for which the member received a refund of their contributions.

G. Compensation

Compensation is the total base wages, including state education compensation and fire career education compensation, but excluding overtime, bonuses and any other payments.

H. Final Average Compensation (FAC)

For Members hired prior to October 4, 2016:

The average of Compensation over the highest 3 years of Credited Service.

For Members hired on or after October 4, 2016:

The average of Compensation over the highest 5 years out of the last 10 years of Credited Service.

I. Normal Retirement

For Members hired prior to October 4, 2016 with 20 or more years of service as of that date:

Eligibility: A member may retire on the first day of the month coincident with or next following the earlier of:

(1) age 55 and 10 years of Credited Service, or
(2) 20 years of Credited Service regardless of age.

Benefit: 3.00% (or 3.50% of FAC for those electing the enhanced multiplier) for each year of Credited Service; subject to a maximum benefit equal to 87.50% of FAC.

Normal Form of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly income payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993, commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds $1,206,994.

For Members hired prior to October 4, 2016 with less than 20 years of service as of that date:

Eligibility: A member may retire on the first day of the month coincident with or next following the earlier of:

(1) age 55 and 10 years of Credited Service, or
(2) 20 years of Credited Service regardless of age.

Benefit: **For those retiring with more than 20 years of service:** 3.00% of FAC (or 3.50% of FAC for those electing the enhanced multiplier) for each year of Credited Service prior to October 4, 2016. For Credited Service earned after October 4, 2016, 3.00% of FAC for each year of Credited Service after October 4, 2016. Members hired after April 9, 2013 are not eligible for the enhanced multiplier.

For those retiring with less than 20 years of service: 2.50% of FAC for each year of Credited Service prior to October 4, 2016. For Credited Service earned after October 4, 2016, 3.00% of FAC for each year of Credited Service after October 4, 2016.

The maximum annual starting benefit is $100,000, but not less than 2.00% of average monthly earnings for each year of continuous service. The maximum benefit amount will be increased annually by 2% each October 1st beginning October 1, 2016.

Normal Form of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly income payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse. For the benefit based on service accrued after October 4, 2016, the normal form is a 10-Year Certain and Life annuity.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993, commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds \$1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after separating from employment.

For Members hired after October 4, 2016:

Eligibility: A member may retire on the first day of the month coincident with or next following the earlier of:

(1) age 55 and 10 years of Credited Service, or
(2) 25 years of Credited Service regardless of age.

Benefit: 2.75% of FAC for each year of Credited Service. The maximum annual starting benefit is \$100,000, but not less than 2.00% of average monthly earnings for each year of continuous service. The maximum benefit amount will be increased annually by 2% each October 1st beginning October 1, 2016.

Normal Form of Benefit: 10 Years Certain and Life thereafter.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993, commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds \$1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after separating from employment.

J. Early Retirement

<u>For Members hired prior to October 4, 2016:</u>

Eligibility: A member may elect to retire earlier than the Normal Retirement Eligibility upon attainment of age 50 and 10 years of Credited Service.

Benefit: The Normal Retirement Benefit is reduced by 3.0% for each year by which the Early Retirement date precedes the Normal Retirement date.

Normal Form of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly income payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse. For the benefit based on service accrued after October 4, 2016, the normal form is a 10-Year Certain and Life annuity.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993, commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds $1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after separating from employment.

<u>For Members hired on or after October 4, 2016:</u>

Early retirement is not available.

K. Delayed Retirement

Same as Normal Retirement taking into account compensation earned and service credited until the date of actual retirement.

L. Service Connected Disability

Eligibility: Any member who becomes totally and permanently disabled as a result of an act occurring in the performance of service for the City is immediately eligible for a disability benefit.

Benefit: The disability benefit is equal to the accrued benefit, but not less than 60% of FAC.

Normal Form of Benefit: Payable until death or recovery from disability or until the member reaches Early or Normal Retirement Age and elects to receive Early or Normal Retirement Benefits in lieu of disability benefits. Other options are also available.

COLA: None

M. Non-Service Connected Disability

Eligibility: Any member with at least 10 years of Credited Service who becomes totally and permanently disabled is immediately eligible for a disability benefit.

Benefit: The accrued Normal Retirement Benefit with a minimum equal to 2.00% of FAC for each year of Credited Service, with a minimum of 25% of FAC.

Normal Form of Benefit: Payable until death or recovery from disability or until the member reaches Early or Normal Retirement Age and elects to receive Early or Normal Retirement Benefits in lieu of disability benefits. Other options are also available.

COLA: None

N. Death in the Line of Duty

Eligibility: Any member whose death is determined to be the result of a service incurred injury is eligible for survivor benefits regardless of Credited Service.

Benefit: Spouse will receive 50% of FAC, plus 5% to each unmarried child under 18 (age 22 if full-time student), subject to an overall maximum of 60% of FAC.

Normal Form of Benefit: Payable for the life of spouse, or until age 18 (age 22 if full-time student) for children.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993, commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds $1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after separating from employment

O. Other Pre-Retirement Death

Eligibility: All members are eligible for survivor benefits.

Benefit: $2,500 lump sum is payable if the member has less than one year of service. A $5,000 lump sum is payable if the member has more than one year of service but less than five.

If the member has five or more years of service, a $5,000 lump sum is payable, plus a month benefit of 65% of the accrued benefit to the spouse (as of the date of death), subject to a minimum of 20% of FAC. In addition, 5% to each unmarried child under 18 (age 22 if full-time student). The total monthly benefit is subject to a maximum of 50% of FAC and 35% after death or remarriage of spouse.

Normal Form of Benefit: Payable for the life of spouse, or until age 18 (age 22 if full-time student) for children.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993, commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds $1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after separating from employment

P. Post Retirement Death

Benefit determined by the form of benefit elected upon retirement.

Q. Optional Forms

In lieu of electing the Normal Form of benefit, the optional forms of benefits available to all retirees are the life annuity and the 50%, 66 2/3%, 75% and 100% Joint and Survivor options with or without the pop-up feature.

R. Vested Termination

Eligibility: A member has earned a non-forfeitable right to Plan benefits after the completion of 10 years of Credited Service.

Benefit: The benefit is the member's accrued Normal Retirement Benefit. Benefit begins on the date that would have been the member's Normal Retirement date based on Credited Service at termination.

Normal Form of Benefit: 10 Years Certain and Life thereafter. For married participants, a monthly income payable for life of member; upon death of member, 100% of member's benefit payable to spouse for one year and 60% thereafter until death or remarriage of spouse. For the benefit based on service accrued after October 4, 2016, the normal form is a 10-Year Certain and Life annuity.

COLA: Cost of living increases of 1.00% apply for those retiring after October 1, 1993, commencing on the 25th anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds $1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after separating from employment.

S. Refunds

Eligibility: All members terminating employment with less than 10 years of Credited Service are eligible.

Benefit: Refund of the member's contributions with simple interest of 3%.

T. Member Contributions

9.00% of Compensation until the member has earned the maximum normal retirement benefit.

U. State Contributions

Chapter 175 Premium Tax Refunds.

V. Employer Contributions

Any additional amount determined by the actuary needed to fund the plan properly according to State laws.

W. Cost of Living Increases

Cost of living increases of 1.00% apply for those retiring after October 1, 1993, commencing on the 25^{th} anniversary of the retiree's hire date. Additional increases are available when the revenue under Chapter 175 exceeds $1,206,994. For benefits accrued after October 4, 2016, the adjustment will begin one year after separating from employment.

X. Deferred Retirement Option Plan

Eligibility: Plan members who have met the eligibility requirements for Normal Retirement.

Benefit: The member's Credited Service and FAC are frozen upon entry into the DROP. The monthly retirement benefit as described under Normal Retirement is calculated based upon the frozen Credited Service and FAC.

Maximum DROP Period: 60 months

Interest Credited: For members who enter the DROP, the member's DROP account is credited at the net rate of return on retirement fund assets during the period the employee participates in the DROP.

Normal Form of Benefit: Lump Sum, Direct Rollover, or Partial Lump Sum with a Direct Rollover of remaining balance.

Y. Other Ancillary Benefits

There are no ancillary retirement type benefits not required by statutes but which might be deemed a City of Delray Beach Firefighters' Retirement System liability if continued beyond the availability of funding by the current funding source.

Z. Changes from Previous Valuation

In compliance with newly adopted Florida Statutes Chapter 112.1816, the following additional provisions are reflected:

> As provided and subject to the limitations in Section 112.1816, Florida Statutes, effective July 1, 2019, a firefighter who is diagnosed with certain specified cancers is presumed to have contracted those cancers while in the line of duty for purposes of determining the disability or death benefit payable from the Plan.