

City of North Miami Clair T. Singerman Employees Retirement System

ACTUARIAL VALUATION REPORT
AS OF OCTOBER 1, 2019

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





April 23, 2020

Board of Trustees
Clair T. Singerman Employees Retirement System
North Miami, Florida

Dear Board Members:

The results of the October 1, 2019 Annual Actuarial Valuation of the City of North Miami Clair T. Singerman Employees Retirement System are presented in this report.

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 GASB Statement No. 67 for the fiscal year ending September 30, 2019. 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 in Section A 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 or other information through September 30, 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 and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

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 Methods. The investment return assumption was prescribed by the Board and the assumed mortality rates detailed in the Actuarial Assumptions and Methods 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 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.

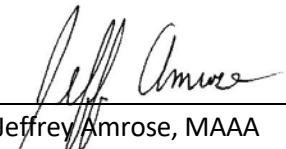
The signing actuaries are independent of the plan sponsor.

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 AND COMPANY

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


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



TABLE OF CONTENTS

<u>Section</u>	<u>Title</u>	<u>Page</u>
A	Discussion of Valuation Results	
	1. Discussion of Valuation Results	1
	2. Risk Associated with Measuring the Accrued Liability and Actuarially Determined Contribution	4
	3. Chapter Revenue	7
B	Valuation Results	
	1. Participant Data	8
	2. Actuarially Determined Employer Contribution	12
	3. Actuarial Present Value of Benefits and Assets	15
	4. Calculation of Employer Normal Cost	19
	5. Liquidation of the Unfunded Actuarial Accrued Liability	22
	6. Actuarial Gains and Losses	28
	7. Recent History of Required and Actual Contributions	32
	8. Recent History of UAAL and Funded Ratio	33
	9. Actuarial Assumptions and Cost Method	34
	10. Glossary of Terms	40
C	Pension Fund Information	
	1. Statement of Plan Assets at Market Value	43
	2. Reconciliation of Plan Assets	44
	3. Reconciliation of Plan Assets by Group	45
	4. Actuarial Value of Assets	46
	5. Investment Rate of Return	47
D	Financial Accounting Information	
	1. FASB No. 35	48
	2. GASB No. 67	49
E	Miscellaneous Information	
	1. Reconciliation of Membership Data	55
	2. Active Participant Scatter	56
	3. Inactive Participant Scatters	57
F	Summary of Plan Provisions	60



SECTION A

DISCUSSION OF VALUATION RESULTS

DISCUSSION OF VALUATION RESULTS

Closed Plan

In reviewing this Report, it is important for the reader to keep in mind that this Plan was closed to new members after June 1, 2016. One consequence of this closure is that the required employer contribution will generally continue to increase as a percentage of covered payroll as such payroll decreases from year to year

Comparison of Required Employer Contributions

A comparison of the required employer contribution developed in this valuation and the last valuation 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)
Actuarially Determined Employer Contribution As % of Covered Payroll	\$ 3,629,523 29.31 %	\$ 4,126,483 34.41 %	\$ (496,960) (5.10) %

The contribution has been adjusted for interest on the basis that payments are made on the first day of the fiscal year by both the City and the County.

The actual Employer contribution during the year ending September 30, 2019 was \$5,731,935. The required contribution was \$5,731,935 for that year based on a payment date of October 1, 2018 for the City contributions on behalf of general employees and police officers and for the County contribution on behalf of firefighters.

Employer Contributions by Group

Separate actuarial valuations have been performed for general employees, police officers and firefighters. Results are as follows:

Group	Actuarially Determined Employer Contribution for FYE 9/30/2021	
	Dollar Amount	% of Payroll
General Employees	\$ 3,586,825	29.24 %
Police Officers	37,165	31.78
Firefighters	5,533	N/A
	3,629,523	29.31



Revisions in Benefits

There were no changes in benefits in the current valuation.

Revisions in Actuarial Assumptions and Methods

The investment return assumption was changed from 6.85% to 6.75%, net of investment expenses. In addition, the mortality tables were updated from the mortality rates used by the Florida Retirement System (FRS) for Regular and Special Risk Class members in the July 1, 2018 FRS Actuarial Valuation to the rates used in the July 1, 2019 FRS Actuarial Valuation. Please see the Actuarial Assumptions and Cost Method Section for more details.

The net impact of the above assumption changes decreased the annual required contribution by \$427,107 or 3.44% of covered payroll.

Actuarial Experience

There was a net actuarial loss of \$2,057,147 for the year which means that actual experience was less favorable than expected. The loss was primarily due to greater than expected salary increases during the year for General Employees (7.3% actual average salary increases versus 4.0% assumed) and less than expected retiree deaths during the year (2 retiree deaths versus 8 assumed). The loss was partially offset by gains from investment earnings above the assumed rate of 6.85% from the prior valuation. The return on the actuarial valuation of assets was 7.3%, while the return on the market value of assets was 4.8%. The experience loss caused the Required Employer Contribution to increase by approximately \$327,000, or 2.64% of covered payroll.

Funded Ratio

This year's funded ratio is 92.1% compared to 89.2% last year. The funded ratio was 90.8% before the assumption change described above. The ratio is equal to the actuarial value of assets divided by the actuarial accrued (past service) liability.

Analysis of Change in Required Employer Contribution

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

Contribution rate last year	34.41 %
Change in assumptions	(3.44)
Payment on unfunded liability	(4.53)
Experience gain/loss	2.64
Change in administrative expense	0.27
Change in Normal Cost rate	<u>(0.04)</u>
Contribution rate this year	29.31 %



Variability of Future Contribution Rates

One consequence of a plan closure is that, in general, the annual payment on the unfunded accrued liability will continue to increase as a percentage of covered payroll, as such payroll decreases from year to year. Additionally, 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 increase at a rate that is inversely proportional to the rate of shrinking payroll, but this does not always happen.

The Market Value of Assets exceeds the Actuarial Value of Assets by \$2,254,298 as of the valuation date (see Section C). This difference will be gradually recognized in the absence of offsetting losses. In turn, the computed employer contribution would gradually decrease by approximately \$234,000.

Relationship to Market Value

If Market Value had been the basis for the valuation, the Employer contribution would have been approximately \$3.4 million and the funded ratio would have been 93.7%.

Conclusion

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:

	<u>2019</u>	<u>2018</u>
Ratio of the market value of assets to payroll	10.80	10.81
Ratio of actuarial accrued liability to payroll	11.52	11.63
Ratio of actives to retirees and beneficiaries	0.8	0.8
Ratio of net cash flow to market value of assets	-1.65 %	-1.46 %

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			
	748 Plan	691 Plan	Total
1. Base Amount Previous Plan Year (Excluding Amount Allocated to Share Plan) ¹	184,086	-	184,086
2. Amount Received for Previous Plan Year	389,927	4,149	394,076
3. Amount Allocated to Share Plan ²	192,889	1,554	194,443
4. Amount Received for Previous Plan Year After Share Plan Allocation (2) - (3) ³	197,038	2,595	199,633
5. Benefit Improvements Made in Prior Plan Year	-	-	-
6. Excess Funds for Previous Plan Year	-	2,595	2,595
7. Accumulated Excess at Beginning of Previous Plan Year	729,967	35,430	765,397
8. Prior Excess Used in Previous Plan Year ⁴	729,967	-	729,967
9. Accumulated Excess as of Valuation Date (7) - (8) + (6)	-	38,025	38,025
10. Base Amount This Plan Year (Excluding Amount Allocated to the Share Plan) ⁵	197,038	-	197,038

¹ 50% of Chapter 185 revenue from FYE 2018, held in reserve in Share Plan to offset required City contribution for FYE 2019.

² 50% of Chapter 185 revenue from FYE 2019, less amount allocated to 691 Plan Reserve.

³ 50% of Chapter 185 revenue from FYE 2019, plus amount allocated to 691 Plan Reserve.

⁴ Includes amount allocated to the City and adjustments.

⁵ Held in reserve in Share Plan to offset required City contribution for FYE 2020.

Under the collective bargaining agreement covering the period October 1, 2018 through September 30, 2021, the City may apply 50% of the annual Chapter 185 revenue as an offset to the required contribution. The remaining 50% of the annual Chapter 185 revenue is allocated to the Share Plan (with a portion going to the 691 Plan reserve). The City was also previously provided with the balance of unallocated excess Chapter 185 revenue (attributable to the 748 Plan) from the Share Plan which was used as an offset to the required contribution.



SECTION B

VALUATION RESULTS

PARTICIPANT DATA -- ALL GROUPS COMBINED		
	October 1, 2019	October 1, 2018
ACTIVE MEMBERS		
Number	189	198
Covered Annual Payroll	\$ 12,384,844	\$ 11,992,650
Average Annual Payroll	\$ 65,528	\$ 60,569
Average Age	48.3	47.4
Average Past Service	14.1	13.1
Average Age at Hire	34.2	34.3
RETIRES & BENEFICIARIES		
Number	234	233
Annual Benefits	\$ 7,306,912	\$ 7,114,086
Average Annual Benefit	\$ 31,226	\$ 30,533
Average Age	70.9	70.2
DISABILITY RETIREES		
Number	2	2
Annual Benefits	\$ 81,176	\$ 81,176
Average Annual Benefit	\$ 40,588	\$ 40,588
Average Age	62.9	61.9
TERMINATED VESTED MEMBERS		
Number	4	4
Annual Benefits	\$ 49,906	\$ 62,185
Average Annual Benefit	\$ 12,477	\$ 15,546
Average Age	46.9	47.7

PARTICIPANT DATA -- GENERAL EMPLOYEES		
	October 1, 2019	October 1, 2018
ACTIVE MEMBERS		
Number	188	197
Covered Annual Payroll	\$ 12,267,884	\$ 11,871,871
Average Annual Payroll	\$ 65,255	\$ 60,263
Average Age	48.2	47.3
Average Past Service	13.9	12.9
Average Age at Hire	34.3	34.4
RETIREES & BENEFICIARIES		
Number	203	201
Annual Benefits	\$ 6,461,000	\$ 6,270,663
Average Annual Benefit	\$ 31,828	\$ 31,197
Average Age	69.3	68.7
DISABILITY RETIREES		
Number	2	2
Annual Benefits	\$ 81,176	\$ 81,176
Average Annual Benefit	\$ 40,588	\$ 40,588
Average Age	62.9	61.9
TERMINATED VESTED MEMBERS		
Number	4	4
Annual Benefits	\$ 49,906	\$ 62,185
Average Annual Benefit	\$ 12,477	\$ 15,546
Average Age	46.9	47.7

PARTICIPANT DATA -- POLICE OFFICERS		
	October 1, 2019	October 1, 2018
ACTIVE MEMBERS		
Number	1	1
Covered Annual Payroll	\$ 116,960	\$ 120,779
Average Annual Payroll	\$ 116,960	\$ 120,779
Average Age	65.6	64.6
Average Past Service	44.3	43.3
Average Age at Hire	21.3	21.3
RETIREES & BENEFICIARIES		
Number	18	19
Annual Benefits	\$ 433,591	\$ 431,102
Average Annual Benefit	\$ 24,088	\$ 22,690
Average Age	79.2	78.0
DISABILITY RETIREES		
Number	0	0
Annual Benefits	\$ 0	\$ 0
Average Annual Benefit	\$ 0	\$ 0
Average Age	0.0	0.0
TERMINATED VESTED MEMBERS		
Number	0	0
Annual Benefits	\$ 0	\$ 0
Average Annual Benefit	\$ 0	\$ 0
Average Age	0.0	0.0

PARTICIPANT DATA -- FIREFIGHTERS		
	October 1, 2019	October 1, 2018
ACTIVE MEMBERS		
Number	0	0
Covered Annual Payroll	\$ 0	\$ 0
Average Annual Payroll	\$ 0	\$ 0
Average Age	0.0	0.0
Average Past Service	0.0	0.0
Average Age at Hire	0.0	0.0
RETIREES & BENEFICIARIES		
Number	13	13
Annual Benefits	\$ 412,321	\$ 412,321
Average Annual Benefit	\$ 31,717	\$ 31,717
Average Age	83.2	82.2
DISABILITY RETIREES		
Number	0	0
Annual Benefits	\$ 0	\$ 0
Average Annual Benefit	\$ 0	\$ 0
Average Age	0.0	0.0
TERMINATED VESTED MEMBERS		
Number	0	0
Annual Benefits	\$ 0	\$ 0
Average Annual Benefit	\$ 0	\$ 0
Average Age	0.0	0.0

ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC) GENERAL EMPLOYEES			
A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. ADEC to Be Paid During Fiscal Year Ending	9/30/2021	9/30/2021	9/30/2020
C. Assumed Dates of Employer Contributions	10/1/2020	10/1/2020	10/1/2019
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 1,983,100	\$ 2,169,640	\$ 2,335,517
E. Employer Normal Cost	1,376,923	1,375,923	1,305,996
F. ADEC as of the Valuation Date: D+E <i>Valuation Date</i>	3,360,023 <i>10/1/2019</i>	3,545,563 <i>10/1/2019</i>	3,641,513 <i>10/1/2018</i>
G. ADEC if Paid Quarterly throughout the Next Fiscal Year	3,734,408	3,946,564	4,053,367
H. ADEC if Paid on the First Day of the Next Fiscal Year <i>First Day of Next Fiscal Year</i>	3,586,825 <i>10/1/2020</i>	3,788,434 <i>10/1/2020</i>	3,890,957 <i>10/1/2019</i>
I. ADEC as % of Covered Payroll*	29.24 %	30.88 %	32.77 %
J. Assumed Rate of Increase in Covered Payroll to Contribution Year	0.00 %	0.00 %	0.00 %
K. Covered Payroll for Contribution Year	12,267,884	12,267,884	11,871,871
L. ADEC for Contribution Year: I x K*	3,586,825	3,788,434	3,890,957

* Assuming the contribution from Item G is paid on the first day of the next fiscal year.



ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC) POLICE OFFICERS			
A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. ADEC to Be Paid During Fiscal Year Ending	9/30/2021	9/30/2021	9/30/2020
C. Assumed Dates of Employer Contributions	10/1/2020	10/1/2020	10/1/2019
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 0	\$ 76,768	\$ 85,271
E. Employer Normal Cost	34,815	34,313	33,709
F. ADEC as of the Valuation Date: D+E <i>Valuation Date</i>	34,815 <i>10/1/2019</i>	111,081 <i>10/1/2019</i>	118,980 <i>10/1/2018</i>
G. ADEC if Paid Quarterly throughout the Next Fiscal Year	38,694	123,644	132,436
H. ADEC if Paid on the First Day of the Next Fiscal Year <i>First Day of Next Fiscal Year</i>	37,165 <i>10/1/2020</i>	118,690 <i>10/1/2020</i>	127,130 <i>10/1/2019</i>
I. ADEC as % of Covered Payroll*	31.78 %	101.48 %	105.26 %
J. Assumed Rate of Increase in Covered Payroll to Contribution Year	0.00 %	0.00 %	0.00 %
K. Covered Payroll for Contribution Year	116,960	116,960	120,779
L. ADEC for Contribution Year: I x K*	37,165	118,690	127,130

* Assuming the contribution from Item G is paid on the first day of the next fiscal year.



ACTUARIALLY DETERMINED EMPLOYER CONTRIBUTION (ADEC) FIREFIGHTERS			
A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. ADEC to Be Paid During Fiscal Year Ending	9/30/2021	9/30/2021	9/30/2020
C. Assumed Dates of Employer Contributions	10/1/2020	10/1/2020	10/1/2019
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 5,183	\$ 139,921	\$ 101,447
E. Employer Normal Cost	0	0	0
F. ADEC as of the Valuation Date: D+E, but not less than \$0 <i>Valuation Date</i>	5,183 <i>10/1/2019</i>	139,921 <i>10/1/2019</i>	101,447 <i>10/1/2018</i>
G. ADEC if Paid Quarterly throughout the Next Fiscal Year	5,766	155,892	112,921
H. ADEC if Paid on the First Day of the Next Fiscal Year <i>First Day of Next Fiscal Year</i>	5,533 <i>10/1/2020</i>	149,506 <i>10/1/2020</i>	108,396 <i>10/1/2019</i>
I. ADEC as % of Covered Payroll*	---	---	---
J. Assumed Rate of Increase in Covered Payroll to Contribution Year	0.00 %	0.00 %	0.00 %
K. Covered Payroll for Contribution Year	---	---	---
L. ADEC for Contribution Year*	5,533	149,506	108,396

* Assuming the contribution from Item G is paid on the first day of the next fiscal year.



ACTUARIAL VALUE OF BENEFITS AND ASSETS -- ALL EMPLOYEES

A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ 62,637,545	\$ 63,056,497	\$ 58,605,176
b. Vesting Benefits	902,647	906,243	904,901
c. Disability Benefits	317,909	306,081	295,229
d. Preretirement Death Benefits	598,869	801,528	772,985
e. Return of Member Contributions	62,759	68,074	108,438
f. Total	<u>64,519,729</u>	<u>65,138,423</u>	<u>60,686,729</u>
2. Inactive Members			
a. Service Retirees & Beneficiaries	88,795,433	90,117,278	89,127,904
b. Disability Retirees	636,591	639,468	649,705
c. Terminated Vested Members	706,162	728,434	882,700
d. Total	<u>90,138,186</u>	<u>91,485,180</u>	<u>90,660,309</u>
3. Total for All Members	154,657,915	156,623,603	151,347,038
C. Actuarial Accrued (Past Service) Liability	142,665,523	144,737,695	139,415,310
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	132,774,579	134,673,080	129,548,044
E. Plan Assets			
1. Market Value	133,706,089	133,706,089	129,604,854
2. Actuarial Value	131,451,791	131,451,791	124,421,561
F. Unfunded Actuarial Accrued Liability (UAAL): C - E2	11,213,732	13,285,904	14,993,749
G. Actuarial Present Value of Projected Covered Payroll	83,925,710	83,313,611	82,776,171
H. Actuarial Present Value of Projected Member Contributions	5,521,675	5,482,387	5,471,067
I. Accumulated Contributions of Active Members	8,403,214	8,403,214	7,886,785

ACTUARIAL VALUE OF BENEFITS AND ASSETS -- GENERAL EMPLOYEES

A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ 61,026,947	\$ 61,360,402	\$ 56,859,390
b. Vesting Benefits	902,647	906,243	904,901
c. Disability Benefits	317,909	306,081	295,229
d. Preretirement Death Benefits	589,844	785,923	758,923
e. Return of Member Contributions	62,759	68,074	108,438
f. Total	<u>62,900,106</u>	<u>63,426,723</u>	<u>58,926,881</u>
2. Inactive Members			
a. Service Retirees & Beneficiaries	82,443,854	83,284,589	82,118,300
b. Disability Retirees	636,591	639,468	649,705
c. Terminated Vested Members	706,162	728,434	882,700
d. Total	<u>83,786,607</u>	<u>84,652,491</u>	<u>83,650,705</u>
3. Total for All Members	146,686,713	148,079,214	142,577,586
C. Actuarial Accrued (Past Service) Liability	134,718,209	136,216,698	130,670,012
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	124,824,629	126,151,078	120,837,935
E. Plan Assets			
1. Market Value	125,497,731	125,497,731	121,158,629
2. Actuarial Value	123,381,826	123,381,826	116,313,126
F. Unfunded Actuarial Accrued Liability (UAAL): C - E2	11,336,383	12,834,872	14,356,886
G. Actuarial Present Value of Projected Covered Payroll	83,808,750	83,196,651	82,655,392
H. Actuarial Present Value of Projected Member Contributions	5,513,488	5,474,200	5,462,612
I. Accumulated Contributions of Active Members	8,162,314	8,162,314	7,653,951

ACTUARIAL VALUE OF BENEFITS AND ASSETS -- POLICE OFFICERS

A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ 1,610,598	\$ 1,696,095	\$ 1,745,786
b. Vesting Benefits	-	-	-
c. Disability Benefits	-	-	-
d. Preretirement Death Benefits	9,025	15,605	14,062
e. Return of Member Contributions	-	-	-
f. Total	<u>1,619,623</u>	<u>1,711,700</u>	<u>1,759,848</u>
2. Inactive Members			
a. Service Retirees & Beneficiaries	3,820,897	4,061,810	4,134,003
b. Disability Retirees	-	-	-
c. Terminated Vested Members	-	-	-
d. Total	<u>3,820,897</u>	<u>4,061,810</u>	<u>4,134,003</u>
3. Total for All Members	5,440,520	5,773,510	5,893,851
C. Actuarial Accrued (Past Service) Liability	5,416,632	5,750,118	5,869,697
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	5,419,268	5,751,123	5,834,508
E. Plan Assets			
1. Market Value	5,639,549	5,639,549	5,777,466
2. Actuarial Value	5,544,466	5,544,466	5,546,408
F. Unfunded Actuarial Accrued Liability (UAAL): C - E2	(127,834)	205,652	323,289
G. Actuarial Present Value of Projected Covered Payroll	116,960	116,960	120,779
H. Actuarial Present Value of Projected Member Contributions	8,187	8,187	8,455
I. Accumulated Contributions of Active Members	240,900	240,900	232,834

ACTUARIAL VALUE OF BENEFITS AND ASSETS -- FIREFIGHTERS

A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ -	\$ -	\$ -
b. Vesting Benefits	-	-	-
c. Disability Benefits	-	-	-
d. Preretirement Death Benefits	-	-	-
e. Return of Member Contributions	-	-	-
f. Total	-	-	-
2. Inactive Members			
a. Service Retirees & Beneficiaries	2,530,682	2,770,879	2,875,601
b. Disability Retirees	-	-	-
c. Terminated Vested Members	-	-	-
d. Total	2,530,682	2,770,879	2,875,601
3. Total for All Members	2,530,682	2,770,879	2,875,601
C. Actuarial Accrued (Past Service) Liability	2,530,682	2,770,879	2,875,601
D. Actuarial Value of Accumulated Plan Benefits per FASB No. 35	2,530,682	2,770,879	2,875,601
E. Plan Assets			
1. Market Value	2,568,809	2,568,809	2,668,759
2. Actuarial Value	2,525,499	2,525,499	2,562,027
F. Unfunded Actuarial Accrued Liability (UAAL): C - E2	5,183	245,380	313,574
G. Actuarial Present Value of Projected Covered Payroll	-	-	-
H. Actuarial Present Value of Projected Member Contributions	-	-	-
I. Accumulated Contributions of Active Members	-	-	-

CALCULATION OF EMPLOYER NORMAL COST -- GENERAL EMPLOYEES

A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. Normal Cost for			
1. Service Retirement Benefits	\$ 1,591,294	\$ 1,582,217	\$ 1,535,452
2. Vesting Benefits	173,093	173,877	169,311
3. Disability Benefits	23,760	22,785	21,862
4. Preretirement Death Benefits	27,231	34,606	34,405
5. Return of Member Contributions	<u>69,487</u>	<u>70,380</u>	<u>68,168</u>
6. Total for Future Benefits	1,884,865	1,883,865	1,829,198
7. Assumed Amount for Administrative Expenses	<u>320,675</u>	<u>320,675</u>	<u>280,533</u>
8. Total Normal Cost	2,205,540	2,204,540	2,109,731
9. Total as a % of Covered Payroll	17.98%	17.97%	17.77%
C. Expected Member Contribution	828,617	828,617	803,735
D. Employer Normal Cost: B8-C	1,376,923	1,375,923	1,305,996
E. Employer Normal Cost as a % of Covered Payroll	11.22%	11.22%	11.00%

CALCULATION OF EMPLOYER NORMAL COST -- POLICE OFFICERS

A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. Normal Cost for			
1. Service Retirement Benefits	\$ 21,341	\$ 20,891	\$ 21,570
2. Vesting Benefits	2,014	1,967	2,032
3. Disability Benefits	200	184	189
4. Preretirement Death Benefits	207	223	231
5. Return of Member Contributions	<u>920</u>	<u>915</u>	<u>946</u>
6. Total for Future Benefits	24,682	24,180	24,968
7. Assumed Amount for Administrative Expenses	<u>18,320</u>	<u>18,320</u>	<u>17,196</u>
8. Total Normal Cost	43,002	42,500	42,164
9. Total as a % of Covered Payroll	36.77%	36.34%	34.91%
C. Expected Member Contribution	8,187	8,187	8,455
D. Employer Normal Cost: B8-C	34,815	34,313	33,709
E. Employer Normal Cost as a % of Covered Payroll	29.77%	29.34%	27.91%

CALCULATION OF EMPLOYER NORMAL COST -- FIREFIGHTERS

A. Valuation Date	October 1, 2019 <i>After Changes</i>	October 1, 2019 <i>Before Changes</i>	October 1, 2018
B. Normal Cost for			
1. Service Retirement Benefits	\$ -	\$ -	\$ -
2. Vesting Benefits	-	-	-
3. Disability Benefits	-	-	-
4. Preretirement Death Benefits	-	-	-
5. Return of Member Contributions	-	-	-
6. Total for Future Benefits	-	-	-
7. Assumed Amount for Administrative Expenses	-	-	-
8. Total Normal Cost	-	-	-
9. Total as a % of Covered Payroll	N/A	N/A	N/A
C. Expected Member Contribution	-	-	-
D. Employer Normal Cost: B8-C	-	-	-
E. Employer Normal Cost as a % of Covered Payroll	N/A	N/A	N/A

**LIQUIDATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY
GENERAL EMPLOYEES**

UAAL Amortization Period and Payments -- General Employees							
Original UAAL				Current UAAL			
Date	Source **	Amortization Period (Years)	Amount	Years Remaining	Amount	Payment	
						After Changes	Before Changes
10/1/2005	Method Change	20	\$ 12,879,286	6	\$ 5,092,212	\$ 993,062	\$ 995,211
10/1/2006	(Gain)/Loss	20	2,772,755	7	1,292,186	222,654	223,226
10/1/2006	Assumption Change	20	5,079,016	7	2,366,972	407,849	408,896
10/1/2007	(Gain)/Loss	20	453,113	8	228,247	35,461	35,566
10/1/2007	Assumption Change	20	5,935,357	8	2,989,821	464,505	465,879
10/1/2008	(Gain)/Loss	20	759,283	9	409,859	58,305	58,500
10/1/2009	(Gain)/Loss	20	1,940,137	10	1,120,283	147,695	148,244
10/1/2010	(Gain)/Loss	20	(5,847,029)	11	(3,565,551)	(439,894)	(441,689)
10/1/2010	Assumption Change	20	1,382,157	11	842,847	103,985	104,409
10/1/2011	(Gain)/Loss	20	(6,442,703)	12	(4,216,531)	(490,697)	(492,872)
10/1/2012	(Gain)/Loss	20	326,498	13	236,002	26,079	26,203
10/1/2013	(Gain)/Loss	20	757,216	13	576,448	63,699	64,003
10/1/2014	(Gain)/Loss	20	(2,525,432)	13	(1,896,934)	(209,615)	(210,617)
10/1/2015	(Gain)/Loss	20	423,505	13	326,885	36,121	36,294
10/1/2015	Amendment	20	(5,669,879)	13	(4,376,354)	(483,596)	(485,907)
10/1/2016	(Gain)/Loss	20	1,751,094	13	1,416,116	156,484	157,231
10/1/2016	Assumption Change	20	4,436,049	13	3,587,450	396,421	398,315
10/1/2017	(Gain)/Loss	15	523,187	13	432,316	47,772	48,000
10/1/2017	Assumption Change	15	1,439,132	13	1,189,177	131,407	132,034
10/1/2018	(Gain)/Loss	15	1,659,091	14	1,446,183	152,593	153,373
10/1/2018	Assumption Change	15	1,521,614	14	1,326,349	139,949	140,664
10/1/2019	(Gain)/Loss	15	2,010,889	15	2,010,889	203,570	204,677
10/1/2019	Assumption Change	15	(1,498,489)	15	(1,498,489)	(151,698)	N/A
10/1/2019	Police Officers Surplus*	5	(127,834)	5	(127,834)	(29,011)	N/A
			23,938,013		11,208,549	1,983,100	2,169,640

* The police officers' surplus is allocated to general employees.

** Descriptions of the source of changes for bases other than (Gain)/Loss are described below.

10/1/2005 Method Changes:

1. The funding method was changed from Aggregate to Entry Age Normal with a 20-year amortization period for general employees and a 5-year amortization period for police officers.
2. The asset valuation method was changed to the method shown in the report prepared by Stanley, Holcombe & Associates, Inc.
3. The mortality table was changed from the 1983 Group Annuity Mortality Table to the RP 2000 Generational Mortality Table.
4. The investment earnings assumption was changed from 9% per year up to retirement and 7% thereafter to 8.5% per year. The investment earnings assumption will be reduced from 8.5% to 8% in the next actuarial valuation as of October 1, 2006.
5. The retirement rates used were multiplied by 80%.



6. The salary increase assumption was changed from a flat 6% per year to a graded rate table based on service.
7. It was assumed that members will choose the option (lump sum without COLA or annuity with COLA) with the greater actuarial value.

10/1/2006 Assumption Change: The investment earnings assumption was changed from 8.5% per year to 8.0% per year.

10/1/2007 Assumption Change: The investment earnings assumption was changed from 8% per year to 7.5% per year.

10/1/2010 Assumption Change: The timing of expected pay increases was changed from end of year to mid-year timing.

10/1/2013 Amendment: The Plan was amended to provide an Employee Retirement Incentive Program (ERIP) which was offered to members who meet the Rule of 60, have at least ten years of City service, and are eligible for either normal or early retirement as of January 1, 2014. The ERIP provided a 4% benefit multiplier for the last 20 years of credited service. The lump sum form of payment was not available to ERIP retirees.

10/1/2015 Amendment: Ordinance No. 1397, adopted on March 8, 2016.

10/1/2016 Assumption Changes: Decreased the investment rate of return assumption to 7.05%. Salary increase rates, retirement rates, withdrawal rates, and disability rates have all been revised based on the experience study as of 10/1/2015. The mortality assumption was changed to the same rates used by FRS for Regular Class and Special Risk Class members in their July 1, 2016 actuarial valuation, as mandated by the Florida Statutes.

10/1/2017 Assumption Changes: Decreased the investment rate of return assumption to 6.95%. The amortization period for the unfunded actuarial accrued liability of the General Employees was lowered to 15 years for any new bases and any existing bases that had over 15 years remaining as of October 1, 2017. The amortization period for the unfunded actuarial accrued liability of the Police Officers was lowered to 5 years for any new bases and any existing bases that had over 5 years remaining as of October 1, 2017.

10/1/2018 Assumption Change: The investment earnings assumption was changed from 6.95% per year to 6.85% per year.

10/1/2019 Assumption Changes: The investment earnings assumption was changed from 6.85% per year to 6.75% per year and the mortality assumptions were changed to reflect the mortality rates used by the Florida Retirement System (FRS) for Regular Class and Special Risk Class members in the July 1, 2019 FRS Actuarial Valuation.



The Unfunded Actuarial Liability is being amortized as a level dollar amount over the number of years remaining in the amortization period.

Amortization Schedule -- General Employees*	
Year	Expected UAAL
2019	\$ 11,336,383
2020	9,953,674
2021	8,477,618
2022	6,901,929
2023	5,219,880
2024	3,424,294
2029	469,797
2034	-

** Excluding Police Officers Surplus*

**LIQUIDATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY
POLICE OFFICERS**

UAAL Amortization Period and Payments -- Police Officers							
Original UAAL				Current UAAL			
Date	Category	Amortization Period (Years)	Amount	Years Remaining	Amount	Payment	
						After Changes	Before Changes
10/1/2016	Credit	10	\$ (199,425)	3	\$ (187,788)	\$ (66,726)	\$ (66,786)
10/1/2016	(Gain)/Loss	10	94,833	3	81,741	29,045	29,071
10/1/2016	Assumption Change	10	272,023	3	234,470	83,314	83,388
10/1/2017	(Gain)/Loss	5	48,369	3	39,811	14,146	14,159
10/1/2017	Assumption Change	5	48,315	3	39,767	14,130	14,143
10/1/2018	(Gain)/Loss	5	50,574	4	27,176	7,473	7,483
10/1/2018	Assumption Change	5	47,491	4	42,116	11,582	11,597
10/1/2019	(Gain)/Loss	5	(71,641)	5	(71,641)	(16,258)	(16,287)
10/1/2019	Assumption Change	5	(333,486)	5	(333,486)	(75,682)	N/A
			\$ (42,947)		\$ (127,834)	\$ 1,024	\$ 76,768

UAAL Amortization Period and Payments -- Police Officers -- After Fresh Start*						
Original UAAL				Current UAAL		
Date	Category	Amortization Period (Years)	Amount	Years Remaining	Amount **	Payment**
10/1/2019	Fresh Start UAAL	5	\$ (127,834)	5	\$ (127,834)	\$ (29,011)
			\$ (127,834)		\$ (127,834)	\$ (29,011)

* Since the sum of the outstanding bases was negative while the sum of the amortization payments was positive after assumption changes, there is a fresh start of the UAAL as of October 1, 2019.

** The police officers' surplus is allocated to general employees.



The Unfunded Actuarial Liability is being amortized as a level dollar amount over the number of years remaining in the amortization period.

Amortization Schedule -- Police Officers	
Year	Expected UAAL
2019	\$ (127,834)
2020	(105,494)
2021	(81,646)
2022	(56,188)
2023	(29,011)
2024	-

**LIQUIDATION OF THE UNFUNDED ACTUARIAL ACCRUED LIABILITY
FIREFIGHTERS**

UAAL Amortization Period and Payments -- Firefighters							
Original UAAL				Current UAAL			
Date	Category	Amortization Period (Years)	Amount	Years Remaining	Amount	Payment	
						<i>After Changes</i>	<i>Before Changes</i>
10/1/2016	Assumption Change	10	\$ 222,078	7	\$ 127,481	\$ 21,966	\$ 22,022
10/1/2019	(Gain)/Loss	1	117,899	1	117,899	117,899	117,899
10/1/2019	Assumption Change	1	<u>(240,197)</u>	1	<u>(240,197)</u>	<u>(240,197)</u>	<u>N/A</u>
			\$ 99,780		\$ 5,183	\$ (100,332)	\$ 139,921

UAAL Amortization Period and Payments -- Firefighters -- After Fresh Start*						
Original UAAL				Current UAAL		
Date	Category	Amortization Period (Years)	Amount	Years Remaining	Amount	Payment
10/1/2019	Fresh Start UAAL	1	\$ 5,183	1	\$ 5,183	\$ 5,183
			\$ 5,183		\$ 5,183	\$ 5,183

* Since the sum of the outstanding bases was positive while the sum of the amortization payments was negative after assumption changes, there is a fresh start of the UAAL as of October 1, 2019.

The Unfunded Actuarial Liability is being amortized as a level dollar amount over the number of years remaining in the amortization period.

Amortization Schedule -- Firefighters	
Year	Expected UAAL
2019	\$ 5,183
2020	-



ACTUARIAL GAINS AND LOSSES

When the actual plan experience differs from the actuarial assumptions, an actuarial gain or loss is the result. The net actuarial gain or loss for each group is computed as follows:

	General	Police	Fire	Total
1. Last Year's UAAL	\$ 14,356,886	\$ 323,289	\$ 313,574	\$ 14,993,749
2. Last Year's Employer Normal Cost	1,215,115	31,968	-	1,247,083
3. Last Year's Contributions	5,441,928	95,741	194,266	5,731,935
4. Interest at the Assumed Rate on:				
a. 1 and 2 for one year	1,066,682	24,335	21,480	1,112,497
b. 3 from dates paid	<u>372,772</u>	<u>6,558</u>	<u>13,307</u>	<u>392,637</u>
c. Total: a - b	693,910	17,777	8,173	719,860
5. This Year's Expected UAAL (Before Changes): 1 + 2 - 3 + 4c	10,823,983	277,293	127,481	11,228,757
6. Change in UAAL Due to Change in Benefits or Assumptions	(1,498,489)	(333,486)	(240,197)	(2,072,172)
7. This Year's Expected UAAL (After Changes): 5 + 6	9,325,494	(56,193)	(112,716)	9,156,585
8. Actual UAAL (After Changes)	11,336,383	(127,834) *	5,183	11,213,732
9. Net Actuarial Gain (Loss): 7 - 8	(2,010,889)	71,641	(117,899)	(2,057,147)
10. Gain (Loss) due to Investments				563,574
11. Gain (Loss) due to Other Causes				(2,620,721)

* The police officers' surplus is allocated to general employees.

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. The actual investment return rates shown below 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 year.

Period	Annualized Investment Return		Annualized Salary Increases	
	Actual	Assumed	Actual	Assumed
01/1/77 - 01/1/78	3.2 %	6.0 %	7.0 %	4.5 %
10/1/78 - 9/30/79	3.5	6.0	15.0	4.5
10/1/79 - 9/30/81	1.6	7.0	9.0	5.5
10/1/81 - 9/30/83	25.5	7.0	10.0	5.5
10/1/83 - 9/30/85	10.9	7.0	8.0	5.5
10/1/85 - 9/30/87	19.0	7.0	6.0	5.5
10/1/87 - 9/30/89	8.9	8.0	6.5	6.0
10/1/89 - 9/30/90	1.1	8.0	(1.5)	6.0
10/1/90 - 9/30/91	14.4	8.0	1.6	6.0
10/1/91 - 9/30/92	16.2	9.0	6.5	6.0
10/1/92 - 9/30/93	16.6	9.0	5.8	6.0
10/1/93 - 9/30/94	2.2	9.0	7.7	7.0 *
10/1/94 - 9/30/95	18.9	9.0	6.0	7.0 *
10/1/95 - 9/30/96	9.5	9.0	7.4	7.0 *
10/1/96 - 9/30/97	13.2	9.0	5.9	7.0 *
10/1/97 - 9/30/98	10.8	9.0	5.4(G)/4.1(P)	7.0 *
10/1/98 - 9/30/99	12.6	9.0	8.1(G)/8.2(P)	7.0 *
10/1/99 - 9/30/00	11.4	9.0	7.1(G)/2.8(P)	7.0 *
10/1/00 - 9/30/01	8.3	9.0	1.1(G)/0.3(P)	7.0 *
10/1/01 - 9/30/02	(3.0)	9.0	6.2(G)/5.5(P)	6.0
10/1/02 - 9/30/03	3.7	9.0	6.2(G)/5.4(P)	6.0
10/1/03 - 9/30/04	1.5	9.0	5.5(G)/7.7(P)	6.0
10/1/04 - 9/30/05	2.3	9.0	6.0(G)/8.6(P)	6.0
10/1/05 - 9/30/06	6.3	8.5	10.3(G)/16.1(P)	5.5(G)/5.4(P)
10/1/06 - 9/30/07	6.8	8.0	3.1(G)/3.6(P)	6.0(G)/5.4(P)
10/1/07 - 9/30/08	3.9	7.5	1.8(G)/0.0(P)	6.1(G)/5.4(P)
10/1/08 - 9/30/09	1.8	7.5	2.9(G)/1.2(P)	6.1(G)/5.4(P)
10/1/09 - 9/30/10	5.3	7.5	-1.5(G)/-0.3(P)	6.0(G)/5.4(P)
10/1/10 - 9/30/11	3.8	7.5	-8.2(G)/-16.0(P)	6.0(G)/5.4(P)
10/1/11 - 9/30/12	6.0	7.5	5.5(G)/10.8(P)	6.0(G)/5.4(P)
10/1/12 - 9/30/13	6.8	7.5	5.1(G)/5.5(P)	6.0(G)/5.4(P)
10/1/13 - 9/30/14	7.5	7.5	-0.2(G)/-3.4(P)	6.2(G)/5.4(P)
10/1/14 - 9/30/15	6.2	7.5	4.0(G)/6.6(P)	6.2(G)/5.4(P)
10/1/15 - 9/30/16	7.1	7.5	9.7(G)/2.3(P)	6.2(G)/5.4(P)
10/1/16 - 9/30/17	7.5	7.05	9.7(G)/2.1(P)	4.3(G)/3.0(P)
10/1/17 - 9/30/18	8.0	6.95	7.6(G)/-0.2(P)	4.2(G)/3.0(P)
10/1/18 - 9/30/19	7.3	6.85	7.3(G)/-3.2(P)	4.0(G)/3.0(P)
Average	8.4	---	4.8(G)/3(P) **	---

* 6% assumption for police officers and firefighters.

** Average since 1997.



**Actual (A) Compared to Expected (E) Decrements
Among Active General Employees**

Year Ended	Number Added During Year		Service Retirement		Disability Retirement		Death		Terminations				Active Members End of Year
	A	E	A	E	A	E	A	E	Vested	Other	Totals		
									A	A	A	E	
9/30/2002	30	22	4	12	0	2	0	0	6	12	18	22	368
9/30/2003	23	32	11	16	0	2	0	0	5	16	21	22	359
9/30/2004	27	28	13	17	0	2	0	0	7	8	15	20	358
9/30/2005	25	31	12	17	1	2	0	1	1	17	18	18	352
9/30/2006	28	28	6	17	0	2	0	0	0	22	22	18	352
9/30/2007	38	24	4	15	0	2	0	0	11	9	20	17	366
9/30/2008	27	21	7	20	0	2	0	0	0	14	14	17	372
9/30/2009	8	18	9	23	0	2	0	0	3	6	9	17	362
9/30/2010	3	69	35	20	0	2	0	0	13	21	34	16	296
9/30/2011	15	25	18	19	0	2	0	0	1	6	7	12	286
9/30/2012	18	48	27	21	0	2	0	0	6	15	21	11	256
9/30/2013	25	17	11	16	0	1	0	0	2	4	6	10	264 *
9/30/2014	39	61	51	7	0	1	0	0	5	5	10	11	242
9/30/2015	38	40	4	8	0	1	0	0	9 ***	27 ***	36	14	240
9/30/2016	21	29	10	12	0	1	0	0	0	19	19	13	232
9/30/2017	0	0	6	12	0	0	0	0	6	6	12	13	214
9/30/2018	0	0	6	12	0	0	0	0	2	9	11	11	197
9/30/2019	0	0	5	14	0	0	0	0	1	3	4	8	188
9/30/2020		0		14		0		0				7	
18 Yr Totals ****	365	493	239	278	1	26	0	1	78	219	297	270	

* Before reflecting 48 ERIP retirees.

** Includes 48 ERIP retirees not previously reflected.

*** Reflects 1 vested transfer and 11 nonvested transfers to FRS.

**** Totals are through current Plan Year only.



**Actual (A) Compared to Expected (E) Decrements
Among Active Police Officers**

Year Ended	Number Added During Year		Service Retirement		Disability Retirement		Death		Terminations				Active Members End of Year
	A	E	A	E	A	E	A	E	Vested	Other	Totals		
									A	A	A	E	
9/30/2002	0	0	3	4	0	0	0	0	0	0	0	0	7
9/30/2003	0	0	1	2	0	0	0	0	0	0	0	0	6
9/30/2004	0	0	1	4	0	0	0	0	0	0	0	0	5
9/30/2005	0	0	2	3	0	0	0	0	0	0	0	0	3
9/30/2006	0	0	0	2	0	0	0	0	0	0	0	0	3
9/30/2007	0	0	0	3	0	0	0	0	0	0	0	0	3
9/30/2008	0	1	1	2	0	0	0	0	0	0	0	0	2
9/30/2009	0	1	1	2	0	0	0	0	0	0	0	0	1
9/30/2010	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2011	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2012	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2013	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2014	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2015	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2016	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2017	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2018	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2019	0	0	0	1	0	0	0	0	0	0	0	0	1
9/30/2020		0		1		0		0				0	
18 Yr Totals *	0	2	9	32	0	0	0	0	0	0	0	0	

* Totals are through current Plan Year only.

RECENT HISTORY OF REQUIRED AND ACTUAL CONTRIBUTIONS						
Valuation Date	For FYE Ending	Required Contributions (Between Employer & State)		Actual Contributions		
		Amount	% of Payroll	Employer	State	Total
10/1/1991	9/30/1993	\$ 886,728	35.58 %	\$ 843,565	\$ 60,597	\$ 904,162
10/1/1991	9/30/1994	879,668	36.55	838,016	54,577	892,593
10/1/1993	9/30/1995	1,498,386	12.67	1,452,542	53,635	1,506,177
10/1/1993	9/30/1996	1,458,944	11.72	1,405,267	62,463	1,467,730
10/1/1995	9/30/1997	1,760,285	13.34	1,696,824 ¹	63,461	1,760,285
10/1/1995	9/30/1998	786,027	5.94	667,337	121,663	789,000
10/1/1997	9/30/1999	559,917	4.30	473,088	86,829	559,917
10/1/1997	9/30/2000	553,939	4.22	522,127	31,812	553,939
10/1/1999	9/30/2001	252,534	1.78	252,534	0	252,534
10/1/1999	9/30/2002	254,552	1.74	254,552	0	254,552
10/1/2001	9/30/2003	1,085,686	7.51	1,085,686	0	1,085,686
10/1/2002	9/30/2004	2,557,247	16.58	2,557,247	0	2,557,247
10/1/2003	9/30/2005	3,515,204	22.63	3,515,204	0	3,515,204
10/1/2004	9/30/2006	4,439,848	27.95	3,789,262	0	3,789,262
10/1/2005	9/30/2007	4,368,096	27.38	4,368,096	0	4,368,096
10/1/2006	9/30/2008	4,900,204	28.40	4,278,122 ²	0	4,278,122
10/1/2007	9/30/2009	5,460,248	30.19	4,929,540 ³	0	4,929,540
10/1/2008	9/30/2010	5,731,132	31.47	5,731,132	0	5,731,132
10/1/2009	9/30/2011	6,356,163	35.09	6,356,163	0	6,356,163
10/1/2010	9/30/2012	5,568,079	37.50	5,646,907	0	5,646,907
10/1/2011	9/30/2013	4,525,712	34.07	4,525,712	0	4,525,712
10/1/2012	9/30/2014	4,131,869	33.10	4,196,181	0	4,196,181
10/1/2013	9/30/2015	5,598,011	52.85	5,598,011	0	5,598,011
10/1/2014	9/30/2016	5,993,388	52.04	5,993,388	0	5,993,388
10/1/2015	9/30/2017	5,028,652	43.28	5,028,652	0	5,028,652
10/1/2016	9/30/2018	5,330,992	45.05	5,330,992	0	5,330,992
10/1/2017	9/30/2019	5,731,935	47.81	5,731,935	0	5,731,935
10/1/2018	9/30/2020	4,126,483	34.41	---	---	---
10/1/2019	9/30/2021	3,629,523	29.31	---	---	---

¹ Does not include proceeds of Pension Obligation Bond in the amount of \$10,868,833.

² Reflects the exclusion of \$622,082 of the County contribution receivable for the year ending September 30, 2007, and the inclusion of a \$646,704 County contribution receivable for the year ending September 30, 2008, as shown on the September 30, 2008 financial statements.

³ Reflects the exclusion of \$646,704 of the County contribution receivable for the year ending September 30, 2008, and the inclusion of a \$115,996 County contribution receivable for the year ending September 30, 2009.



RECENT HISTORY OF UAAL AND FUNDED RATIO

Valuation Date	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age Normal (b)	Unfunded Actuarial Accrued Liability (UAAL) Entry Age Normal (b)-(a)	Funded Ratio (a)/(b)	Annual Covered Payroll (c)	UAAL As % of Payroll (b-a)/(c)
10/1/1995	\$ 38,882,450	\$ 50,248,832	\$ 11,366,382	77.4 %	\$ 13,194,968	86.1 %
10/1/1997	52,072,871	52,298,792	225,921	99.6	13,043,842	1.7
10/1/1999	58,875,802	56,780,548	(2,095,254)	103.7	14,139,623	(14.8)
10/1/2001	62,110,336	59,943,465	(2,166,871)	103.6	14,453,082	(15.0)
10/1/2002	55,291,559	62,380,560	7,089,001	88.6	15,421,323	46.0
10/1/2003	53,926,829	64,432,281	10,505,452	83.7	15,530,805	67.6
10/1/2004	54,227,261	67,485,625	13,258,364	80.4	15,886,989	83.5
10/1/2005	60,623,796	75,784,482	15,160,686	80.0	15,952,834	95.0
10/1/2006	65,393,710	87,268,437	21,874,727	74.9	17,256,272	126.8
10/1/2007	71,450,969	98,986,010	27,535,040	72.2	18,089,097	152.2
10/1/2008	75,784,705	104,182,882	28,398,177	72.7	18,213,561	155.9
10/1/2009	78,535,899	109,631,323	31,095,424	71.6	18,114,099	171.7
10/1/2010	81,080,885	107,183,003	26,102,118	75.6	14,849,412	175.8
10/1/2011	85,534,546	102,996,257	17,461,711	83.0	13,284,175	131.4
10/1/2012	88,127,070	103,821,983	15,694,913	84.9	12,483,246	125.7
10/1/2013	93,681,544	116,495,470	22,813,926	80.4	10,592,994	215.4
10/1/2014	98,182,705	118,154,197	19,971,492	83.1	11,524,318	173.3
10/1/2015	103,126,258	115,328,753	12,202,495	89.4	11,618,974	105.0
10/1/2016	110,067,733	125,673,386	15,605,653	87.6	11,834,735	131.9
10/1/2017	116,705,372	131,767,372	15,062,000	88.6	11,989,341	125.6
10/1/2018	124,421,561	139,415,310	14,993,749	89.2	11,992,650	125.0
10/1/2019	131,451,791	142,665,523	11,213,732	92.1	12,384,844	90.5

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) dollar contributions over a reasonable period of future years.

Actuarial Value of Assets - The Actuarial Value of Assets phase in the difference between the expected actuarial value and actual 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 the Experience Study Report as of October 1, 2015. 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 valuations is 6.75% per year, compounded annually (net after investment expenses).

The Inflation Rate assumed in this valuation is 2.5% per year. The Inflation Rate is defined to be the long term rate of annual increases in 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 wage inflation of 4.25%.



Pay increase assumptions for individual active members are shown below. Part of the assumption for each service year is for productivity, merit and/or seniority increases, and the other 2.5% recognizes inflation.

The rates of salary increase used for individual members are in accordance with the following table. This assumption is used to project a member's current salary to the salaries upon which benefits will be based.

Years of Service	% Increase in Salary		
	Merit and Seniority	Base (Economic)	Total Increase
0 - 2	3.5%	2.5%	6.0%
3 - 5	2.5%	2.5%	5.0%
6 - 9	2.0%	2.5%	4.5%
10 - 14	1.5%	2.5%	4.0%
15 - 19	1.0%	2.5%	3.5%
20 and Higher	0.5%	2.5%	3.0%

Demographic Assumptions

The mortality table for General Employees is the PUB-2010 Headcount Weighted Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Below Median Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Headcount Weighted Below Median Retiree Female Table (post-retirement). These tables use ages set back one year for males and future improvements in mortality projected to all future years after 2010 using scale MP 2018. These are the same rates used for Regular Class members of the Florida Retirement System (FRS) in their actuarial valuation as of July 1, 2019.

FRS Healthy Post-Retirement Mortality for Regular Class Members

Sample Attained Ages (in 2019)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
	50	0.19 %	0.58 %	32.93
55	0.98	0.58	28.57	32.33
60	1.15	0.60	24.50	27.81
65	1.30	0.69	20.48	23.25
70	1.81	1.10	16.49	18.78
75	2.90	1.92	12.79	14.60
80	4.91	3.47	9.52	10.87

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

For disabled retirees, the mortality table used was the PUB-2010 Headcount-Weighted General Disabled Retiree Tables with ages set forward 3 years for males and females.

FRS Disabled Mortality for Regular Class Members

Sample Attained Ages (in 2019)	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	Women	Men	Women
50	2.02 %	1.64 %	20.99	23.92
55	2.53	1.91	18.18	20.88
60	3.08	2.27	15.50	17.88
65	3.93	2.83	12.94	14.91
70	5.08	3.79	10.53	12.07
75	6.98	5.46	8.29	9.45
80	10.12	8.31	6.33	7.19

The **mortality tables** for Police and Fire members are 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 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 Ages (in 2019)	Probability of Dying Next Year		Future Life Expectancy (years)	
	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.

For disabled retirees, the mortality tables used were 80% of the PUB-2010 Headcount Weighted General Disabled Retiree Male Table and 20% of the Headcount Weighted Safety Disabled Retiree Male Table, and 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 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		Future Life Expectancy (years)	
	Men	Women	Men	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:

Number of Years After First Eligibility for Normal Retirement	Probability of Normal Retirement
0	30 %
1	25
2	25
3	25
4	25
5	50
6	50
7	50
8	50
9	50
10+	100

The rate of retirement is 7% for each year of eligibility for early retirement under the early retirement eligibility at 14 years of service regardless of age. The rate of retirement is 10% for each year of eligibility for early retirement under the early retirement eligibility at age 55 with 10 years of service.

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.

Sample Ages	Years of Service	% of Active Members Separating Within Next Year
ALL	Under 1	13.0 %
	1	13.0
	2	13.0
	3	10.0
	4	10.0
	5	9.0
	6	9.0
	7	5.0
	8	4.5
	9	4.0
25 - 39	10 & Over	4.0
40 - 49		3.5
50 & Over		3.0

Rates of disability among active members. (50% of future disability retirements are assumed to be service-connected.)

Sample Ages	% of Active Members Becoming Disabled Within Next Year
20	0.01%
25	0.01%
30	0.01%
35	0.01%
40	0.02%
45	0.03%
50	0.05%
55	0.10%
60	0.17%

Changes Since Prior Valuation – The investment return assumption was lowered from 6.85% to 6.75% and the mortality assumptions were changed to reflect the mortality rates used by the Florida Retirement System (FRS) for Regular Class and Special Risk Class members in the July 1, 2019 FRS Actuarial Valuation.

Miscellaneous and Technical Assumptions

<i>Administrative & Investment Expenses</i>	The investment return assumption is intended to be the return net of investment expenses. Annual administrative expenses are assumed to be equal to the average of the expenses over the previous two years. Assumed administrative expenses are added to the Normal Cost.
<i>Benefit Service</i>	Exact fractional service is used to determine the amount of benefit payable.
<i>COLA</i>	For future retirees, benefits are assumed to increase at rates varying from 1.5% to 3% per year, starting five years after retirement, based on service as of November 10, 2015.
<i>Decrement Operation</i>	Disability and mortality decrements operate during retirement eligibility.
<i>Decrement Timing</i>	Decrements of all types are assumed to occur at the beginning of the year.
<i>Eligibility Testing</i>	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.
<i>Forfeitures</i>	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.
<i>Incidence of Contributions</i>	Employer contributions are assumed to be made at the beginning of the fiscal year for general employees and police officers and at the end of each calendar quarter for firefighters. 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.
<i>Marriage Assumption</i>	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.
<i>Normal Form of Benefit</i>	A life annuity is the normal form of benefit.
<i>Pay Increase Timing</i>	Middle of fiscal year. This is equivalent to assuming that reported pays represent amounts paid to members during the year ended on the valuation date.
<i>Service Credit Accruals</i>	It is assumed that members accrue one year of service credit per year.

GLOSSARY

<i>Actuarial Accrued Liability (AAL)</i>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<i>Actuarial Assumptions</i>	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.
<i>Actuarial Cost Method</i>	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.
<i>Actuarial Equivalent</i>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<i>Actuarial Present Value (APV)</i>	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.
<i>Actuarial Present Value of Future Benefits (APVFB)</i>	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.
<i>Actuarial Valuation</i>	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.
<i>Actuarial Value of Assets</i>	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 employer contribution (ADEC).

<i>Amortization Method</i>	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.
<i>Amortization Payment</i>	That portion of the plan contribution or ADEC which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<i>Amortization Period</i>	The period used in calculating the Amortization Payment.
<i>Actuarially Determined Employer Contribution (ADEC)</i>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The ADEC consists of the Employer Normal Cost and Amortization Payment.
<i>Closed Amortization Period</i>	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.
<i>Employer Normal Cost</i>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<i>Equivalent Single Amortization Period</i>	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.
<i>Experience Gain/Loss</i>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. On the other hand, losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.
<i>Funded Ratio</i>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.



<i>GASB</i>	Governmental Accounting Standards Board.
<i>GASB No. 67 and GASB No. 68</i>	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.
<i>Normal Cost</i>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<i>Open Amortization Period</i>	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.
<i>Unfunded Actuarial Accrued Liability</i>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<i>Valuation Date</i>	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	2018
A. Cash and Cash Equivalents (Operating Cash)	\$ -	\$ -
B. Receivables		
1. Member Contributions	\$ 3,123	\$ 319
2. City Contributions	-	-
3. County Contributions	-	-
4. State Contributions (from Share Plan)	38,025	35,430
5. Investment Income and Other Receivables	194,162	241,718
6. Total Receivables	\$ 235,310	\$ 277,467
C. Investments		
1. Short Term Investments	\$ 1,832,365	\$ 1,943,228
2. Domestic Equities	79,055,559	76,381,305
3. International Equities	-	-
4. Domestic Fixed Income	31,687,294	31,850,376
5. International Fixed Income	-	-
6. Real Estate	21,543,006	19,278,783
7. Private Equity	-	-
8. Total Investments	\$ 134,118,224	\$ 129,453,692
D. Liabilities		
1. Benefits Payable	\$ (489,083)	\$ -
2. Accrued Expenses and Other Payables	(120,337)	(90,875)
3. Total Liabilities	\$ (609,420)	\$ (90,875)
E. Total Market Value of Assets Available for Benefits	\$ 133,744,114	\$ 129,640,284
F. State Contribution Reserve	\$ (38,025)	\$ (35,430)
G. Market Value of Assets Net State Contribution Reserve	\$ 133,706,089	\$ 129,604,854
H. Employee Contribution Refunds Payable to FRS Transfers	-	-
I. Market Value Net of Contribution Refunds Payable	\$ 133,706,089	\$ 129,604,854
J. Allocation of Investments		
1. Short Term Investments	1.4%	1.5%
2. Domestic Equities	58.9%	59.0%
3. International Equities	0.0%	0.0%
4. Domestic Fixed Income	23.6%	24.6%
5. International Fixed Income	0.0%	0.0%
6. Real Estate	16.1%	14.9%
7. Private Equity	0.0%	0.0%
8. Total Investments	100.0%	100.0%



Reconciliation of Plan Assets

Item	September 30	
	2019	2018
A. Market Value of Assets at Beginning of Year	\$ 129,604,854	\$ 118,615,028
B. Adjustment to Match Financial Statements	\$ -	\$ -
C. Revenues and Expenditures		
1. Contributions		
a. Member Contributions	\$ 824,981	\$ 813,650
b. City Contributions	5,537,669	5,135,715
c. County Contributions	194,266	195,277
d. Total	<u>\$ 6,556,916</u>	<u>\$ 6,144,642</u>
2. Investment Income		
a. Interest, Dividends, and Other Income	\$ 1,311,940	\$ 1,153,850
b. Net Realized/Unrealized Gains/(Losses)*	5,449,399	12,141,030
c. Investment Expenses	(482,159)	(492,143)
d. Net Investment Income	<u>\$ 6,279,180</u>	<u>\$ 12,802,737</u>
3. Benefits and Refunds		
a. Regular Monthly Benefits	\$ (7,569,584)	\$ (7,315,763)
b. Refunds	(26,378)	(136,942)
c. Lump Sum Benefits	(793,949)	(171,809)
d. Total	<u>\$ (8,389,911)</u>	<u>\$ (7,624,514)</u>
4. Administrative and Miscellaneous Expenses	\$ (344,950)	\$ (333,039)
5. Employee Contribution Refunds Payable to FRS Transfers	\$ -	\$ -
D. Market Value of Assets at End of Year	\$ 133,706,089	\$ 129,604,854

* The breakdown between realized and unrealized gains and (losses) was not provided.

Reconciliation of Plan Assets by Group

Item	September 30, 2019			
	General	Police	Fire	Total
A. Market Value of Assets at Beginning of Year	\$ 121,158,629	\$ 5,777,466	\$ 2,668,759	\$ 129,604,854
B. Adjustment to Match Financial Statements	\$ -	\$ -	\$ -	\$ -
C. Revenues and Expenditures				
1. Contributions				
a. Member Contributions	\$ 816,915	\$ 8,066	\$ -	\$ 824,981
b. City Contributions	5,441,928	95,741	-	5,537,669
c. County Contributions	-	-	194,266	194,266
d. Total	<u>\$ 6,258,843</u>	<u>\$ 103,807</u>	<u>\$ 194,266</u>	<u>\$ 6,556,916</u>
2. Investment Income				
a. Interest, Dividends, and Other Income	\$ 1,243,416	\$ 43,848	\$ 24,676	\$ 1,311,940
b. Net Realized/Unrealized Gains/(Losses)	5,164,770	182,132	102,497	5,449,399
c. Investment Expenses	<u>(456,975)</u>	<u>(16,115)</u>	<u>(9,069)</u>	<u>(482,159)</u>
d. Net Investment Income	<u>\$ 5,951,211</u>	<u>\$ 209,865</u>	<u>\$ 118,104</u>	<u>\$ 6,279,180</u>
3. Benefits and Refunds				
a. Regular Monthly Benefits and Lump Sums	\$ (7,517,641)	\$ (433,572)	\$ (412,320)	\$ (8,363,533)
b. Refunds	<u>(26,378)</u>	<u>-</u>	<u>-</u>	<u>(26,378)</u>
c. Total	<u>\$ (7,544,019)</u>	<u>\$ (433,572)</u>	<u>\$ (412,320)</u>	<u>\$ (8,389,911)</u>
4. Administrative and Miscellaneous Expenses	\$ (326,933)	\$ (18,017)	\$ -	\$ (344,950)
D. Market Value of Assets at End of Year	\$ 125,497,731	\$ 5,639,549	\$ 2,568,809	\$ 133,706,089
E. Percentage of Total	93.9%	4.2%	1.9%	100.0%

Actuarial Value of Assets

Item	September 30	
	2019	2018
A. Beginning of Year Assets		
1. Market Value	\$ 129,604,854	\$ 118,615,028
2. Actuarial Value	124,421,561	116,705,372
B. End of Year Market Value of Assets	133,706,089	129,604,854
C. Net of Contributions Less Disbursements	(2,177,945)	(1,812,911)
D. Actual Net Investment Earnings*	6,279,180	12,802,737
E. Expected Investment Earnings*	8,644,601	8,233,277
F. Expected Actuarial Value End of Year	130,888,217	123,125,738
G. Market Value End of Year Less Expected Actuarial Value: B - F	2,817,872	6,479,116
H. 20% of Difference	563,574	1,295,823
I. End of Year Assets		
1. Actuarial Value: F + H	131,451,791	124,421,561
2. Final Actuarial Value Within 80% to 120% of Market Value	131,451,791	124,421,561
J. Employee Contribution Refunds Payable to FRS Transfers	0	0
K. Net Valuation Assets	131,451,791	124,421,561
L. Recognized Investment Earnings	9,208,175	9,529,100
M. Recognized Rate of Return	7.3%	8.0%

* Net of Investment Related Expenses.

Note: Actuarial Value of Assets by group is distributed in the same ratio as market value.



Year Ending September 30th	Investment Rate of Return	
	Market Value*	Actuarial Value
1990	1.1 %	1.1 %
1991	14.4	14.4
1992	16.2	16.2
1993	16.6	16.6
1994	2.2	2.2
1995	18.9	18.9
1996	12.4	9.5
1997	28.0	13.2
1998	0.8	10.8
1999	18.6	12.6
2000	4.3	11.4
2001	(3.8)	8.3
2002	(7.2)	(3.0)
2003	13.7	3.7
2004	8.7	1.5
2005	9.0	2.3
2006	7.0	6.3
2007	11.5	6.8
2008	(6.8)	3.9
2009	(1.8)	1.8
2010	7.9	5.3
2011	2.4	3.8
2012	16.7	6.0
2013	10.1	6.8
2014	10.6	7.5
2015	0.8	6.2
2016	11.0	7.1
2017	11.0	7.5
2018	10.6	8.0
2019	4.8	7.3
Average Returns:		
Last 5 Years	7.6 %	7.2 %
Last 10 Years	8.5 %	6.5 %
All Years	8.0 %	7.3 %

* Net of investment expenses after 2005.

The above rates are based on 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

	General	Police	Fire	Total
A. Valuation Date	10/1/2019	10/1/2019	10/1/2019	10/1/2019
B. Actuarial Present Value of Accumulated Plan Benefits				
1. Vested Benefits				
a. Members Currently Receiving Payments	\$ 83,080,445	\$ 3,820,897	\$ 2,530,682	\$ 89,432,024
b. Terminated Vested Members	706,162	-	-	706,162
c. Other Members	39,342,374	1,598,371	-	40,940,745
d. Total	123,128,981	5,419,268	2,530,682	131,078,931
2. Non-Vested Benefits	1,695,648	-	-	1,695,648
3. Total Actuarial Present Value of Accumulated Plan Benefits: 1d + 2	124,824,629	5,419,268	2,530,682	132,774,579
4. Accumulated Contributions of Active Members	8,162,314	232,834	-	8,395,148
C. Changes in the Actuarial Present Value of Accumulated Plan Benefits				
1. Total Value at Beginning of Year	120,837,935	5,834,508	2,875,601	129,548,044
2. Increase (Decrease) During the Period Attributable to:				
a. Plan Amendment	-	-	-	-
b. Change in Actuarial Assumptions	(1,326,449)	(331,855)	(240,197)	(1,898,501)
c. Latest Member Data, Benefits Accumulated, and Decrease in the Discount Period	12,857,162	350,187	307,598	13,514,947
d. Benefits Paid	(7,544,019)	(433,572)	(412,320)	(8,389,911)
e. Net Increase	3,986,694	(415,240)	(344,919)	3,226,535
3. Total Value at End of Period	124,824,629	5,419,268	2,530,682	132,774,579
D. Market Value of Assets	125,497,731	5,639,549	2,568,809	133,706,089
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,	<u>2019</u>	<u>2018</u>	<u>2017</u>	<u>2016</u>	<u>2015</u>	<u>2014</u>
Total Pension Liability						
Service Cost	\$ 1,812,287	\$ 1,759,663	\$ 1,959,651	\$ 2,659,600	\$ 2,438,790	\$ 2,250,457
Interest	9,216,810	8,939,070	8,775,025	9,099,037	8,937,243	8,638,765
Benefit Changes	-	-	-	(6,839,780)	-	-
Difference between actual & expected experience	3,067,379	1,551,666	2,228,073	(1,266,151)	(2,263,638)	-
Assumption Changes	1,601,838	1,522,923	4,504,616	-	-	-
Benefit Payments	(8,363,533)	(7,487,572)	(7,225,538)	(7,034,144)	(6,863,520)	(6,939,695)
Refunds	(26,378)	(136,942)	(98,051)	(190,942)	(265,792)	(185,090)
Other (Increase in State Contribution Reserve)	2,595	1,901	1,657	1,423	1,253	1,253
Net Change in Total Pension Liability	<u>7,310,998</u>	<u>6,150,709</u>	<u>10,145,433</u>	<u>(3,570,957)</u>	<u>1,984,336</u>	<u>3,765,690</u>
Total Pension Liability - Beginning	<u>134,998,624</u>	<u>128,847,915</u>	<u>118,702,482</u>	<u>122,273,439</u>	<u>120,289,103</u>	<u>116,523,413</u>
Total Pension Liability - Ending (a)	<u>\$ 142,309,622</u>	<u>\$ 134,998,624</u>	<u>\$ 128,847,915</u>	<u>\$ 118,702,482</u>	<u>\$ 122,273,439</u>	<u>\$ 120,289,103</u>
Plan Fiduciary Net Position						
Contributions - Employer	\$ 5,537,669	\$ 5,135,715	\$ 4,924,792	\$ 5,900,606	\$ 5,452,219	\$ 4,024,959
Contributions - Employer (from State/Share Plan)	2,595	1,901	1,657	1,423	1,253	1,253
Contributions - Non-Employer Contributing Entity	194,266	195,277	103,860	92,782	145,792	171,222
Contributions - Member	824,981	813,650	788,484	920,667	853,456	789,599
Net Investment Income	6,279,180	12,802,737	12,071,492	11,084,389	548,641	9,493,224
Benefit Payments	(8,363,533)	(7,487,572)	(7,225,538)	(7,034,144)	(6,863,520)	(6,939,695)
Refunds	(26,378)	(136,942)	(98,051)	(190,942)	(265,792)	(185,090)
Administrative Expense	(344,950)	(333,039)	(262,418)	(250,675)	(235,209)	(284,291)
Other	-	-	-	-	-	-
Net Change in Plan Fiduciary Net Position	<u>4,103,830</u>	<u>10,991,727</u>	<u>10,304,278</u>	<u>10,524,106</u>	<u>(363,160)</u>	<u>7,071,181</u>
Plan Fiduciary Net Position - Beginning	<u>129,640,284</u>	<u>118,648,557</u>	<u>108,344,279</u>	<u>97,820,173</u>	<u>98,183,333</u>	<u>91,112,152</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 133,744,114</u>	<u>\$ 129,640,284</u>	<u>\$ 118,648,557</u>	<u>\$ 108,344,279</u>	<u>\$ 97,820,173</u>	<u>\$ 98,183,333</u>
Net Pension Liability - Ending (a) - (b)	<u>8,565,508</u>	<u>5,358,340</u>	<u>10,199,358</u>	<u>10,358,203</u>	<u>24,453,266</u>	<u>22,105,770</u>
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	93.98 %	96.03 %	92.08 %	91.27 %	80.00 %	81.62 %
Covered Payroll*	\$ 11,992,650	\$ 11,989,341	\$ 11,834,735	\$ 11,618,974	\$ 12,192,229	\$ 11,279,986
Net Pension Liability as a Percentage of Covered Payroll	71.42 %	44.69 %	86.18 %	89.15 %	200.56 %	195.97 %

* Estimated covered payroll.



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

FY Ending September 30,	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	Plan Fiduciary Net Position as a % of Total Pension Liability	Covered Payroll	Net Pension Liability as a % of Covered Payroll
2014	\$ 120,289,103	\$ 98,183,333	\$ 22,105,770	81.62%	\$ 11,279,986	195.97%
2015	122,273,439	97,820,173	24,453,266	80.00%	12,192,229	200.56%
2016	118,702,482	108,344,279	10,358,203	91.27%	11,618,974	89.15%
2017	128,847,915	118,648,557	10,199,358	92.08%	11,834,735	86.18%
2018	134,998,624	129,640,284	5,358,340	96.03%	11,989,341	44.69%
2019	142,309,622	133,744,114	8,565,508	93.98%	11,992,650	71.42%



NOTES TO SCHEDULE OF 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	3.00% to 6.00% depending on service
Investment Rate of Return	6.85%
Retirement Age	Experience-based table of rates
Mortality	<p>The mortality table for General Employees is the RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality) with future improvements in mortality projected to all future years using Scale BB. For females, the base mortality rates include a 100% white collar adjustment. For males, the base mortality rates include a 50% blue collar adjustment and a 50% white collar adjustment. These are the same rates used for Regular Class members of the Florida Retirement System (FRS) in their actuarial valuation as of July 1, 2017, as mandated by Chapter 112.63, Florida Statutes.</p> <p>The mortality table for Police and Fire members is the RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality) with future improvements in mortality projected to all future years using Scale BB. For females, the base mortality rates include a 100% white collar adjustment. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in their actuarial valuation as of July 1, 2017, as mandated by Chapter 112.63, Florida Statutes.</p>

Other Information:

Notes See Discussion of Valuation Results in the October 1, 2018 Actuarial Valuation Report.



SCHEDULE OF CONTRIBUTIONS
GASB Statement No. 67

<u>FY Ending September 30,</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll</u>	<u>Actual Contribution as a % of Covered Payroll</u>
2014	\$ 4,196,181	\$ 4,196,181	\$ -	\$ 11,279,986	37.20%
2015	5,598,011	5,598,011	-	12,192,229	45.91%
2016	5,993,388	5,993,388	-	11,618,974	51.58%
2017	5,028,652	5,028,652	-	11,834,735	42.49%
2018	5,330,992	5,330,992	-	11,989,341	44.46%
2019	5,731,935	5,731,935	-	11,992,650	47.80%

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	General: Level Dollar, Closed Police and Fire: Level Dollar, Closed
Remaining Amortization Period	15 years
Asset Valuation Method	Recognition of 20% of difference between market value of assets and expected actuarial value of assets
Inflation	2.50%
Salary Increases	3.00% to 6.00% depending on service
Investment Rate of Return	6.95%
Retirement Age	Experience-based table of rates
Mortality	The mortality table for General Employees is the RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality) with future improvements in mortality projected to all future years using Scale BB. For females, the base mortality rates include a 100% white collar adjustment. For males, the base mortality rates include a 50% blue collar adjustment and a 50% white collar adjustment. These are the same rates used for Regular Class members of the Florida Retirement System (FRS) in their actuarial valuation as of July 1, 2017, as mandated by Chapter 112.63, Florida Statutes.

The mortality table for Police and Fire members is the RP-2000 Combined Healthy Participant Mortality Table (for pre-retirement mortality) and the RP-2000 Mortality Table for Annuitants (for post-retirement mortality) with future improvements in mortality projected to all future years using Scale BB. For females, the base mortality rates include a 100% white collar adjustment. For males, the base mortality rates include a 90% blue collar adjustment and a 10% white collar adjustment. These are the same rates used for Special Risk Class members of the Florida Retirement System (FRS) in their actuarial valuation as of July 1, 2017, as mandated by Chapter 112.63, Florida Statutes.

Other Information:
Notes See Discussion of Valuation Results in the October 1, 2017 Actuarial Valuation Report



**SINGLE DISCOUNT RATE
GASB Statement No. 67**

A single discount rate of 6.85% 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 6.85%. 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 (6.85%) 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 6.85%, 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 5.85%	Current Single Discount Rate Assumption 6.85%	1% Increase 7.85%
\$26,377,956	\$8,565,508	(\$6,200,930)

SECTION E

MISCELLANEOUS INFORMATION

RECONCILIATION OF MEMBERSHIP DATA				
	From 10/1/2018 to 10/1/2019			
	General	Police	Fire	Total
A. Active Members				
1. Number Included in Last Valuation	197	1	0	198
2. New Employees	0	0	0	0
3. Non-Vested Employment Terminations	(3)	0	0	(3)
4. Vested Employment Terminations	(1)	0	0	(1)
5. Service & Early Retirements	(5)	0	0	(5)
6. Disability Retirements	0	0	0	0
7. Deaths	0	0	0	0
8. Transfers	0	0	0	0
9. Other - Inactive	0	0	0	0
10. Number Included in This Valuation	<u>188</u>	<u>1</u>	<u>0</u>	<u>189</u>
B. Terminated Vested Members				
1. Number Included in Last Valuation	4	0	0	4
2. Additions from Active Members	1	0	0	1
3. Lump Sum Payments/Refund of Contributions	0	0	0	0
4. Payments Commenced	(1)	0	0	(1)
5. Deaths	0	0	0	0
6. Other	0	0	0	0
7. Number Included in This Valuation	<u>4</u>	<u>0</u>	<u>0</u>	<u>4</u>
C. Service Retirees, Disability Retirees and Beneficiaries				
1. Number Included in Last Valuation	203	19	13	235
2. Additions from Active Members	2 *	0	0	2
3. Additions from Terminated Vested Members	1	0	0	1
4. Deaths Resulting in No Further Payments	(1)	(1)	0	(2)
5. Deaths Resulting in New Survivor Benefits	0	0	0	0
6. End of Certain Period - No Further Payments	0	0	0	0
7. Lump Sum Payments	0	0	0	0
8. Number Included in This Valuation	<u>205</u>	<u>18</u>	<u>13</u>	<u>236</u>

**3 elected full lump sums.*

ACTIVE PARTICIPANT SCATTER – GENERAL EMPLOYEES AND POLICE OFFICERS

Age Group	Years of Service to Valuation Date												Totals
	0-1	1-2	2-3	3-4	4-5	5-9	10-14	15-19	20-24	25-29	30-34	35 & Up	
20-24 NO.	0	0	0	0	0	0	0	0	0	0	0	0	0
TOT PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
AVG PAY	0	0	0	0	0	0	0	0	0	0	0	0	0
25-29 NO.	0	0	0	1	2	3	0	0	0	0	0	0	6
TOT PAY	0	0	0	72,427	105,456	120,037	0	0	0	0	0	0	297,920
AVG PAY	0	0	0	72,427	52,728	40,012	0	0	0	0	0	0	49,653
30-34 NO.	0	0	0	4	6	10	0	0	0	0	0	0	20
TOT PAY	0	0	0	188,984	308,257	526,931	0	0	0	0	0	0	1,024,172
AVG PAY	0	0	0	47,246	51,376	52,693	0	0	0	0	0	0	51,209
35-39 NO.	0	0	0	4	0	8	5	2	0	0	0	0	19
TOT PAY	0	0	0	152,837	0	455,423	374,489	131,063	0	0	0	0	1,113,812
AVG PAY	0	0	0	38,209	0	56,928	74,898	65,532	0	0	0	0	58,622
40-44 NO.	0	0	0	1	2	5	4	5	5	0	0	0	22
TOT PAY	0	0	0	31,737	177,328	505,951	312,824	296,556	432,914	0	0	0	1,757,310
AVG PAY	0	0	0	31,737	88,664	101,190	78,206	59,311	86,583	0	0	0	79,878
45-49 NO.	0	0	0	2	2	5	3	9	4	4	0	0	29
TOT PAY	0	0	0	181,289	70,270	327,007	156,203	672,127	247,345	300,298	0	0	1,954,539
AVG PAY	0	0	0	90,644	35,135	65,401	52,068	74,681	61,836	75,074	0	0	67,398
50-54 NO.	0	0	0	3	1	2	5	9	9	3	5	0	37
TOT PAY	0	0	0	131,171	35,135	136,075	260,459	584,432	516,266	228,172	460,982	0	2,352,692
AVG PAY	0	0	0	43,724	35,135	68,038	52,092	64,937	57,363	76,057	92,196	0	63,586
55-59 NO.	0	0	0	1	2	4	5	7	3	6	1	0	29
TOT PAY	0	0	0	101,695	131,439	217,294	275,177	403,193	244,167	364,505	90,220	0	1,827,690
AVG PAY	0	0	0	101,695	65,720	54,324	55,035	57,599	81,389	60,751	90,220	0	63,024
60-64 NO.	0	0	0	0	2	4	2	0	2	3	1	0	14
TOT PAY	0	0	0	0	261,057	234,296	80,062	0	96,096	153,607	42,997	0	868,115
AVG PAY	0	0	0	0	130,528	58,574	40,031	0	48,048	51,202	42,997	0	62,008
65 & Up NO.	0	0	0	0	0	4	2	4	1	1	0	1	13
TOT PAY	0	0	0	0	0	283,756	108,412	298,584	54,620	92,092	0	115,232	952,696
AVG PAY	0	0	0	0	0	70,939	54,206	74,646	54,620	92,092	0	115,232	73,284
TOT NO.	0	0	0	16	17	45	26	36	24	17	7	1	189
TOT AMT	0	0	0	860,140	1,088,942	2,806,770	1,567,626	2,385,955	1,591,408	1,138,674	594,199	115,232	12,148,946
AVG AMT	0	0	0	53,759	64,055	62,373	60,293	66,277	66,309	66,981	84,886	0	64,280



INACTIVE PARTICIPANT SCATTER – GENERAL EMPLOYEES

Age Group	Terminated Vested		Disabled		Retired		Deceased with Beneficiary	
	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits
Under 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-
35-39	1	2,460	-	-	1	7,390	-	-
40-44	-	-	-	-	-	-	-	-
45-49	2	238	1	40,701	4	64,627	-	-
50-54	1	47,208	-	-	11	316,596	-	-
55-59	-	-	-	-	23	1,005,693	-	-
60-64	-	-	-	-	43	1,726,407	-	-
65-69	-	-	-	-	27	1,049,061	-	-
70-74	-	-	-	-	36	1,209,594	-	-
75-79	-	-	-	-	22	482,335	1	19,056
80-84	-	-	1	40,475	11	238,113	2	10,090
85-89	-	-	-	-	9	187,047	3	25,067
90-94	-	-	-	-	6	84,992	-	-
95-99	-	-	-	-	2	19,423	1	7,563
100 & Over	-	-	-	-	1	7,946	-	-
Total	4	49,906	2	81,176	196	6,399,224	7	61,776
Average Age		47		63		69		86

INACTIVE PARTICIPANT SCATTER – POLICE OFFICERS

Age Group	Terminated Vested		Disabled		Retired		Deceased with Beneficiary	
	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits
Under 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	-	-
60-64	-	-	-	-	-	-	-	-
65-69	-	-	-	-	3	285,012	-	-
70-74	-	-	-	-	2	1,088	1	5,529
75-79	-	-	-	-	5	53,975	-	-
80-84	-	-	-	-	3	29,387	-	-
85-89	-	-	-	-	1	17,986	-	-
90-94	-	-	-	-	1	25,927	1	5,190
95-99	-	-	-	-	1	9,497	-	-
100 & Over	-	-	-	-	-	-	-	-
Total	-	-	-	-	16	422,872	2	10,719
Average Age		N/A		N/A		79		84

INACTIVE PARTICIPANT SCATTER – FIREFIGHTERS

Age Group	Terminated Vested		Disabled		Retired		Deceased with Beneficiary	
	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits	Number	Total Benefits
Under 20	-	-	-	-	-	-	-	-
20-24	-	-	-	-	-	-	-	-
25-29	-	-	-	-	-	-	-	-
30-34	-	-	-	-	-	-	-	-
35-39	-	-	-	-	-	-	-	-
40-44	-	-	-	-	-	-	-	-
45-49	-	-	-	-	-	-	-	-
50-54	-	-	-	-	-	-	-	-
55-59	-	-	-	-	-	-	-	-
60-64	-	-	-	-	-	-	-	-
65-69	-	-	-	-	-	-	-	-
70-74	-	-	-	-	-	-	-	-
75-79	-	-	-	-	2	89,580	1	33,891
80-84	-	-	-	-	5	157,194	1	14,151
85-89	-	-	-	-	3	107,376	-	-
90-94	-	-	-	-	1	10,129	-	-
95-99	-	-	-	-	-	-	-	-
100 & Over	-	-	-	-	-	-	-	-
Total	-	-	-	-	11	364,279	2	48,042
Average Age		N/A		N/A		84		81

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 North Miami, Florida, Chapter 15, Article III, and was most recently amended under Ordinance No. 1397 passed and adopted on March 8, 2016. The Plan is also governed by certain provisions of Chapters 175 and 185, Florida Statutes, Part VII, Chapter 112, Florida Statutes (F.S.) and the Internal Revenue Code.

B. Effective Date

January 1, 1968

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 general employees hired prior to June 1, 2016 are eligible. General employees hired on or after June 1, 2016 will participate in the Florida Retirement System.

F. Credited Service

Service is measured as the total number of calendar years, or portions thereof, during which the member has served as an employee of the City and has made the required contributions to the Plan. No service is credited for any periods of employment for which the member received a refund of employee contributions.

G. Compensation

Total compensation including member contributions which are "picked up" by the City, but excluding overtime, bonuses and other certain payments.

H. Average Final Compensation (AFC)

For members who reached their normal retirement date on or before September 29, 2016:

AFC is the average of Compensation over the highest 2 years out of the last 10 years of Credited Service prior to termination or retirement. AFC excludes lump sum payment of unused leave.

For all other members:

Effective September 30, 2016, AFC is the average of Compensation over the highest 3 years out of the last 10 years of Credited Service prior to termination or retirement. AFC excludes lump sum payment of unused leave. Effective September 30, 2017, the "highest 3 years" will be replaced by the "highest 4 years" and beginning September 30, 2018, "the highest 4 years" will be replaced by "the highest 5 years".



I. Normal Retirement

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

- (1) age 62 and 10 years of Credited Service, or
- (2) age 55 and 20 years of Credited Service.

Police officers and firefighters may retire on the first day of the month coincident with or next following age 50 and 20 years of Credited Service.

Benefit: 2.5% of AFC multiplied by Credited Service up to July 1, 1969, plus 3.0% of AFC multiplied by Credited Service after July 1, 1969 through November 9, 2015.

Accrual rates for Credited Service earned on or after November 10, 2015:

3.0% for members who have reached their Normal Retirement date on or before November 10, 2015 and for members with 15 or more years of Credited Service as of that date.

2.5% for members with 10 or more years, but less than 15 years, of Credited Service who are not yet eligible for Normal Retirement as of November 10, 2015.

2.0% for members with less than 10 years of Credited Service on November 10, 2015.

Normal Form of Benefit: Single Life Annuity; other options are also available.

COLA: See Item V. Cost of Living Increases

J. Early Retirement

Eligibility: General employees may elect to retire earlier than the Normal Retirement Eligibility upon attainment of:

- (1) age 55 with 10 years of Credited Service, or
- (2) 14 years of Credited Service regardless of age.

Police officers and firefighters may elect to retire earlier than the Normal Retirement eligibility upon attainment of 14 years of Credited Service.

Benefit: The Normal Retirement Benefit is reduced by 4.0% for each year that the Early Retirement date precedes the Normal Retirement date.

Normal Form of Benefit: Single Life Annuity; other options are also available.

COLA: See Item V. Cost of Living Increases



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 incurs a mental or physical condition resulting from injury, disease, or mental disorder, which renders the member incapable of performing work for the City at a rate of 90% of the member's regular rate of Compensation is immediately eligible for a disability benefit.

Benefit: 75% of member's Compensation on the date of disability. The benefit will be reduced by amounts paid from other sources to the extent that, when combined with this benefit, they exceed 100% of the rate of pay in effect at the time of the disability.

Normal Form of Benefit: Payable for life, or until recovery from disability.

COLA: None

M. Non-Service Connected Disability

Eligibility: Any member who incurs a mental or physical condition resulting from injury, disease, or mental disorder, which renders the member incapable of performing work for the City at a rate of 75% of the member's regular rate of Compensation is immediately eligible for a disability benefit.

Benefit: The member's vested accrued benefit payable at the Normal Retirement date taking into account compensation earned and service credited on the date of disability with a maximum equal to 50% of Compensation. The benefit will be reduced by amounts paid from other sources to the extent that, when combined with this benefit, they exceed 100% of the rate of pay in effect at the time of the disability.

Normal Form of Benefit: Payable for life, or until recovery from disability.

COLA: None

N. Death in the Line of Duty

Eligibility: Any member who dies while performing, directly or indirectly, services for the City is eligible for survivor benefits regardless of Credited Service.

Benefit: 50% of the member's monthly Compensation at the time of death shall be paid to the member's spouse. In addition, 10% of the member's final Compensation shall be paid for each child under age 19. In no event shall the total benefit exceed 100% of the member's final Compensation; or 50% if there is no surviving spouse.



Normal Form
of Benefit: Spouse benefits payable until the earlier of death or remarriage. Children's benefits are payable until age 19.

COLA: None

O. Other Pre-Retirement Death

Eligibility: Any vested member who dies while employed by the City is eligible for survivor benefits.

Benefit: For members who were eligible for Early or Normal Retirement, the member's Retirement Benefit shall be payable to the member's beneficiary.

For members who were not eligible for Early or Normal Retirement, an amount equal to the member's vested accrued benefit and accumulated contributions with interest shall be payable to the member's beneficiary.

Normal Form
of Benefit: For members who were eligible for Early or Normal Retirement, the Retirement Benefit shall be paid as though the member had elected a 10 Year Certain and Life annuity and retired immediately preceding death.

For members who were not eligible for Early or Normal Retirement, the benefit shall be paid in a lump sum.

COLA: None

The designated beneficiary of a plan member who was not vested will receive a refund of the member's accumulated contributions with interest.

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 Straight Life Annuity option, the 50%, 75%, and 100% Joint and Survivor options, or the 5 and 10 Years Certain and Life options. A Social Security option is also available for members retiring prior to the time they are eligible for Social Security retirement benefits if they are not retiring under Disability Retirement.

Alternatively, members can elect a partial lump sum with the remaining value of the benefit paid as a monthly annuity. A total lump sum distribution is also available for those who became members of the Plan prior to October 1, 2004.



R. Vested Termination

Eligibility: A member has earned a non-forfeitable right to Plan benefits after the completion of 5 years of Credited Service (see vesting table below).

Credited Service	Vested Percent
Less than 5	0%
5	25
6	40
7	55
8	70
9	85
10 or more	100

Benefit: Any member who is not eligible for any other benefits provided under the Plan will receive the vested portion of their accrued Normal Retirement Benefit as of the date of termination. Benefit begins at the member's Early or Normal Retirement date and will be reduced for Early Retirement if applicable.

Normal Form of Benefit: Single Life Annuity; other options are also available.

COLA: See Item V. Cost of Living Increases

Members terminating employment with less than 5 years of Credited Service will receive a refund of their own accumulated contributions with interest.

S. Refunds

Eligibility: All members terminating employment with less than 5 years of Credited Service are eligible. Optionally, vested members (those with 5 or more years of Credited Service) may elect a refund in lieu of the vested benefits otherwise due.

Benefit: A refund of the member's contributions with interest.

T. Member Contributions

7.0% of Compensation for members who have reached their Normal Retirement date prior to November 10, 2015 and for members who are not yet eligible for Normal Retirement as of November 10, 2015 with more than 10, but less than 15, years of Credited Service.

8.0% of Compensation for members with 15 or more years of Credited Service

6.0% of Compensation for members with less than 10 years of Credited Service and who had not reached their Normal Retirement date on or before November 10, 2015.



U. Employer Contributions

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

V. Cost of Living Increases

Members who retire after October 1, 2004 (not due to disability) and who have reached their Normal Retirement date on or before November 10, 2015, electing an annuity form of payment, receive an annual cost of living adjustment each April 1st. These retirees may choose a 1.92% COLA with a one-year delay, a 2.50% COLA with a three-year delay, or a 3.00% COLA with a five-year delay.

Members with 15 or more years of Credited Service who had not reached their Normal Retirement date on or before November 10, 2015, electing an annuity form of payment, will receive a 2.50% annual cost of living adjustment each April 1st following the 5th year of retirement.

Members with 10 or more years, but less than 15 years, of Credited Service who had not reached their Normal Retirement date on or before November 10, 2015, electing an annuity form of payment, will receive a 2.00% annual cost of living adjustment each April 1st following the 5th year of retirement.

Members with less than 10 years of Credited Service as of November 10, 2015 who elect an annuity form of payment will receive a 1.50% annual cost of living adjustment each April 1st following the 5th year of retirement.

W. 13th Check

Not Applicable

X. Deferred Retirement Option Plan (DROP)

Not Applicable

Y. Other Ancillary Benefits

There are no ancillary benefits-retirement type benefits not required by statutes but which might be deemed a Clair T. Singerman Employees' Retirement System liability if continued beyond the availability of funding by the current funding source.

Z. Changes from Previous Valuation

None