

TOWN OF INDIAN RIVER SHORES
PUBLIC SAFETY OFFICERS AND FIREFIGHTERS' DEFINED BENEFIT PLAN

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2021

CONTRIBUTIONS APPLICABLE TO THE
PLAN/FISCAL YEAR ENDING SEPTEMBER 30, 2022

GASB 67/68 DISCLOSURE INFORMATION
AS OF SEPTEMBER 30, 2021



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

October 19, 2021

Board of Trustees
Town of Indian River Shores
Public Safety Officers and Firefighters' Defined Benefit Plan

Re: Town of Indian River Shores Public Safety Officers and Firefighters' Defined Benefit Plan

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the Town of Indian River Shores Public Safety Officers and Firefighters' Defined Benefit Plan. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and may produce significantly different results.

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Chapters 112, 175, and 185, Florida Statutes, as well as applicable federal laws and regulations. In our opinion, the assumptions used in the valuations, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience.

The funding percentages and unfunded accrued liability are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuations, we did not perform an analysis of the potential range of such future measurements.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the Town of Indian River Shores, financial reports prepared by the custodian bank, and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

Additionally, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models that apply the funding and accounting rules to generate the results. All internally developed models are reviewed as part of the valuation process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

The total pension liability, net pension liability, and certain sensitivity information shown in this report are based on an actuarial valuation performed as of October 1, 2020. The total pension liability was rolled-forward from the valuation date to the plan's fiscal year ending September 30, 2021 using generally accepted actuarial principles. It is our opinion that the assumptions used for this purpose are internally consistent, reasonable, and comply with the requirements under GASB No. 67 and No. 68.


The undersigned are familiar with the immediate and long-term aspects of pension valuations, and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Town of Indian River Shores, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Public Safety Officers and Firefighters' Defined Benefit Plan. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

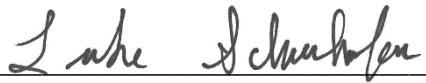
If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 239-433-5500.

Respectfully submitted,

Foster & Foster, Inc.

By: 

Douglas H. Lozen, EA, MAAA
Enrolled Actuary #20-7778

By: 

Luke M. Schoenhofen, ASA, EA, MAAA
Enrolled Actuary #20-8968

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Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the Town of Indian River Shores Public Safety Officers and Firefighters' Defined Benefit Plan, performed as of October 1, 2021, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ending September 30, 2022.

The contribution requirements, compared with those set forth in the October 1, 2020 actuarial valuation report, are as follows:

Valuation Date Applicable to Fiscal Year Ending	10/1/2021 <u>9/30/2022</u>	10/1/2020 <u>9/30/2021</u>
Minimum Required Contribution ¹ % of Projected Annual Payroll	18.28%	18.50%
Member Contributions (Est.) ² % of Projected Annual Payroll	5.71%	5.78%
Town And State Required Contribution % of Projected Annual Payroll	12.57%	12.72%
Town Required Contribution ³ % of Projected Annual Payroll	\$155,268 12.57%	\$192,831 12.72%

¹ The Minimum Required Contribution reflects the statutory Normal Cost minimum as of October 1, 2020 and October 1, 2021.

² All Members are required to contribute a variable contribution rate that is based in part on the funding cost of the Plan. The base Member Contribution Rate is 5.0% of earnings, with an upward or downward adjustment (up to a maximum of 9.0%) to reflect 31.25% of the total minimum required contribution above 16.0% of payroll.

³ The dollar amounts are for illustration purposes only. The Town should budget based on the percentage of payroll rates disclosed in the above table.

³ All State Monies are allocated to the Share Plan.

As you can see, the Minimum Required Contribution shows a decrease when compared to the results determined in the October 1, 2020 actuarial valuation. The decrease is attributable to a reduction in normal cost rate. The decrease was offset in part by a reduction in the member contribution rate.

Plan experience was favorable overall on the basis of the plan's actuarial assumptions. The primary source of actuarial gain was an investment return of 16.41% (Actuarial Asset Basis) which exceeded the 6.75% assumption.

CHANGES SINCE PRIOR VALUATION

Plan Changes

There have been no changes in benefits since the prior valuation.

Actuarial Assumption/Method Changes

There have been no assumption or method changes since the prior valuation.

CONTRIBUTION IMPACT OF ANNUAL CHANGES

(1) Contribution Determined as of October 1, 2020	12.72%
(2) Summary of Contribution Impact by component:	
Change in Normal Cost Rate	-0.22%
Reduction in the Member Contribution Rate	0.07%
Other	<u>0.00%</u>
Total Change in Contribution	-0.15%
(3) Contribution Determined as of October 1, 2021	12.57%

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>10/1/2021</u>	<u>10/1/2020</u>
A. Participant Data		
Actives	15	18
Service Retirees	15	13
DROP Retirees	3	4
Beneficiaries	0	0
Disability Retirees	1	0
Terminated Vested	<u>5</u>	<u>3</u>
 Total	 39	 38
 Total Annual Payroll	 \$1,320,084	 \$1,515,968
Payroll Under Assumed Ret. Age	1,235,224	1,515,968
 Annual Rate of Payments to:		
Service Retirees	800,714	693,720
DROP Retirees	206,549	267,176
Beneficiaries	0	0
Disability Retirees	37,339	0
Terminated Vested	27,053	61,027
 B. Assets		
Actuarial Value (AVA) ¹	19,682,173	18,419,808
Market Value (MVA) ¹	19,682,173	18,419,808
 C. Liabilities		
Present Value of Benefits		
Actives		
Retirement Benefits	2,889,658	3,451,811
Disability Benefits	181,079	203,691
Death Benefits	26,728	29,745
Vested Benefits	327,378	371,618
Refund of Contributions	2,966	5,151
Service Retirees	9,642,257	8,474,488
DROP Retirees ¹	3,001,380	3,678,996
Beneficiaries	0	0
Disability Retirees	437,677	0
Terminated Vested	304,523	601,628
Share Plan Balances ¹	<u>2,204,291</u>	<u>2,560,754</u>
 Total	 19,017,937	 19,377,882

C. Liabilities - (Continued)	<u>10/1/2021</u>	<u>10/1/2020</u>
Present Value of Future Salaries	8,740,068	10,576,903
Present Value of Future Member Contributions	499,058	611,345
Normal Cost (Retirement)	160,195	200,492
Normal Cost (Disability)	25,613	29,716
Normal Cost (Death)	2,069	2,474
Normal Cost (Vesting)	29,388	36,622
Normal Cost (Refunds)	<u>1,157</u>	<u>2,007</u>
Total Normal Cost	218,422	271,311
Present Value of Future Normal Costs	1,385,327	1,705,998
Accrued Liability (Retirement)	1,836,311	2,145,526
Accrued Liability (Disability)	41,963	43,908
Accrued Liability (Death)	12,316	13,246
Accrued Liability (Vesting)	151,612	152,473
Accrued Liability (Refunds)	280	865
Accrued Liability (Inactives) ¹	13,385,837	12,755,112
Share Plan Balances ¹	<u>2,204,291</u>	<u>2,560,754</u>
Total Actuarial Accrued Liability (EAN AL)	17,632,610	17,671,884
Unfunded Actuarial Accrued Liability (UAAL)	(2,049,563)	(747,924)
Funded Ratio (AVA / EAN AL)	111.6%	104.2%

D. Actuarial Present Value of

Accrued Benefits	<u>10/1/2021</u>	<u>10/1/2020</u>
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Vested Accrued Benefits

Inactives + Share Plan Balances ¹	15,590,128	15,315,866
Actives	948,742	1,088,153
Member Contributions	<u>557,298</u>	<u>630,109</u>
Total	17,096,168	17,034,128

Non-vested Accrued Benefits	<u>51,436</u>	<u>130,998</u>
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Total Present Value

Accrued Benefits (PVAB)	17,147,604	17,165,126
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Funded Ratio (MVA / PVAB)	114.8%	107.3%
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Increase (Decrease) in Present Value of
Accrued Benefits Attributable to:

Plan Amendments	0
Assumption Changes	0
Plan Experience	920,650
Benefits Paid	(2,028,360)
Interest	1,090,189
Other	<u>0</u>
Total	(17,521)

Valuation Date	10/1/2021	10/1/2020
Applicable to Fiscal Year Ending	<u>9/30/2022</u>	<u>9/30/2021</u>

E. Pension Cost

Normal Cost (with interest) % of Total Annual Payroll ²	18.28	18.50
Administrative Expenses (with interest) % of Total Annual Payroll ²	6.45	4.65
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 10 years (as of 10/1/2021, with interest) % of Total Annual Payroll ²	(24.86)	(7.77)
Minimum Required Contribution % of Total Annual Payroll ²	18.28	18.50
Expected Member Contributions % of Total Annual Payroll ²	5.71	5.78
Expected Town and State Contribution % of Total Annual Payroll ²	12.57	12.72

F. Past Contributions

Plan Years Ending:	<u>9/30/2021</u>
Total Required Contribution	285,516
Town and State Requirement	196,311
Actual Contributions Made:	
Members (excluding buyback)	89,204
Town	196,311
State ³	<u>196,895</u>
Total	482,410

G. Net Actuarial (Gain)/Loss (1,314,725)

¹ The asset values and liabilities include accumulated DROP and Share Plan Balances as of 9/30/2021 and 9/30/2020.

² Contributions developed as of 10/1/2021 are expressed as a percentage of total annual payroll at 10/1/2021 of \$1,235,224. The Minimum Required Contribution also reflects the statutory Normal Cost Minimum.

³ State Contribution is allocated to the Share Plan.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Actuarial Accrued Liability</u>
2021	(2,049,563) ¹

I. (i) 5 Year Comparison of Actual and Assumed Salary Increases

		<u>Actual</u>	<u>Assumed</u>
Year Ended	9/30/2021	6.80%	6.32%
Year Ended	9/30/2020	11.71%	5.25%
Year Ended	9/30/2019	8.63%	5.25%
Year Ended	9/30/2018	6.58%	5.25%
Year Ended	9/30/2017	4.14%	5.25%

(ii) 5 Year Comparison of Investment Return on Market Value and Actuarial Value

		<u>Market Value</u>	<u>Actuarial Value</u>	<u>Assumed</u>
Year Ended	9/30/2021	16.41%	16.41%	6.75%
Year Ended	9/30/2020	3.68%	3.68%	6.75%
Year Ended	9/30/2019	5.99%	5.99%	6.25%
Year Ended	9/30/2018	8.84%	8.84%	6.25%
Year Ended	9/30/2017	9.46%	9.46%	6.25%

(iii) Average Annual Payroll Growth

(a) Payroll as of:	10/1/2021	\$1,235,224
	10/1/2011	1,720,628
(b) Total Increase		-28.21%
(c) Number of Years		10.00
(d) Average Annual Rate		-3.26%

¹ Based on current State law and the existing UAAL bases, the UAAL is projected to never be positive.

STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of Part VII, Chapter 112, Florida Statutes. 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.



Douglas H. Lozen, EA, MAAA
Enrolled Actuary #20-7778

Please let us know when the report is approved by the Board and unless otherwise directed we will provide copies of the report to the following offices to comply with Chapter 112, Florida Statutes:

Mr. Keith Brinkman
Bureau of Local
Retirement Systems
Post Office Box 9000
Tallahassee, FL 32315-9000

Mr. Steve Bardin
Municipal Police and Fire
Pension Trust Funds
Division of Retirement
Post Office Box 3010
Tallahassee, FL 32315-3010

RECONCILIATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITIES

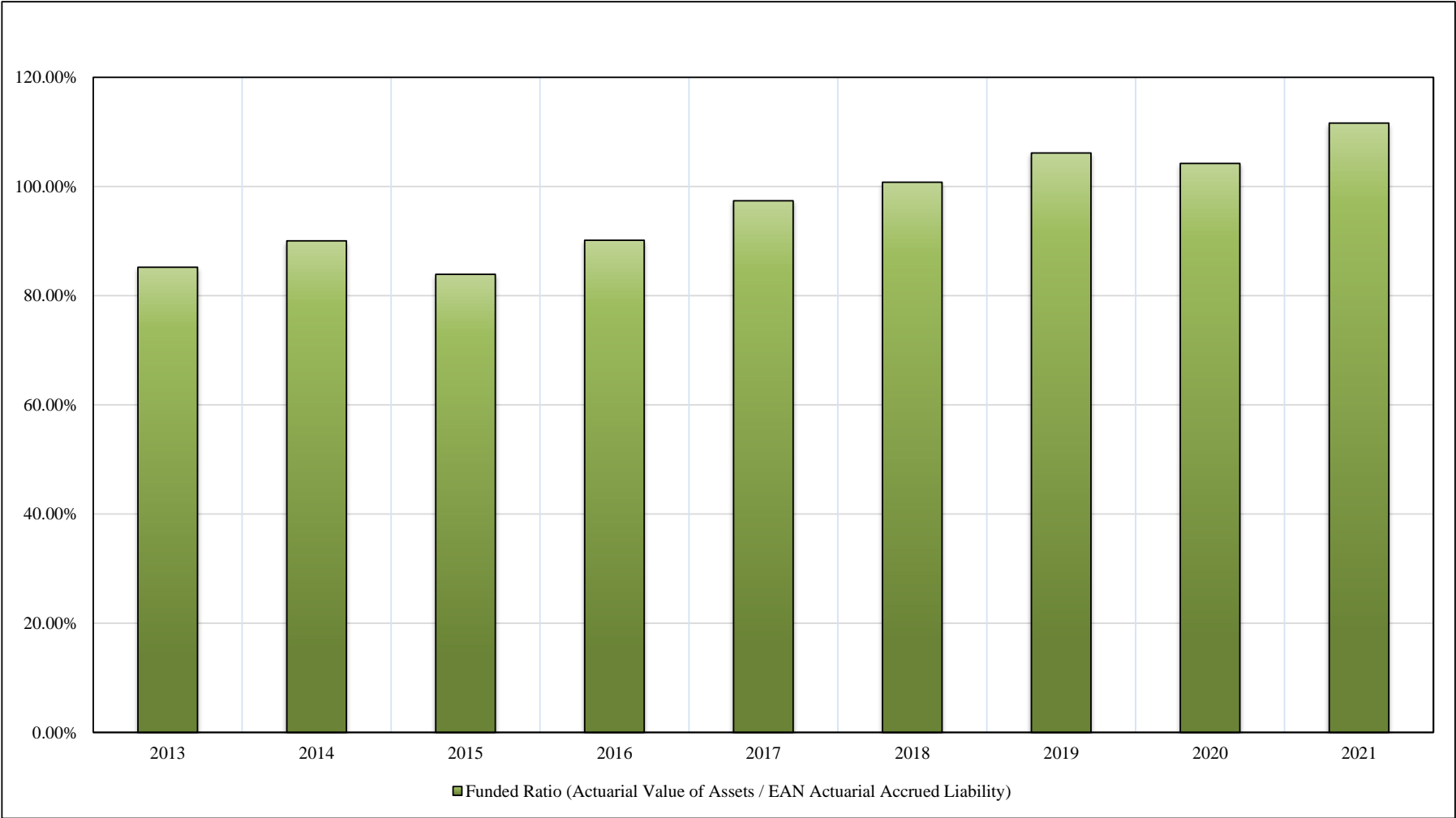
(1) Unfunded Actuarial Accrued Liability as of October 1, 2020	(\$747,924)
(2) Sponsor Normal Cost developed as of October 1, 2020	183,688
(3) Expected administrative expenses for the year ended September 30, 2021	68,121
(4) Expected interest on (1), (2) and (3)	(35,787)
(5) Sponsor contributions to the System during the year ended September 30, 2021	196,311
(6) Expected interest on (5)	6,625
(7) Expected Unfunded Actuarial Accrued Liability as of September 30, 2021 (1)+(2)+(3)+(4)-(5)-(6)	(734,838)
(8) Change to UAAL due to Assumption Change	0
(9) Change to UAAL due to Actuarial (Gain)/Loss	(1,314,725)
(10) Unfunded Actuarial Accrued Liability as of October 1, 2021	(2,049,563)

<u>Type of Base</u>	<u>Date Established</u>	<u>Years Remaining</u>	<u>10/1/2021 Amount</u>	<u>Amortization Amount</u>
Actuarial Gain	10/1/2018	7	(308,161)	(53,099)
Benefit Change	10/1/2018	7	24	4
Actuarial Loss	10/1/2019	8	71,281	11,074
Assump Change	10/1/2019	8	(832,273)	(129,304)
Actuarial Loss	10/1/2020	9	657,856	93,584
Assump Change	10/1/2020	9	(323,565)	(46,029)
Actuarial Gain	10/1/2021	10	<u>(1,314,725)</u>	<u>(173,330)</u>
			<u>(2,049,563)</u>	<u>(297,100)</u>

DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of October 1, 2020	(\$747,924)
(2) Expected UAAL as of October 1, 2021	(734,838)
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	(1,694,137)
Salary Increases	1,734
Active Decrements	(4,159)
Inactive Mortality	61,936
Other	<u>319,901</u>
Increase in UAAL due to (Gain)/Loss	(1,314,725)
Assumption Changes	<u>0</u>
(4) Actual UAAL as of October 1, 2021	(\$2,049,563)

HISTORY OF FUNDING PROGRESS



ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate

Healthy Active Lives:

Female: PubS.H-2010 (Below Median) for Employees, set forward one year.

Male: PubS.H-2010 (Below Median) for Employees, set forward one year.

Healthy Retiree Lives:

Female: PubS.H-2010 (Below Median) for Healthy Retirees, set forward one year.

Male: PubS.H-2010 (Below Median) for Healthy Retirees, set forward one year.

Beneficiary Lives:

Female: PubG.H-2010 (Below Median) for Healthy Retirees.

Male: PubG.H-2010 (Below Median) for Healthy Retirees, set back one year.

Disabled Lives:

80% PubG.H-2010 for Disabled Retirees / 20% PubS.H-2010 for Disabled Retirees.

All rates are projected generationally with Mortality Improvement Scale MP-2018. We feel this assumption sufficiently accommodates future mortality improvements.

The previously described mortality assumption rates were mandated by Chapter 2015-157, Laws of Florida. This law mandates the use of the assumptions used in either of the two most recent valuations of the Florida Retirement System (FRS). The above rates are those outlined in Milliman's July 1, 2019 FRS valuation report for special risk employees, with appropriate adjustments made based on plan demographics.

Interest Rate

6.75% per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.

Salary Increases

See table on the following page. These rates were adopted as a result of the July 24, 2020 experience study.

Salary Scale	
Service	Rate
0-1	15.00%
2-10	6.00%
11+	4.50%

Payroll Growth

0.00% for purposes of amortizing the Unfunded Actuarial Accrued Liability. This assumption cannot exceed the ten-year average payroll growth, in compliance with Part VII of Chapter 112, Florida Statutes.

Administrative Expenses

\$77,027 annually, based on the average of actual expenses incurred in the prior two fiscal years.

Amortization Method

New UAAL amortization bases established are amortized over 10 years.

Termination Rates

See table below. These rates were adopted as a result of the July 24, 2020 experience study.

% Terminating During the Year	
Service	Rate
<15	6.5%
15+	0.0%

Disability Rates

See table below. These rates were studied as a result of the July 24, 2020 experience study.

% Becoming Disabled During the Year	
Age	Rate
20	0.09%
25	0.11%
30	0.13%
35	0.17%
40	0.22%
45	0.35%
50	0.66%
55	1.04%
60	1.80%
65+	4.44%

In addition, 75% of disabilities (90% for Firefighters) are assumed to be service-incurred.

Normal Retirement

For Members retiring with less than 25 years of Credited Service, 50% per year prior to age 55, with 100% assumed retirement at age 55.

For Members retiring with at least 25 years of Credited Service, 50% per year for the first two years of eligibility, and 100% upon the completion of 27 years of Credited Service.

Regardless of the number of years of Credited Service, 100% retirement is assumed at age 55.

Rates for Normal Retirement were studied and confirmed as a result of the July 24, 2020 experience study.

Final Salary Load

None.

Funding Method

Individual Entry Age Normal Actuarial Cost Method (level percent of pay).

Asset Method

Fair Market Value, net of investment-related expenses.

GLOSSARY

Actuarial Value of Assets is the asset value used in the valuation to determine contribution requirements. It represents the plan's Market Value of Assets (see below).

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

(a) The normal cost accrual rate equals:

(i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by

(ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

(b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.

(c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.

(d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

Market Value of Assets is the fair market value of plan assets as of the valuation date. This amount may be adjusted to produce an Actuarial Value of Assets for plan funding purposes.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded. Under the Entry Age Normal cost method, it is determined for each participant as the present value of future benefits, determined as of the Member's entry age, amortized as a level percentage of compensation over the anticipated number of years of participation, determined as of the entry age.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current plan participants.

Total Annual Payroll is the projected annual rate of pay for the fiscal year beginning on the valuation date of all covered Members.

Total Required Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over no more than 30 years. The required amount is adjusted for interest according to the timing of contributions during the year.

Unfunded Actuarial Accrued Liability (UAAL) is the difference between the actuarial accrued liability (described above) and the Actuarial Value of Assets. Under the Entry Age Normal Actuarial Cost Method, an actuarial gain or loss, based on actual versus expected UAAL, is determined in conjunction with each valuation of the plan.

DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined using various actuarial assumptions. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Investment Return: When the rate of return on the Actuarial Value of Assets falls short of the assumption, this produces a loss representing assumed investment earnings that were not realized. Further, it is unlikely that the plan will experience a scenario that matches the assumed return in each year as capital markets can be volatile from year to year. Therefore, contribution amounts can vary in the future.
- Salary Increases: When a plan participant experiences a salary increase that was greater than assumed, this produces a loss representing the cost of an increase in anticipated plan benefits for the participant as compared to the previous year. The total gain or loss associated with salary increases for the plan is the sum of salary gains and losses for all active participants.
- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.

Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, closed plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members. For this reason, less tolerance for investment risk may be warranted for highly mature closed plans with a substantial inactive liability. Similarly, mature closed plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has decreased from 118.2% on October 1, 2013 to 75.0% on October 1, 2021, indicating that the plan has been maturing during the period.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 75.9%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors may result in larger increases in contribution requirements than would be needed for a less mature plan. Please note Chapter 112, Florida Statutes, requires that the plan sponsor contributes the minimum required contribution; thus, there is minimal solvency risk to the plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has increased from 85.2% on October 1, 2013 to 111.6% on October 1, 2021.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, decreased from 9.0% on October 1, 2013 to -8.2% on October 1, 2021. The current Net Cash Flow Ratio of -8.2% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks in this section as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>10/1/2013</u>	<u>10/1/2016</u>	<u>10/1/2020</u>	<u>10/1/2021</u>
<u>Support Ratio</u>				
Total Actives	13	20	18	15
Total Inactives ¹	11	13	19	20
Actives / Inactives ¹	118.2%	153.8%	94.7%	75.0%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	10,280,658	13,797,336	18,419,808	19,682,173
Total Annual Payroll	1,126,935	1,575,449	1,515,968	1,320,084
MVA / Total Annual Payroll	912.3%	875.8%	1,215.1%	1,491.0%
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	7,457,260	8,850,056	12,755,112	13,385,837
Total Accrued Liability (EAN)	11,173,751	15,303,886	17,671,884	17,632,610
Inactive AL / Total AL	66.7%	57.8%	72.2%	75.9%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	9,521,552	13,797,336	18,419,808	19,682,173
Total Accrued Liability (EAN)	11,173,751	15,303,886	17,671,884	17,632,610
AVA / Total Accrued Liability (EAN)	85.2%	90.2%	104.2%	111.6%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow ²	922,172	589,330	(283,881)	(1,615,564)
Market Value of Assets (MVA)	10,280,658	13,797,336	18,419,808	19,682,173
Ratio	9.0%	4.3%	-1.5%	-8.2%

¹ Excludes terminated participants awaiting a refund of member contributions.

² Determined as total contributions minus benefit payments and administrative expenses.

PARTIAL HISTORY OF PREMIUM TAX REFUNDS

<u>Received During Fiscal Year</u>	<u>Amount</u>	<u>Increase from Previous Year</u>
2013	176,730.65	N/A
2014	180,816.27	2.3%
2015	173,796.85	-3.9%
2016	257,370.29	48.1%
2017	131,990.17	-48.7%
2018	166,590.78	26.2%
2019	169,971.77	2.0%
2020	180,713.73	6.3%
2021	196,895.35	9.0%

STATEMENT OF FIDUCIARY NET POSITION
SEPTEMBER 30, 2021

<u>ASSETS</u>	COST VALUE	MARKET VALUE
Cash and Cash Equivalents:		
Short Term Investments	420,550.13	420,550.13
Cash	(4,242.61)	(4,242.61)
Total Cash and Equivalents	416,307.52	416,307.52
Receivables:		
Investment Income	36,709.12	36,709.12
Total Receivable	36,709.12	36,709.12
Investments:		
U. S. Bonds and Bills	2,146,681.96	2,094,516.40
Federal Agency Guaranteed Securities	587,858.66	608,801.55
Corporate Bonds	1,835,159.07	1,867,615.35
Municipal Obligations	432,575.90	434,442.49
Stocks	4,613,647.86	6,017,221.35
Mutual Funds:		
Equity	5,035,071.59	6,258,466.37
Pooled/Common/Commingled Funds:		
Real Estate	1,572,672.00	1,964,960.50
Total Investments	16,223,667.04	19,246,024.01
Total Assets	16,676,683.68	19,699,040.65
<u>LIABILITIES</u>		
Payables:		
Investment Expenses	8,020.18	8,020.18
Administrative Expenses	8,847.72	8,847.72
Total Liabilities	16,867.90	16,867.90
NET POSITION RESTRICTED FOR PENSIONS	16,659,815.78	19,682,172.75

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION
FOR THE YEAR ENDED SEPTEMBER 30, 2021
Market Value Basis

ADDITIONS

Contributions:

Member	89,204.32
Town	196,310.97
State	196,895.35

Total Contributions 482,410.64

Investment Income:

Net Realized Gain (Loss)	1,072,229.06
Unrealized Gain (Loss)	1,433,307.14
Net Increase in Fair Value of Investments	2,505,536.20
Interest & Dividends	456,146.11
Less Investment Expense ¹	(83,753.34)

Net Investment Income 2,877,928.97

Total Additions 3,360,339.61

DEDUCTIONS

Distributions to Members:

Benefit Payments	794,780.18
Lump Sum DROP Distributions	385,178.39
Lump Sum Share Distributions	834,616.59
Refunds of Member Contributions	13,784.82

Total Distributions 2,028,359.98

Administrative Expense 69,614.55

Total Deductions 2,097,974.53

Net Increase in Net Position 1,262,365.08

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 18,419,807.67

End of the Year 19,682,172.75

Actuarial Asset Rate of Return 16.41%

Actuarial Gain/(Loss) due to Investment Return 1,694,137.35

¹Investment related expenses include investment advisory, custodial and performance monitoring fees.

DEFERRED RETIREMENT OPTION PLAN ACTIVITY
October 1, 2020 to September 30, 2021

Beginning of the Year Balance	497,720.26
Plus Additions	184,899.57
Investment Return Earned	59,124.23
Less Distributions	(385,178.39)
End of the Year Balance	356,565.67

Note: Investment Return Earned is based on return estimates.

SUPPLEMENTAL CHAPTER 185 SHARE PLAN ACTIVITY

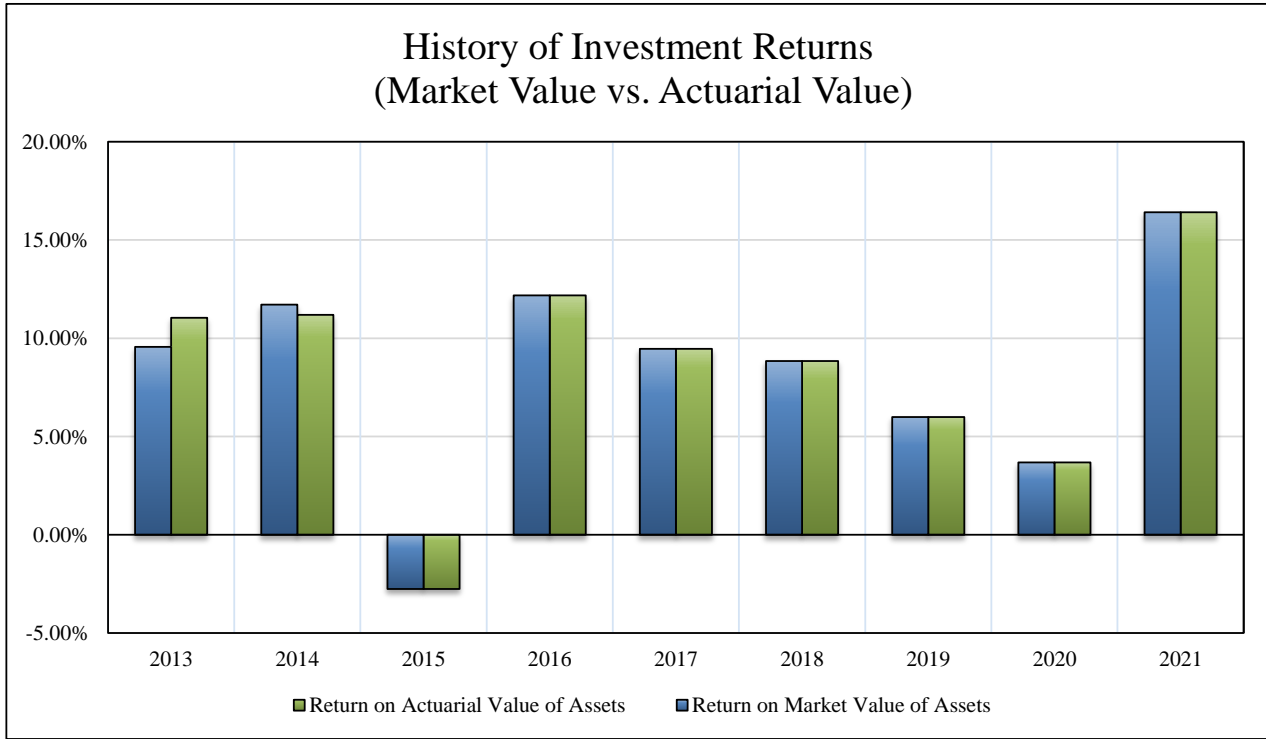
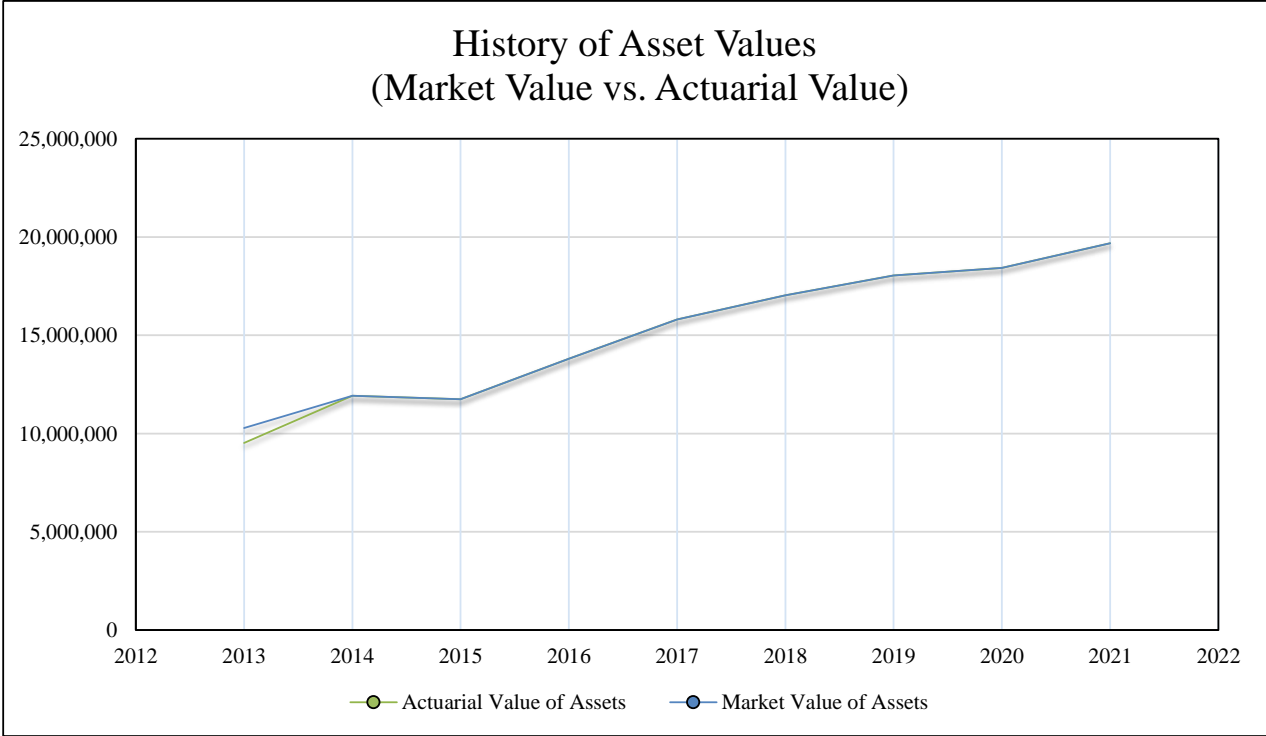
October 1, 2020 through September 30, 2021

9/30/2020 Balance	2,560,753.64
Prior Year Adjustment	0.00
Plus Additions	196,895.35
Investment Return Earned (Est.)	283,259.09
Administrative Fees	(2,000.00)
Less Distributions	<u>(834,616.59)</u>
9/30/2021 Balance (Est.)	2,204,291.49

TOWN CONTRIBUTIONS IN EXCESS OF MINIMUM REQUIREMENT
FOR THE FISCAL YEAR ENDED (FYE) SEPTEMBER 30, 2021

(1) Total Required Contribution Rate	18.50%
(2) Pensionable Payroll	\$1,543,325.89
(3) Total Required Contribution (1) x (2)	285,515.29
(4) Less Actual Member Contributions	(89,204.32)
(5) Less Allowable State Contribution	<u>0.00</u>
(6) Equals Required Town Contribution for Fiscal 2021	196,310.97
(7) Less 2020 Prepaid Contribution	0.00
(8) Less Actual Town Contributions	<u>(196,310.97)</u>
(9) Town Contributions in Excess of Minimum Requirement Applied to Reduce Unfunded Actuarial Accrued Liability as of September 30, 2021	\$0.00

HISTORY OF ASSET VALUES AND INVESTMENT RETURNS



STATISTICAL DATA

	<u>10/1/2018</u>	<u>10/1/2019</u>	<u>10/1/2020</u>	<u>10/1/2021</u>
<u>Actives - Hired before October 1, 2012</u>				
Number	8	6	3	2
Average Current Age	48.0	49.4	47.2	47.3
Average Age at Employment	32.9	34.2	33.5	33.8
Average Past Service	15.1	15.2	13.7	13.5
Average Annual Salary	\$105,059	\$110,233	\$120,910	\$119,182
<u>Actives - Hired after October 1, 2012</u>				
Number	12	14	15	13
Average Current Age	38.1	41.5	41.2	43.8
Average Age at Employment	35.1	38.1	37.4	38.9
Average Past Service	3.0	3.4	3.8	4.9
Average Annual Salary	\$64,336	\$69,591	\$76,883	\$83,209
<u>Service Retirees</u>				
Number	12	12	13	15
Average Current Age	60.7	61.7	61.8	62.7
Average Annual Benefit	\$56,722	\$56,722	\$53,363	\$53,381
<u>DROP Retirees</u>				
Number	1	2	4	3
Average Current Age	57.1	54.4	56.4	51.9
Average Annual Benefit	\$56,157	\$69,429	\$66,794	\$68,850
<u>Beneficiaries</u>				
Number	0	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A
<u>Disability Retirees</u>				
Number	0	0	0	1
Average Current Age	N/A	N/A	N/A	47.3
Average Annual Benefit	N/A	N/A	N/A	\$37,339
<u>Terminated Vested</u>				
Number	3	4	3	5
Average Current Age ¹	49.2	42.4	44.6	38.8
Average Annual Benefit ²	\$15,565	\$21,309	\$30,514	\$27,053

¹ The Average Current Age excludes participants awaiting a refund of contributions.

² The Average Annual Benefit excludes participants awaiting a refund of contributions.

AGE AND SERVICE DISTRIBUTION

PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19												0
20 - 24												0
25 - 29												0
30 - 34	1				1	2						4
35 - 39						3						3
40 - 44				1			1					2
45 - 49												0
50 - 54						2	1					3
55 - 59	1											1
60 - 64			1			1						2
65+												0
Total	2	0	1	1	1	8	2	0	0	0	0	15

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 10/1/2020	18
b. Terminations	
i. Vested (partial or full) with deferred annuity	(1)
ii. Vested in refund of member contributions only	(1)
iii. Refund of member contributions or full lump sum distribution received	(2)
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	0
f. DROP	<u>(1)</u>
g. Continuing participants	13
h. New entrants	<u>2</u>
i. Total active life participants in valuation	15

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	DROP <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested (Deferred Annuity)	Vested (Due Refund)	<u>Total</u>
a. Number prior valuation	13	4	0	0	2	1	20
Retired	2	(2)	0	0	0	0	0
DROP	0	1	0	0	0	0	1
Vested (Deferred Annuity)	0	0	0	0	1	0	1
Vested (Due Refund)	0	0	0	0	0	1	1
Hired/Terminated in Same Year	0	0	0	0	0	1	1
Death, With Survivor	0	0	0	0	0	0	0
Death, No Survivor	0	0	0	0	0	0	0
Disabled	0	0	0	1	(1)	0	0
Refund of Contributions	0	0	0	0	0	0	0
Rehires	0	0	0	0	0	0	0
Expired Annuities	0	0	0	0	0	0	0
Data Corrections	0	0	0	0	0	0	0
b. Number current valuation	15	3	0	1	2	3	24

SUMMARY OF CURRENT PLAN
TOWN OF INDIAN RIVER SHORES
PUBLIC SAFETY OFFICERS AND FIREFIGHTERS' DEFINED BENEFIT PLAN
(Through Ordinance 532)

<u>Date of Latest Amendment</u>	October 27, 2016
<u>Eligibility</u>	Members are eligible to participate immediately upon hire as a Public Safety Officer or Firefighter.
<u>Credited Service</u>	Total years and fractional parts of years of service as a Participant.
<u>Salary</u>	Total cash remuneration paid to a member for services rendered including overtime. Effective October 1, 2012, overtime pay is limited to 300 hours per year, per participant. Additionally, accruals of unused sick and vacation time earned after September 30, 2012 are not includible in the definition of Salary.
<u>Average Final Compensation</u>	Average Compensation for the best five (5) out of the last ten (10) years of Credited Service.
<u>Member Contributions</u>	Members are required to contribute a variable contribution rate that is based in part on the funding cost of the Plan. The base Member Contribution Rate is 5.0% of earnings, with an adjustment to reflect 31.25% of the total minimum required contribution below 14.50% of payroll or above 16.0% of payroll. The Member Contribution Rate cannot exceed 9.0% of earnings.
<u>Town and State Contributions</u>	Remaining amount required in order to pay current costs and amortize unfunded past service cost, if any, over a period not exceeding 30 years.
<u>Normal Retirement</u>	
Date	Age 50 and completion of 7 years of Credited Service.
Benefit Amount	2.75% (2.00% if hired after September 30, 2012) of Average Final Compensation (AFC) <u>times</u> Credited Service, limited to 100% of AFC.

Form of Benefit	Ten Year Certain and Life Annuity (options available)
<u>Early Retirement</u>	Removed with Ordinance No. 527.
<u>Late Retirement</u>	
Date	Any retirement after the Member's earliest eligible Normal Retirement Date.
Benefit Amount	Greater of: a) Accrued benefit on Late Retirement Date, or b) Accrued benefit at Normal Retirement Date multiplied by a Late Retirement factor (Table of factors provided in Ordinance 504).
<u>Vesting</u>	
Schedule	A Member is 20% Vested upon reaching 3 years of Credited Service. An additional 20% is earned for each complete year of service until reaching 100% vesting after 7 years of Credited Service.
Benefit Amount	Member will receive the vested portion of his (her) accrued benefit payable at age 50. Non-vested members receive a refund of member contributions.
<u>Disability</u>	
Eligibility	Total and permanent as determined by the Board of Trustees. Members are covered from Date of Employment (Service Incurred), or after 10 years of Credited Service (Non-Service Incurred). In accordance with State Law, diagnosis or treatment for Cancer are presumed to be service-incurred.
Benefit Amount	Accrued benefit, but not less than 42% of Average Final Compensation (Service Incurred), or 25% of Average Final Compensation (Non-Service Incurred).
Duration	Payable for life with 10 years certain or until recovery (as determined by the Board).

Death Benefits

Pre-Retirement

Vested or Contributing

Accrued benefit payable at Normal Retirement. The benefit payable as a 10 Year Certain and Life for the Beneficiary.

Non-Vested or Non-Contributing

Refund of member contributions.

Post-Retirement

Benefits payable to beneficiary in accordance with option selected at retirement.

Deferred Retirement Option Plan

Eligibility

Prospectively upon satisfaction of Normal Retirement requirements.

Participation

Up to 60 months, but not beyond 30 years of total service with the Town.

Rate of Return

Actual net returns realized by the Plan as a whole.

Chapter 175/185 Share Accounts

Allocation

The Excess State Monies in the Plan were allocated evenly to all Participating Members upon the initial Share Plan allocation on October 1, 2006. For subsequent years all Excess State Monies as determined by the Board shall be distributed among all active participants on September 30th based on their Credited Service from the later of their Hire Date or October 1, 2006.

Investment Earnings

Net rate of investment return realized by the Plan for the preceding Plan Year.

Vesting Schedule

7 years of Credited Service.

Distribution

Lump sum payment after retirement, termination, disability, or death.

Board of Trustees

The Board of Trustees shall be in compliance with Florida State Statute Chapters 175 and 185. Members shall serve for four-year terms.