

City of Safety Harbor
Firefighters' Pension Fund

Actuarial Valuation
As of October 1, 2021

Determines the Contribution
For the 2022/23 Fiscal Year



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May 23, 2022

Introduction

This report presents the results of the October 1, 2021 actuarial valuation for the City of Safety Harbor Firefighters' Pension Fund. The report is based on the participant data and asset information provided by the pension plan administrator and, except for a cursory review for reasonableness including a comparison to the data provided for the previous valuation, we have not attempted to verify the accuracy of this information.

The primary purpose of this report is to provide a summary of the funded status of the plan as of October 1, 2021 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2022/23 plan year. In addition, this report provides a projection of the long-term funding requirements of the plan, statistical information concerning the assets held in the trust, statistical information concerning the participant population, and a summary of any recent plan changes.

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an *estimate* of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, if any of the assumptions is not completely realized, then the cost shown in this report will change in the future.

Certain assumptions play a bigger role than others in determining the cost of the post-employment pension benefits. In some cases, relatively small changes in a particular assumption can have a dramatic impact on the anticipated cost of benefits. Although a thorough analysis of the impact of such changes is beyond the scope of this report, Table I-B illustrates the impact that alternative long-term investment returns would have on the normal cost rate.

Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2022/23 plan year. The minimum required contribution rate is 20.73% of covered payroll, which represents a decrease of 0.80% of payroll from the prior valuation.

The normal cost rate is 21.67%, which is 1.36% lower than the normal cost rate that was developed in the prior valuation. Table I-C provides a breakdown of the sources of change in the normal cost rate. Significantly, the rate decreased by 2.25% of payroll due to investment gains, decreased by another 3.76% of payroll due to demographic experience, and increased by 4.65% of payroll due to the assumption change that is described below. Although the market value of assets earned 19.47% during the 2020/21 plan year, the actuarial value of assets is based on a five-year phase-in of the



unexpected investment gains and losses. On this basis, the actuarial value of assets earned 10.47% during the 2020/21 plan year, whereas a 7.00% annual investment return was required to maintain a stable contribution rate.

Chapter 112, Florida Statutes, sets forth the rules concerning the minimum required contribution for public pension plans within the state. Essentially, the City must contribute an amount equal to the annual normal cost of the plan plus an adjustment as necessary to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the City's 2022/23 minimum required contribution will be equal to 20.73% multiplied by the total pensionable earnings for the 2022/23 plan year for the active employees who are covered by the plan and reduced by the portion of the Chapter 175/185 contribution that is allowed to be recognized during the 2022/23 plan year.

Based on the current assets, participant data, and actuarial assumptions and methods that are used to value the plan, the present-day value of the total long-term funding requirement is \$16,947,586. As illustrated in Table I-A, current assets are sufficient to cover \$12,022,759 of this amount, the employer's 2021/22 expected contribution will cover \$373,224 of this amount, the employer's 2022/23 expected contribution will cover \$375,575 of this amount, and future employee contributions are expected to cover \$986,622 of this amount, leaving \$3,189,406 to be covered by future employer funding beyond the 2022/23 fiscal year. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

Advance Employer Contribution

The City has made contributions to the plan in excess of the minimum amount that was required to be contributed pursuant to Chapter 112. In this report, the excess contributions are referred to as an "advance employer contribution." As of October 1, 2021, the advance employer contribution is \$451,205, which reflects the advance employer contribution of \$447,144 as of October 1, 2020 plus \$4,061 of actual employer contributions in excess of the minimum required contribution for the 2020/21 plan year as shown in Table II-F.

The City may apply all or any portion of the advance employer contribution towards the minimum required contribution for the 2021/22 plan year or for any later plan year. The minimum required contribution for that plan year will be reduced dollar-for-dollar by the amount of the advance employer contribution that is applied in this manner.

Alternatively, at any time, the City may apply all or any portion of the advance employer contribution as an *extra* contribution in excess of the minimum required contribution. In this case, the immediate application of the entire balance of the advance employer contribution as of October 1, 2021 would reduce the minimum required contribution for the 2022/23 plan year to 18.11% of payroll.

Assumption Change

Since the completion of the previous valuation, the assumed interest (or discount) rate was decreased from 7.00% per annum to 6.75% per annum. The impact of this assumption change was to increase the normal cost rate by 4.65% of payroll.



Identification and Assessment of Risk

The liabilities and cost presented in this report are based on numerous assumptions concerning the cost of benefits to be provided in the future, long-term investment returns, and the future demographic experience of the current participants. Anyone referring to this report should remember that the cost developed herein is only an *estimate* of the true cost of providing post-employment pension benefits. No one can predict with certainty whether the true cost will be higher or lower than the cost presented in this report. The calculated cost is entirely dependent upon the assumptions that are described in Table IV-A. If any of the assumptions is changed, then the cost shown in this report will change accordingly. Likewise, there is always a risk that, should these assumptions not be realized, the liabilities of the plan, the contributions required to fund the plan, and the funded status of the plan may be significantly different than the amounts shown in this report.

Although a thorough analysis of the risk of not meeting the assumptions is beyond the scope of this report, this discussion is intended to identify the significant risks faced by the plan. In some cases, a more detailed review of the risks, including numerical analysis, may be appropriate to help the plan sponsor and other interested parties assess the specific impact of not realizing certain assumptions. For example, Table I-B illustrates the impact that alternative long-term investment returns would have on the contribution rate. Note that this report is not intended to provide advice on the management or reduction of the identified risks nor is this report intended to provide investment advice.

The most significant risk faced by most defined benefit pension plans is investment risk, i.e. the risk that long-term investment returns will be less than assumed. Other related risks include a risk that, if the investments of the plan decline dramatically over a short period of time (such as occurred with many pension plans in 2008), the plan's assets may not have sufficient time to recover before benefits become due. Even if the assets of the plan grow in accordance with the assumed investment return over time, if benefit payments are expected to be large in the short-term (for example, if the plan provides an actuarial equivalent lump sum payment option and a large number of participants are expected to become entitled to such a lump sum in the near future), the plan's assets may not be sufficient to support such a high level of benefit payments. We have provided a 10-year projection of the expected benefit payments in Table III-G to help the Trustees in formulating an investment policy that is expected to provide an investment return that meets both the short- and long-term cash flow needs of the pension plan.

Another source of risk is demographic experience. This is the risk that participants will receive salary increases that are different than the amount assumed, that participants will retire, become disabled, or terminate their employment at a rate that is different than assumed, and that participants will live longer than assumed, just to cite a few examples of the demographic risk faced by the plan. Although for most pension plans, the demographic risk is not as significant as the investment risk, particularly in light of the fact that the mortality assumption includes a component for future life expectancy increases, the demographic risk can nevertheless be a significant contributing factor to liabilities and contribution rates that become higher than anticipated.

A third source of risk is the risk that the plan sponsor (or other contributing entities) will not make, or will not have the ability to make, the contributions that are required to keep the plan funded at a sufficient level. Material changes in the number of covered employees, covered payroll, and, in some cases, hours worked by active participants can also significantly impact the plan's liabilities and the level of contributions received by the plan.



Finally, an actuarial funding method has been used to allocate the gap between projected liabilities and assets to each year in the future. The contribution rate under some funding methods is higher during the early years of the plan and then is lower during the later years of the plan. Other funding methods provide for lower contribution rates initially, with increasing contribution rates over time.

The Trustees have adopted the aggregate funding method for this plan, which is expected to result in a contribution rate that is level as a percentage of payroll over the working life of the plan's active participants. A brief description of the actuarial funding method is provided in Table IV-A.

Contents of the Report

Tables I-D through I-G provide a detailed breakdown of various liability amounts by type of benefit and by participant group. Tables II-A through II-F provide information concerning the assets of the trust fund. Tables III-A through III-G provide statistical information concerning the plan's participant population. In particular, Table III-G gives a 10-year projection of the cash that is expected to be required from the trust fund in order to pay benefits to the current group of participants. Finally, Tables IV-A through V-B provide a summary of the actuarial assumptions and methods that are used to value the plan's benefits and of the relevant plan provisions as of October 1, 2021, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

Certification

This actuarial valuation was prepared 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 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 change in plan costs or required contribution rates have been taken into account in the valuation.

For the firm,

Charles T. Carr

Charles T. Carr
Consulting Actuary
Southern Actuarial Services Company, Inc.

Enrolled Actuary No. 20-04927

The individual above is a member of the American Academy of Actuaries and meets the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.



Minimum Required Contribution

Table I-A



For the 2022/23 Plan Year

Present Value of Future Benefits	\$16,011,605
Present Value of Future Administrative Expenses	\$560,406
Actuarial Value of Assets	(\$12,022,759)
Present Value of Future Employee Contributions	(\$986,622)
Present Value of Future Normal Costs	\$3,562,630
Present Value of Future Payroll	÷ \$16,443,728
Normal Cost Rate	= 21.6656%
Expected Payroll	x \$1,733,508
Normal Cost	\$375,575
Adjustment to Reflect Bi-Weekly Employer Contributions	\$0
Expected Employer Contribution for the 2021/22 Plan Year	(\$373,224)
Remaining Contribution Due/(Credit) for the 2021/22 Plan Year	\$2,351
One Year's Interest Charge/(Credit) on the Remaining Contribution	\$0
Preliminary Employer Contribution for the 2022/23 Plan Year	\$375,575
Expected Payroll for the 2022/23 Plan Year	÷ \$1,811,516

Minimum Required Contribution Rate **20.73%**

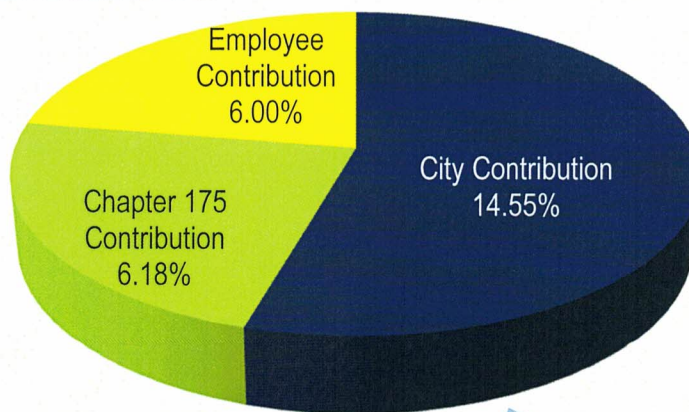
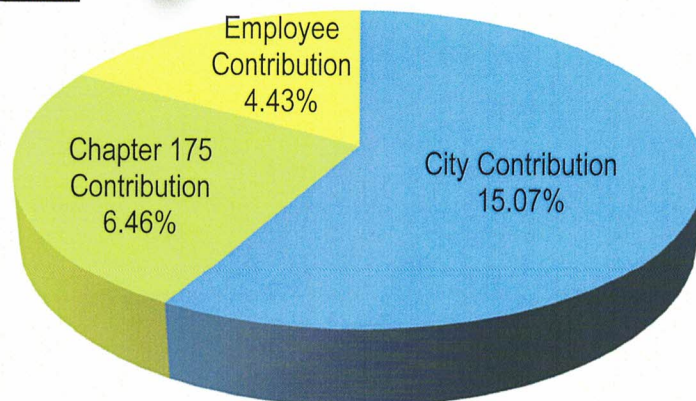
(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the year.)



Minimum Required Contribution

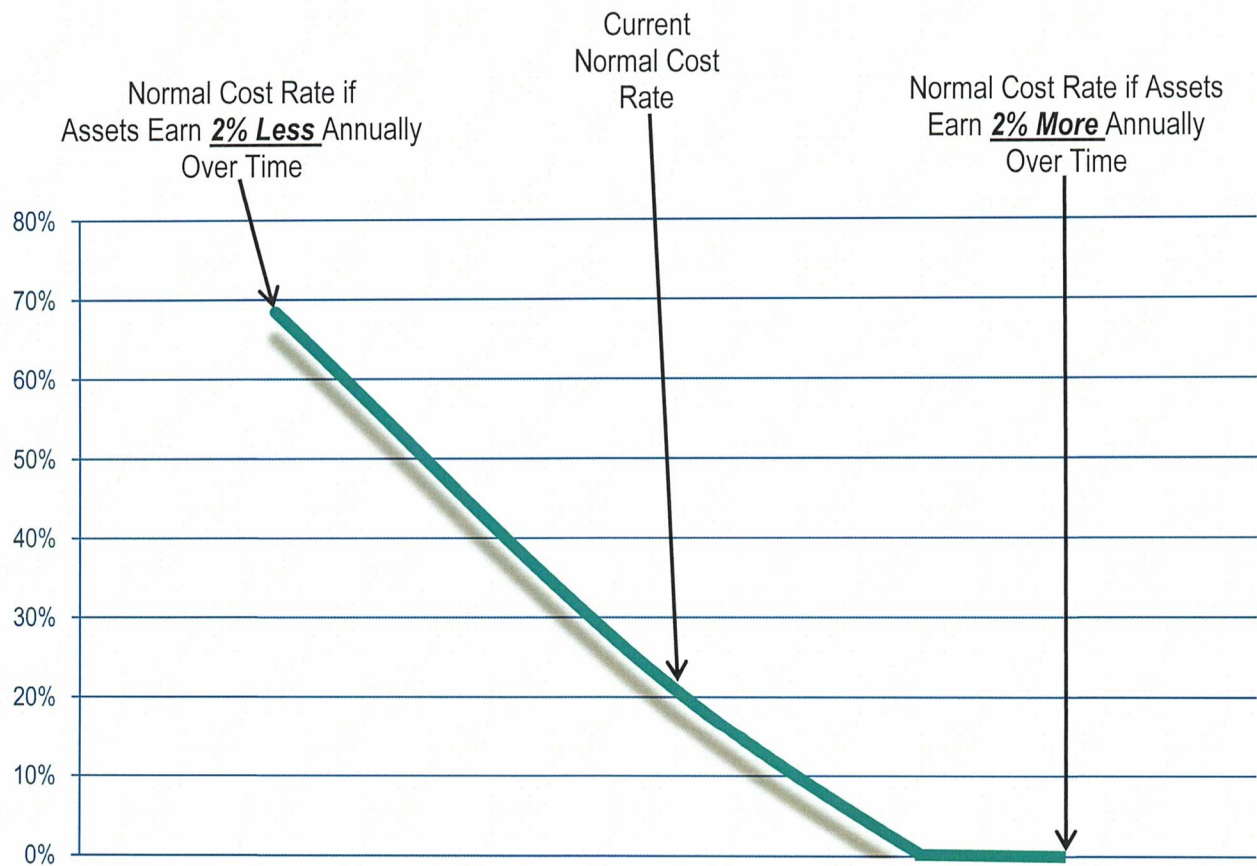
Table I-A
(continued)

The minimum required contribution rate of 20.73% includes both the City contribution and the allowable Chapter 175 contribution. In addition, employees are required to contribute 6.00% of pensionable earnings. The actual City contribution rate is expected to be approximately 14.55% based on the allowable Chapter 175 contribution for the previous year. The chart below shows the expected contribution rate by source for the 2022/23 plan year based on the expected payroll. A comparative chart shows the contribution rate by source for the previous plan year.

For the 2022/23 Plan Year**For the 2021/22 Plan Year**

Sensitivity Analysis

Table I-B



The line above illustrates the sensitivity of the normal cost rate to changes in the long-term investment return.



Gain and Loss Analysis

Table I-C

Previous normal cost rate	23.03%
Increase (decrease) due to investment gains and losses	-2.25%
Increase (decrease) due to demographic experience	-3.76%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	4.65%
Increase (decrease) due to actuarial method changes	0.00%
Current normal cost rate	<u>21.67%</u>



Present Value of Future Benefits

Table I-D

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$13,125,982	\$13,125,982	\$13,852,934
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$13,125,982	\$13,125,982	\$13,852,934
<u>Deferred Vested Participants</u>			
Retirement benefits	\$574,703	\$574,703	\$597,382
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$574,703	\$574,703	\$597,382
<u>Due a Refund of Contributions</u>	\$10,016	\$10,016	\$10,016
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$1,324,005	\$1,324,005	\$1,365,129
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$182,076	\$182,076	\$186,144
DROP participants	\$0	\$0	\$0
Sub-total	\$1,506,081	\$1,506,081	\$1,551,273
<u>Grand Total</u>	<u>\$15,216,782</u>	<u>\$15,216,782</u>	<u>\$16,011,605</u>
Present Value of Future Payroll	\$16,191,380	\$16,191,380	\$16,443,728
Present Value of Future Employee Contribs.	\$971,483	\$971,483	\$986,622
Present Value of Future Employer Contribs.	\$2,755,127	\$2,755,127	\$3,562,630



Present Value of Accrued Benefits

Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$6,004,735	\$6,004,735	\$6,268,340
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$6,004,735	\$6,004,735	\$6,268,340
<u>Deferred Vested Participants</u>			
Retirement benefits	\$574,703	\$574,703	\$597,382
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$574,703	\$574,703	\$597,382
<u>Due a Refund of Contributions</u>	\$10,016	\$10,016	\$10,016
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$1,324,005	\$1,324,005	\$1,365,129
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$182,076	\$182,076	\$186,144
DROP participants	\$0	\$0	\$0
Sub-total	\$1,506,081	\$1,506,081	\$1,551,273
<u>Grand Total</u>	<u>\$8,095,535</u>	<u>\$8,095,535</u>	<u>\$8,427,011</u>
<u>Funded Percentage</u>	167.04%	167.04%	160.47%

(Note: Funded percentage is equal to the ratio of the usable portion of the market value of assets divided by the present value of accrued benefits.)



Present Value of Vested Benefits

Table I-F

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$4,163,796	\$4,163,796	\$4,329,177
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$4,163,796	\$4,163,796	\$4,329,177
<u>Deferred Vested Participants</u>			
Retirement benefits	\$574,703	\$574,703	\$597,382
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$574,703	\$574,703	\$597,382
<u>Due a Refund of Contributions</u>	\$10,016	\$10,016	\$10,016
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$1,324,005	\$1,324,005	\$1,365,129
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$182,076	\$182,076	\$186,144
DROP participants	\$0	\$0	\$0
Sub-total	\$1,506,081	\$1,506,081	\$1,551,273
<u>Grand Total</u>	<u>\$6,254,596</u>	<u>\$6,254,596</u>	<u>\$6,487,848</u>



Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions <u>w/o Amendment</u>	Old Assumptions <u>w/ Amendment</u>	New Assumptions <u>w/ Amendment</u>
<u>Actively Employed Participants</u>			
Retirement benefits	\$7,487,347	\$7,487,347	\$7,794,247
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$7,487,347	\$7,487,347	\$7,794,247
<u>Deferred Vested Participants</u>			
Retirement benefits	\$574,703	\$574,703	\$597,382
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$574,703	\$574,703	\$597,382
<u>Due a Refund of Contributions</u>	\$10,016	\$10,016	\$10,016
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$1,324,005	\$1,324,005	\$1,365,129
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$182,076	\$182,076	\$186,144
DROP participants	\$0	\$0	\$0
Sub-total	\$1,506,081	\$1,506,081	\$1,551,273
<u>Grand Total</u>	<u>\$9,578,147</u>	<u>\$9,578,147</u>	<u>\$9,952,918</u>



Actuarial Value of Assets

Table II-A

<u>Unexpected Investment Gain (Loss)</u>		<u>Unrecognized Gain (Loss)</u>	
For the 2017/18 plan year	\$43,156	x 20%	\$8,631
For the 2018/19 plan year	(\$140,107)	x 40%	(\$56,043)
For the 2019/20 plan year	(\$21,003)	x 60%	(\$12,602)
For the 2020/21 plan year	\$1,386,148	x 80%	\$1,108,918
			<u>\$1,048,904</u>

Market Value of Assets as of October 1, 2021 \$13,522,868

Minus advance employer contributions (\$451,205)

Minus excess Chapter 175/185 contributions \$0

Adjustment for unrecognized gain or loss as shown above,
but restricted to an amount that keeps the actuarial value
of assets within an 80%-120% corridor of the market value (\$1,048,904)

Actuarial Value of Assets as of October 1, 2021 \$12,022,759

<u>Historical Actuarial Value of Assets</u>	
October 1, 2012	\$3,563,115
October 1, 2013	\$4,382,581
October 1, 2014	\$5,077,687
October 1, 2015	\$5,215,219
October 1, 2016	\$5,386,232
October 1, 2017	\$6,218,854
October 1, 2018	\$7,167,545
October 1, 2019	\$8,142,719
October 1, 2020	\$10,423,004
October 1, 2021	\$12,022,759

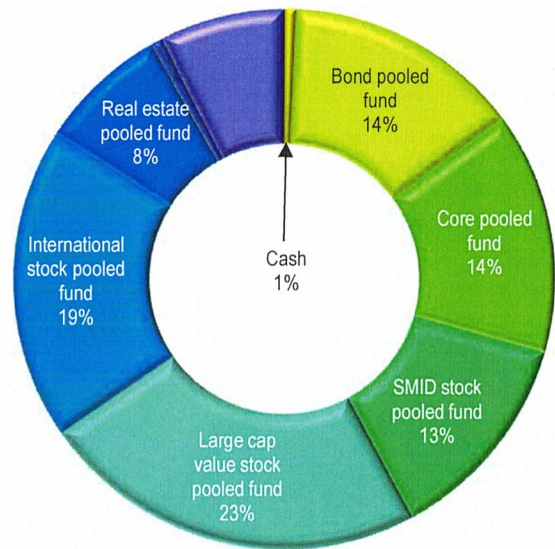


Market Value of Assets

Table II-B

As of October 1, 2021

Market Value of Assets	<u>\$13,522,868</u>
Cash	\$102,285
Bond pooled fund	\$2,264,888
Core pooled fund	\$2,308,724
SMID stock pooled fund	\$2,031,093
Large cap value stock pooled fund	\$3,696,881
International stock pooled fund	\$2,980,885
Real estate pooled fund	\$1,227,423
Chapter 175 contribution receivable	\$111,154
Payable to share plan	(\$1,200,465)

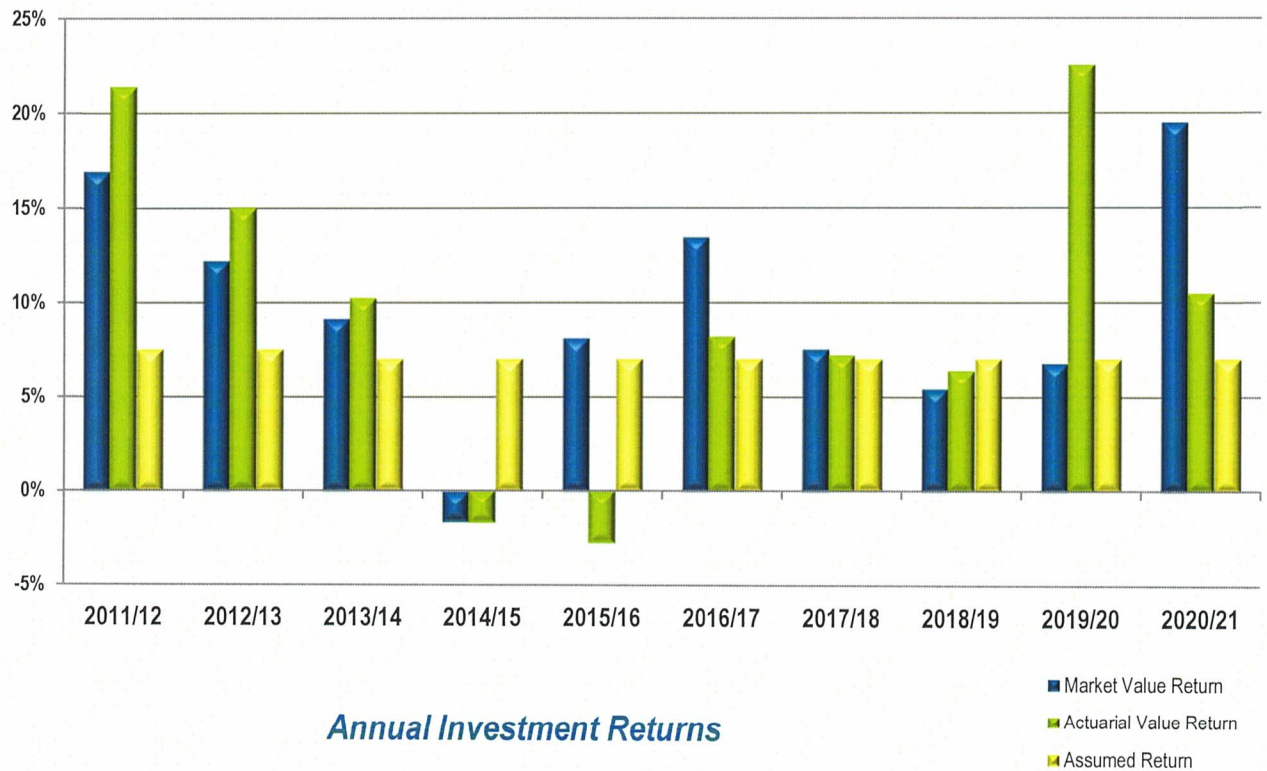
Historical Market Value of Assets

October 1, 2012	\$4,358,157
October 1, 2013	\$5,284,991
October 1, 2014	\$5,219,812
October 1, 2015	\$5,526,007
October 1, 2016	\$6,361,922
October 1, 2017	\$7,731,192
October 1, 2018	\$8,818,048
October 1, 2019	\$9,801,225
October 1, 2020	\$10,871,759
October 1, 2021	\$13,522,868



Investment Return

Table II-C

*Annual Investment Returns*

Plan	Market Value	Actuarial Value	Assumed
Year	Return	Return	Return
2011/12	16.91%	21.38%	7.50%
2012/13	12.20%	15.00%	7.50%
2013/14	9.15%	10.21%	7.00%
2014/15	-1.64%	-1.71%	7.00%
2015/16	8.12%	-2.77%	7.00%
2016/17	13.45%	8.17%	7.00%
2017/18	7.54%	7.19%	7.00%
2018/19	5.45%	6.36%	7.00%
2019/20	6.79%	22.54%	7.00%
2020/21	19.47%	10.47%	7.00%
10yr. Avg.	9.59%	9.39%	7.10%



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2020	\$10,871,759	\$10,423,004
<i>Increases Due To:</i>		
Employer Contributions	\$440,714	\$440,714
Chapter 175/185 Contributions	\$111,899	\$111,899
Employee Contributions	\$79,544	\$79,544
Service Purchase Contributions	\$0	\$0
Total Contributions	<u>\$632,157</u>	<u>\$632,157</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	<u>\$2,163,934</u>	
Total Investment Income	\$2,163,934	\$1,116,641
Other Income	\$0	
Total Income	<u>\$2,796,091</u>	<u>\$1,748,798</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$95,875)	(\$95,875)
Refund of Employee Contributions	(\$6,403)	(\$6,403)
Total Benefit Payments	<u>(\$102,278)</u>	<u>(\$102,278)</u>
Investment Expenses	\$0	
Administrative Expenses	(\$42,704)	(\$42,704)
Advance Employer Contribution		(\$4,061)
Excess Chapter 175/185 Contribution		\$0
Total Expenses	<u>(\$144,982)</u>	<u>(\$149,043)</u>
As of October 1, 2021	<u>\$13,522,868</u>	<u>\$12,022,759</u>



Historical Trust Fund Detail

Table II-E

Income

Plan	Employer	Chapter	Employee	Service	Interest /	Realized	Unrealized	Other
<u>Year</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Contribs.</u>	<u>Dividends</u>	<u>Gains /</u> <u>Losses</u>	<u>Gains /</u> <u>Losses</u>	<u>Income</u>
2011/12	\$273,018	\$134,298	\$9,468	\$0	\$0	\$0	\$601,344	\$0
2012/13	\$243,947	\$139,857	\$10,276	\$0	\$0	\$0	\$554,455	\$0
2013/14	\$251,735	\$143,624	\$10,486	\$0	\$0	\$0	\$459,576	\$0
2014/15	\$261,285	\$142,403	\$10,861	\$0	\$0	\$0	-\$88,704	\$0
2015/16	\$265,384	\$124,216	\$12,244	\$0	\$0	\$0	\$463,903	\$0
2016/17	\$393,136	\$104,116	\$14,270	\$0	\$0	\$0	\$887,972	\$0
2017/18	\$419,768	\$93,023	\$15,181	\$0	\$0	\$0	\$601,055	\$0
2018/19	\$436,914	\$93,428	\$16,657	\$0	\$0	\$0	\$493,988	\$0
2019/20	\$369,708	\$112,822	\$42,044	\$0	\$0	\$0	\$678,569	\$0
2020/21	\$440,714	\$111,899	\$79,544	\$0	\$0	\$0	\$2,163,934	\$0

Expenses

Plan	Monthly	Contrib.	Admin.	Invest.	<u>Other Actuarial Adjustments</u>	
<u>Year</u>	<u>Benefit</u> <u>Payments</u>	<u>Refunds</u>	<u>Expenses</u>	<u>Expenses</u>	<u>Advance</u> <u>Employer</u> <u>Contribs.</u>	<u>Excess</u> <u>Chapter</u> <u>Contribs.</u>
2011/12	\$0	\$0	\$16,668	\$0	\$0	\$101,809
2012/13	\$0	\$0	\$21,701	\$0	\$0	\$107,368
2013/14	\$902,410	\$0	\$28,190	\$0	\$142,125	-\$902,410
2014/15	\$0	\$0	\$19,650	\$0	\$168,663	\$0
2015/16	\$0	\$5,142	\$24,690	\$0	\$52,281	\$0
2016/17	\$0	\$0	\$30,224	\$0	\$104,116	\$0
2017/18	\$3,498	\$0	\$38,673	\$0	\$1,871	\$0
2018/19	\$19,980	\$777	\$37,053	\$0	-\$14,343	\$0
2019/20	\$89,517	\$1,909	\$41,183	\$0	-\$7,569	\$0
2020/21	\$95,875	\$6,403	\$42,704	\$0	\$4,061	\$0

Note: Information was not available to separate the investment expenses from the investment income nor was information available to separate the investment income by source.



Other Reconciliations

Table II-F

Advance Employer Contribution

Advance Employer Contribution as of October 1, 2020	\$447,144
Additional Employer Contribution	\$552,613
Minimum Required Contribution	(\$548,552)
Net Increase in Advance Employer Contribution	\$4,061
Advance Employer Contribution as of October 1, 2021	<u>\$451,205</u>

Excess Chapter 175/185 Contribution

Excess Chapter 175/185 Contribution as of October 1, 2020	\$0
Additional Chapter 175/185 Contribution	\$111,899
Allowable Chapter 175/185 Contribution	(\$111,899)
Net Increase in Excess Chapter 175/185 Contribution	\$0
Excess Chapter 175/185 Contribution as of October 1, 2021	<u>\$0</u>



Historical Chapter 175/185 Contributions

Table II-G

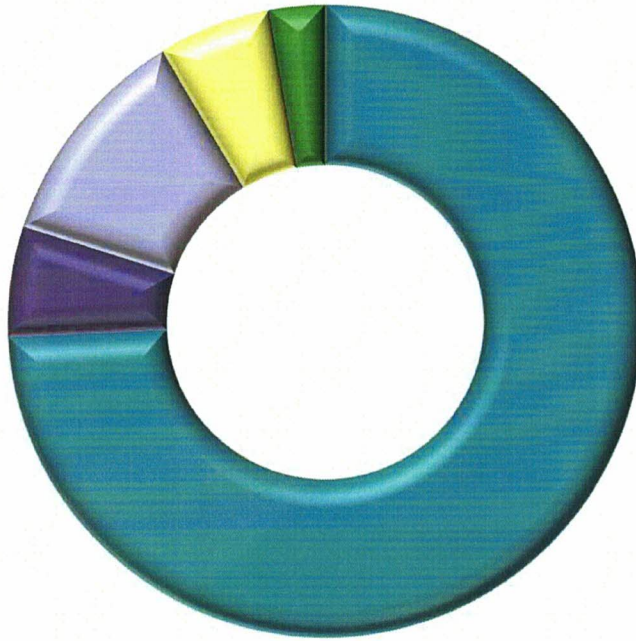
Total Accumulated Excess Chapter 175/185 Contribution \$0

	Chapter 175 Regular <u>Distribution</u>	Chapter 175 Supplemental <u>Distribution</u>	Chapter 185 <u>Distribution</u>	Allowable <u>Amount</u>
1998 Distribution	\$38,114	\$0	\$0	(\$32,489)
1999 Distribution	\$24,844	\$0	\$0	(\$24,844)
2000 Distribution	\$26,322	\$14,175	\$0	(\$26,322)
2001 Distribution	\$25,916	\$13,831	\$0	(\$25,916)
2002 Distribution	\$30,737	\$14,366	\$0	(\$30,737)
2003 Distribution	\$40,249	\$17,127	\$0	(\$32,489)
2004 Distribution	\$45,059	\$24,172	\$0	(\$32,489)
2005 Distribution	\$55,245	\$26,024	\$0	(\$32,489)
2006 Distribution	\$86,206	\$33,151	\$0	(\$32,489)
2007 Distribution	\$72,786	\$73,420	\$0	(\$32,489)
2008 Distribution	\$91,088	\$57,131	\$0	(\$32,489)
2009 Distribution	\$92,039	\$48,517	\$0	(\$32,489)
2010 Distribution	\$87,205	\$45,344	\$0	(\$32,489)
2011 Distribution	\$92,566	\$41,732	\$0	(\$32,489)
2012 Distribution	\$89,595	\$50,262	\$0	(\$32,489)
2013 Distribution	\$95,156	\$48,468	\$0	(\$143,624)
2014 Distribution	\$89,778	\$52,625	\$0	(\$142,403)
2015 Distribution	\$85,098	\$39,118	\$0	(\$124,216)
2016 Distribution	\$82,680	\$21,436	\$0	(\$104,116)
2017 Distribution	\$88,525	\$4,498	\$0	(\$93,023)
2018 Distribution	\$89,943	\$3,485	\$0	(\$93,428)
2019 Distribution	\$112,822	\$0	\$0	(\$112,822)
2020 Distribution	\$111,899	\$0	\$0	(\$111,899)
Interest Adjustment				\$10,385
Transfer to Share Plan				(\$902,410)



Summary of Participant Data

Table III-A

As of October 1, 2021Actively Employed Participants

Active Participants	26
DROP Participants	0

Inactive Participants

Deferred Vested Participants	2
Due a Refund of Contributions	4
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	2
Disability Retirements	0
Beneficiaries Receiving	1

Total Participants 35Number of Participants Included in Prior Valuations

	<i>Active</i>	<i>DROP</i>	<i>Inactive</i>	<i>Retired</i>	<i>Total</i>
October 1, 2012	15	0	1	0	16
October 1, 2013	18	0	1	0	19
October 1, 2014	18	0	1	0	19
October 1, 2015	17	0	2	0	19
October 1, 2016	21	0	2	0	23
October 1, 2017	23	0	3	0	26
October 1, 2018	23	0	4	1	28
October 1, 2019	23	0	4	2	29
October 1, 2020	24	0	5	3	32
October 1, 2021	26	0	6	3	35



Data Reconciliation

Table III-B

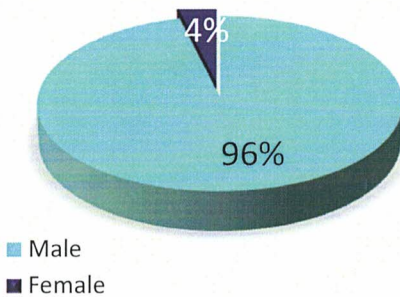
	<u>Active</u>	<u>DROP</u>	<u>Deferred Vested</u>	<u>Due a Refund</u>	<u>Def. Benef.</u>	<u>Service Retiree</u>	<u>Disabled Retiree</u>	<u>Benef. Rec'v.</u>	<u>Total</u>
<u>October 1, 2020</u>	24	0	2	3	0	2	0	1	32
<u>Change in Status</u>									
Re-employed									
Terminated	(3)			3					
Retired									
<u>Participation Ended</u>									
Transferred Out									
Cashed Out				(2)					(2)
Died									
<u>Participation Began</u>									
Newly Hired	5								5
Transferred In									
New Beneficiary									
<u>Other Adjustment</u>									
<u>October 1, 2021</u>	26	0	2	4	0	2	0	1	35



Active Participant Data

Table III-C

As of October 1, 2021

Gender Mix

Average Age	35.0 years
Average Service	7.6 years
Total Annualized Compensation for the Prior Year	\$1,830,372
Total Expected Compensation for the Current Year	\$1,733,508
Average Increase in Compensation for the Prior Year	-0.93%
Expected Increase in Compensation for the Current Year	4.50%

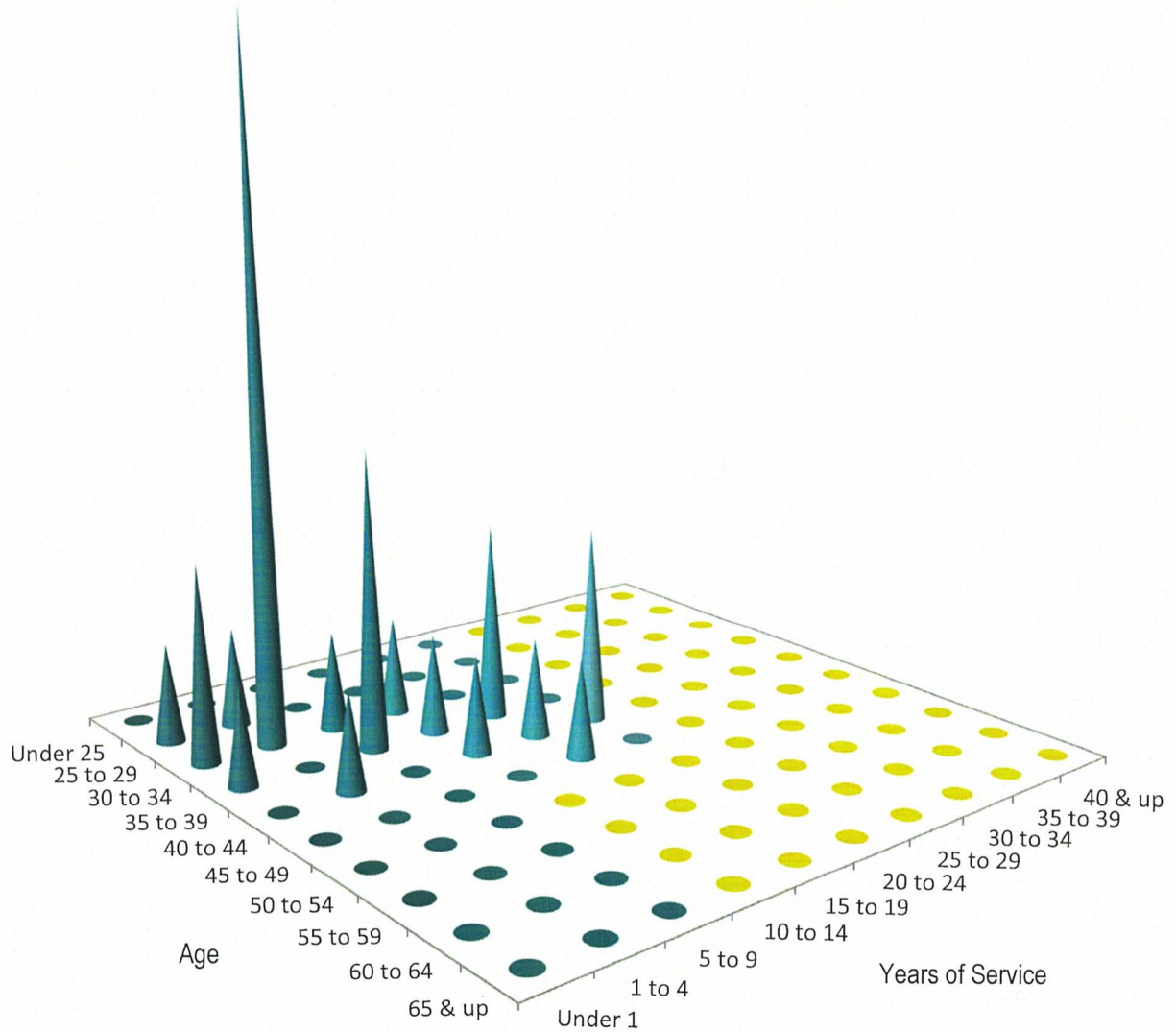
**Active Participant Statistics From Prior Valuations**

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2012	33.9	8.0	\$63,118	5.26%	11.11%
October 1, 2013	33.7	7.5	\$57,093	5.20%	-7.25%
October 1, 2014	35.0	8.8	\$56,488	4.50%	-0.60%
October 1, 2015	36.1	10.2	\$63,786	4.50%	12.71%
October 1, 2016	33.5	8.2	\$62,328	4.50%	6.77%
October 1, 2017	34.1	8.4	\$64,118	4.50%	3.93%
October 1, 2018	34.6	8.6	\$64,408	4.50%	3.78%
October 1, 2019	33.3	8.1	\$69,837	4.50%	11.43%
October 1, 2020	33.3	7.5	\$71,727	4.50%	8.97%
October 1, 2021	35.0	7.6	\$70,399	4.50%	-0.93%



Active Age-Service Distribution

Table III-D



- ▲ *Eligible to retire*
- ▲ *May be eligible to retire*
- ▲ *Not eligible to retire*



Active Age-Service-Salary Table

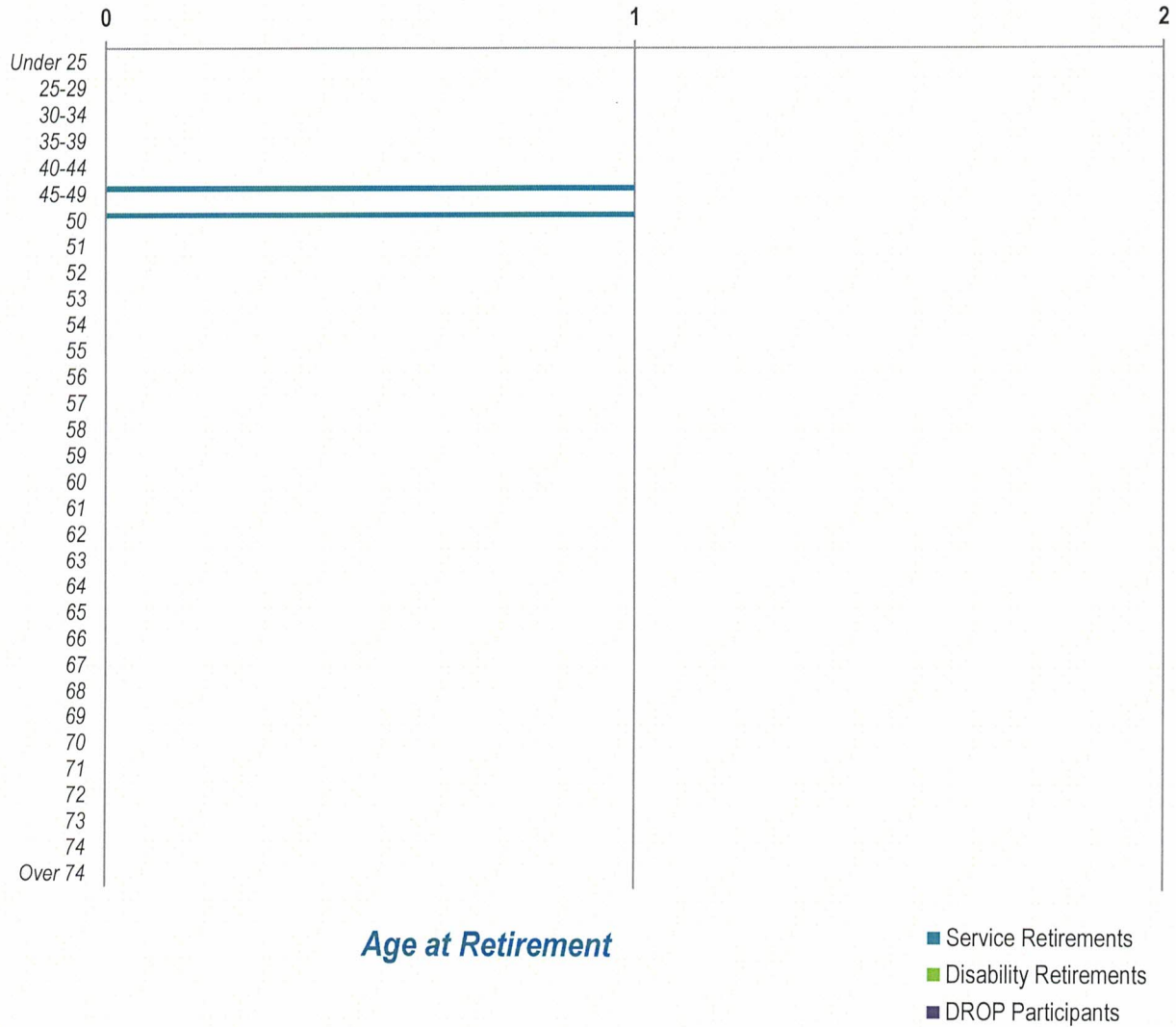
Table III-E

Attained Age	Completed Years of Service										Total
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & up	
Under 25	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
25 to 29	1	1	0	0	0	0	0	0	0	0	2
Avg.Pay	46,845	65,957	0	0	0	0	0	0	0	0	56,401
30 to 34	2	7	1	1	0	0	0	0	0	0	11
Avg.Pay	45,884	61,405	87,849	84,812	0	0	0	0	0	0	63,115
35 to 39	1	0	3	1	2	0	0	0	0	0	7
Avg.Pay	52,077	0	71,033	91,782	80,281	0	0	0	0	0	73,931
40 to 44	0	1	0	1	1	2	0	0	0	0	5
Avg.Pay	0	71,007	0	91,556	75,308	85,758	0	0	0	0	81,877
45 to 49	0	0	0	0	1	0	0	0	0	0	1
Avg.Pay	0	0	0	0	96,403	0	0	0	0	0	96,403
50 to 54	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
55 to 59	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
60 to 64	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
65 & up	0	0	0	0	0	0	0	0	0	0	0
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
Total	4	9	4	3	4	2	0	0	0	0	26
Avg.Pay	47,673	62,977	75,237	89,383	83,068	85,758	0	0	0	0	70,399



Inactive Participant Data

Table III-F

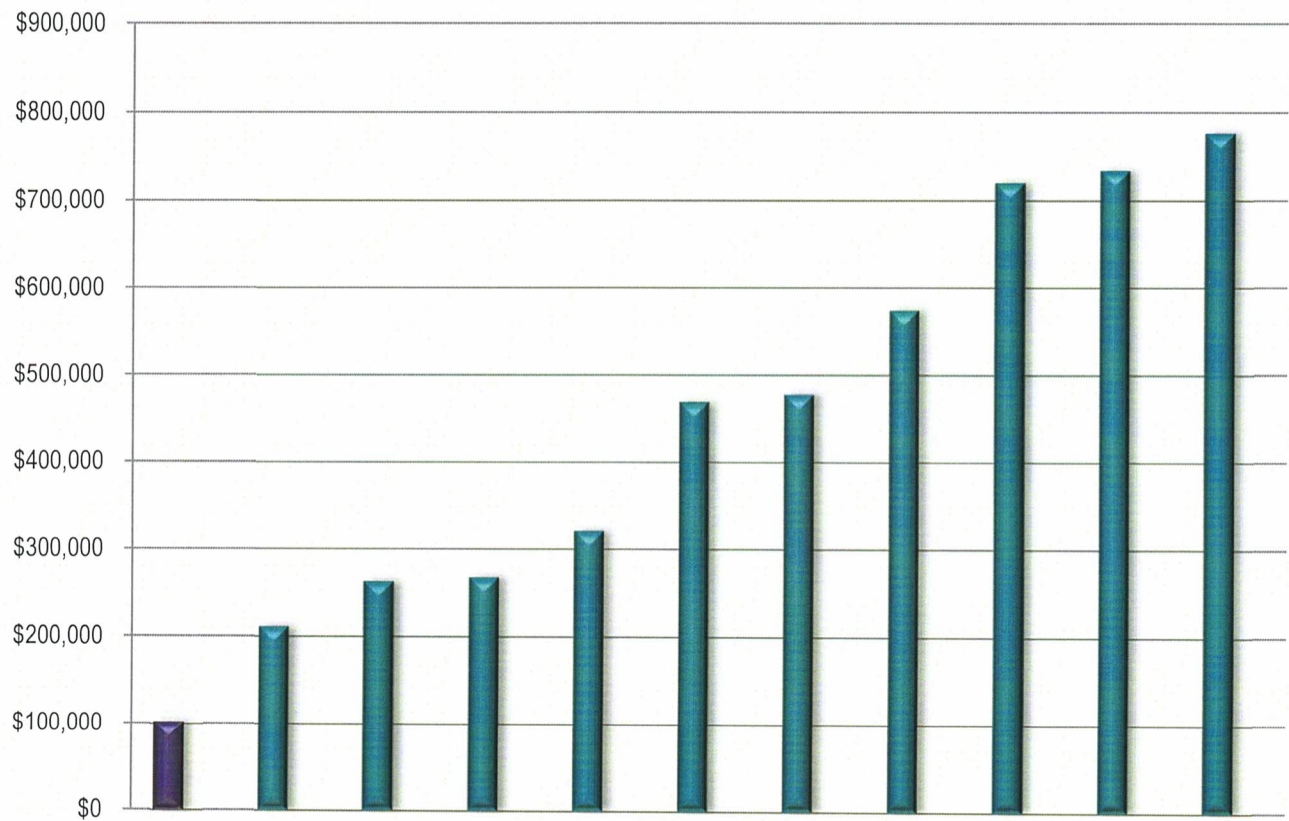
Average Monthly Benefit

Service Retirements	\$3,452.94
Disability Retirements	Not applicable
Beneficiaries Receiving	\$1,243.47
DROP Participants	Not applicable
Deferred Vested Participants	\$2,202.91
Deferred Beneficiaries	Not applicable



Projected Benefit Payments

Table III-G

Actual

For the period October 1, 2020 through September 30, 2021

\$102,278

Projected

For the period October 1, 2021 through September 30, 2022

\$211,036

For the period October 1, 2022 through September 30, 2023

\$263,021

For the period October 1, 2023 through September 30, 2024

\$267,823

For the period October 1, 2024 through September 30, 2025

\$320,984

For the period October 1, 2025 through September 30, 2026

\$468,655

For the period October 1, 2026 through September 30, 2027

\$477,412

For the period October 1, 2027 through September 30, 2028

\$574,227

For the period October 1, 2028 through September 30, 2029

\$720,401

For the period October 1, 2029 through September 30, 2030

\$733,962

For the period October 1, 2030 through September 30, 2031

\$776,610



Summary of Actuarial Methods and Assumptions

Table IV-A

NOTE: The following assumptions and methods have been selected and approved by the Board of Trustees based in part on the advice of the plan's enrolled actuary in accordance with the authority granted to the Board under the pension ordinances and State law.

1. **Actuarial Cost Method**

Aggregate cost method. Under this actuarial cost method, a funding cost is developed for the plan as a level percentage of payroll. The level funding percentage is calculated as the excess of the total future benefit liability over accumulated assets and future employee contributions, with this excess spread over the expected future payroll for current active participants. The normal cost is equal to the level funding percentage multiplied by the expected payroll for the year immediately following the valuation date. The actuarial accrued liability is equal to the accumulated assets. Therefore, under the aggregate cost method, no unfunded accrued liability is developed.

2. **Asset Method**

The actuarial value of assets is equal to the market value of assets, adjusted to reflect a five-year phase-in of the unexpected investment earnings.

3. **Interest (or Discount) Rate**

6.75% per annum

4. **Salary Increases**

Plan compensation is assumed to increase at the rate of 4.50% per annum, unless actual plan compensation is known for a prior plan year.

5. **Decrement**

- Pre-retirement mortality: None is assumed.
- Post-retirement mortality: For non-disabled retirees, sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Healthy Retiree Mortality Table for public safety employees (Below Median table for males), with full generational improvements in mortality using Scale MP-2018 and with ages set forward one year; for disabled retirees, sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Disabled Retiree Mortality Table (80% general employee rates plus 20% public safety employee rates), with full generational improvements in mortality using Scale MP-2018



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

5. Decrements (continued)

- Disability: None is assumed.
- Termination: None is assumed.
- Retirement: Retirement is assumed to occur at normal retirement age.

6. Form of Payment

Future retirees have been assumed to select the 10-year certain and life annuity.

7. Expenses

The total projected benefit liability has been loaded by 3.50% to account for anticipated administrative expenses. In addition, the interest rate set forth in item 3. above is assumed to be net of investment expenses and commissions.



Changes in Actuarial Methods and Assumptions

Table IV-B

Since the completion of the previous valuation, the interest (or discount) rate was decreased from 7.00% per annum to 6.75% per annum.

The following additional assumption and method changes were made during the past 10 years:

- (1) Effective October 1, 2020, the mortality basis was changed from the RP-2000 Blue Collar Mortality Table with generational improvements in mortality using Scale BB to selected PUB-2010 Mortality Tables with generational improvements in mortality using Scale MP-2018.*
- (2) Effective October 1, 2020, the actuarial value of assets was changed from the market value adjusted to reflect a five-year phase-in of the net investment gain or loss to the market value adjusted to reflect a five-year phase-in of the unexpected investment gain or loss.*
- (3) Effective October 1, 2016, the mortality basis was changed from a 2015 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Blue Collar Mortality Table as required by State law.*
- (4) Effective October 1, 2016, the actuarial value of assets was changed from the unadjusted market value to the market value adjusted to reflect a five-year phase-in of the net investment earnings.*
- (5) Effective October 1, 2013, the interest (or discount) rate was decreased from 7.50% per annum to 7.00% per annum.*
- (6) Effective October 1, 2013, the assumed increase in future salaries was changed from a range of rates based on service (8.00% for employees with less than one year of service, 7.00% for employees with at least one but less than two years of service, 6.00% for employees with at least two but less than three years of service, 5.50% for employees with at least three but less than four years of service, and 5.20% for all other employees) to a flat 4.50% per year.*
- (7) Effective October 1, 2013, the mortality basis was changed from the 1994 Group Annuity Reserving Table, projected to 2002 by Scale AA, to the RP-2000 Mortality Table for annuitants, projected to 2015 by Scale AA, as published by the Internal Revenue Service (IRS) for purposes of Internal Revenue Code (IRC) section 430.*



Summary of Plan Provisions

Table V-A

1. Benefit Formula

3.00% of Average Monthly Earnings multiplied by Credited Service

2. Service Retirement

Normal retirement: Age 55 with at least 10 years of credited service; or

Any age with at least 20 years of credited service

Early retirement: Age 50 with at least 10 years of credited service

(Note: In the case of early retirement, the participant's benefit is reduced by 3% for each year by which the participant's early retirement age precedes his normal retirement age.)

3. Disability Retirement

Service-based disability: Participant must be disabled during the course of his employment with the City.

Non-service disability: Participant must have earned at least 10 years of credited service.

The disability benefit is a monthly 10-year certain and life annuity equal to the monthly accrued benefit, but not less than 42% of average monthly earnings in the case of a service-based disability and offset as necessary to preclude the total of the participant's worker's compensation, disability benefit, and other City-financed disability or salary continuation benefit from exceeding his average monthly earnings. The disability benefit is not reduced to an amount less than the greater of 42% of average monthly earnings or 2.75% of average monthly earnings for each year of credited service. The participant may convert his disability benefit into any of the optional forms of payment that are otherwise available under the plan.

(A participant is disabled if he is found to have a mental or physical condition resulting from bodily injury, disease, or a mental disorder that renders him incapable of employment as a firefighter.)

4. Deferred Vested Retirement

A vested participant who terminates employment before becoming eligible for retirement receives a deferred vested retirement benefit payable at the participant's early or normal retirement age. If the benefit is payable prior to normal retirement age, then the benefit is reduced by 3% for each year by which the participant's early retirement age precedes his normal retirement age.

A non-vested participant who terminates employment receives his accumulated contributions.



Summary of Plan Provisions

Table V-A

(continued)

5. Vesting

An employee becomes 100% vested upon the attainment of 10 years of credited service.

6. Pre-Retirement Death Benefit

If a vested, married participant dies prior to retirement, the participant's spouse receives a 10-year certain annuity commencing at the participant's normal or early retirement age and reduced for payment prior to the participant's normal retirement age at the rate of 3% per year, if applicable. Alternatively, the spouse may commence receipt of the 10-year certain annuity immediately, subject to an actuarial adjustment for earlier payment. The Trustees may elect to pay the pre-retirement death benefit as a single lump sum distribution if the value of the benefit is less than or equal to \$1,000.

If a vested, unmarried participant dies prior to retirement, the participant's beneficiary receives a 10-year certain annuity commencing immediately. If the participant was eligible for early retirement at the time of his death, the annuity is reduced for payment prior to the participant's normal retirement age at the rate of 3% per year, if applicable. Alternatively, the annuity is reduced actuarially for payment prior to the participant's normal retirement age. The Trustees may elect to pay the pre-retirement death benefit as a single lump sum distribution if the value of the benefit is less than or equal to \$1,000.

If a vested participant dies in the line of duty prior to retirement, the participant's beneficiary may elect to receive an immediate monthly life annuity equal to 50% of the deceased participant's plan compensation at the time of his death in lieu of the benefits described above.

If a non-vested participant dies prior to retirement, the participant's beneficiary receives the participant's accumulated contributions.

7. Form of Payment

Actuarially increased single life annuity (*optional*);

10-year certain and life annuity (*normal form of payment*);

Actuarially reduced 50% joint and contingent annuity (*optional*);

Actuarially reduced 66⅔% joint and contingent annuity (*optional*);

Actuarially reduced 75% joint and contingent annuity (*optional*);



Summary of Plan Provisions

Table V-A

(continued)

Actuarially reduced 100% joint and contingent annuity (*optional*); or

Actuarially equivalent single lump sum distribution (*automatic if the single sum value of the participant's benefit is less than or equal to \$1,000*)

(Note: All forms of payment guarantee at least the return of the participant's accumulated contributions. Furthermore, a participant may change his joint annuitant up to two times after retirement subject to an actuarially equivalent adjustment.)

8. Automatic Cost-of-Living Adjustment

Participants receive an automatic annual 2% cost-of-living adjustment beginning on the October 1 immediately following retirement. The cost-of-living adjustment is pro-rated for participants who have been retired for less than one year.

9. Average Monthly Earnings

Average monthly earnings during the highest five years of compensation out of the 10 years immediately preceding the determination date or career average earnings, if greater. Earnings include W-2 compensation, but exclude payments for accrued annual or sick leave and lump sum payments other than bonuses and exclude overtime in excess of 300 hours per plan year after the date that the first collective bargaining agreement is effective after July 1, 2011. Earnings cannot exceed the maximum amount allowed under Internal Revenue Code (IRC) section 401(a)(17).

10. Credited Service

The elapsed time from the participant's date of hire until his date of termination, retirement, or death.

11. Employee Contribution

Prior to October 1, 2019, employees were required to contribute 1.00% of basic salary. Employees hired on and after that date are required to contribute 6.00% of basic salary. All other employees are required to contribute 2.00% of basic salary for the 2019/20 plan year, 4.00% of basic salary for the 2020/21 plan year, and 6.00% of basic salary thereafter.

Employee contributions are accumulated without interest.



Summary of Plan Provisions

Table V-A

(continued)

12. City Contribution

The City is required to make periodic contributions at least on a quarterly basis as determined under Chapter 112, Florida Statutes.

13. Participant Requirement

All firefighters of the City of Safety Harbor automatically become participants in the plan on their date of hire; a new employee who is hired as a fire chief may irrevocably opt out of participation in the plan.

14. Actuarial Equivalence

Based on 6.75% interest per annum and the mortality table promulgated by the Internal Revenue Service (IRS) for purposes of determining minimum lump sum distributions pursuant to Internal Revenue Code (IRC) section 417(e)(3).

15. Plan Effective Date

The plan was originally effective on January 1, 1996.

16. Deferred Retirement Option Plan (DROP)

A participant who reaches his Normal Retirement Age is eligible to participate in the DROP for a period of up to 60 months. Interest is credited on the DROP accounts at the rate of 1.30% per annum.



Summary of Plan Amendments

Table V-B

No significant plan amendments were adopted since the completion of the previous valuation.

The following additional plan amendments were adopted during the past 10 years and were reflected in prior valuation reports:

- (1) Effective October 1, 2019, the employee contribution rate was increased from 1.00% of pensionable earnings to the amounts shown in item 11. of Table V-A and the normal retirement age was decreased from any age with 25 years of service to any age with 20 years of service.*
- (2) Effective March 5, 2018, a new employee who is hired as a fire chief may irrevocably opt out of the plan. (Resolution 2018-04)*
- (3) During the 2013/14 plan year, the employee contribution rate was increased from 1.00% of covered compensation to 13.87% of covered compensation and was then immediately reduced back to 1.00%. (Resolution 2014-03)*
- (4) During the 2013/14 plan year, a Deferred Retirement Option Plan (DROP) was added whereby any member who is otherwise eligible to retire with a normal retirement benefit may choose to continue his employment with the City for a period up to 60 months but have his retirement benefit deposited into a DROP account along with interest at the rate of 1.30% per annum. (Resolution 2014-03)*
- (5) During the 2013/14 plan year, a share plan was added whereby \$902,410 of accumulated excess Chapter 175 distributions served as an initial deposit and, going forward, Chapter 175 distributions in excess of \$171,110 per year will be deposited into the share plan. (Resolution 2014-03)*
- (6) During the 2013/14 plan year, payments for overtime in excess of 300 hours per plan year are excluded from plan compensation for service earned after the date that the first collective bargaining agreement is effective after July 1, 2011. (Resolution 2014-03)*

