

CITY OF SATELLITE BEACH
POLICE OFFICERS' AND FIREFIGHTERS'
RETIREMENT SYSTEM

ACTUARIAL VALUATION
AS OF OCTOBER 1, 2019

DETERMINES THE CONTRIBUTION
FOR THE 2020/21 FISCAL YEAR



	<u>Page</u>
Discussion	1
 <u>Funding Results</u>	
Table I-A Minimum Required Contribution	I-1
Table I-B Sensitivity Analysis	I-3
Table I-C Gain and Loss Analysis	I-4
Table I-D Present Value of Future Benefits	I-5
Table I-E Present Value of Accrued Benefits	I-6
Table I-F Present Value of Vested Benefits	I-7
Table I-G Entry Age Normal Accrued Liability	I-8
Table I-H Entry Age Normal Cost	I-9
Table I-I Unfunded Liability Bases	I-10
 <u>Accounting Results</u>	
GASB 67/68 Supplement as of September 30, 2019	
 <u>Assets</u>	
Table II-A Actuarial Value of Assets	II-1
Table II-B Market Value of Assets	II-2
Table II-C Investment Return	II-3
Table II-D Asset Reconciliation	II-4
Table II-E Historical Trust Fund Detail	II-5
Table II-F Other Reconciliations	II-6
Table II-G Historical Chapter 175/185 Contributions	II-7
 <u>Data</u>	
Table III-A Summary of Participant Data	III-1
Table III-B Data Reconciliation	III-2
Table III-C Active Participant Data	III-3
Table III-D Active Age-Service Distribution	III-4
Table III-E Active Age-Service-Salary Table	III-5
Table III-F Inactive Participant Data	III-6
Table III-G Projected Benefit Payments	III-7
 <u>Methods & Assumptions</u>	
Table IV-A Summary of Actuarial Methods and Assumptions	IV-1
Table IV-B Changes in Actuarial Methods and Assumptions	IV-3
 <u>Plan Provisions</u>	
Table V-A Summary of Plan Provisions	V-1
Table V-B Summary of Plan Amendments	V-5



January 26, 2020

Introduction

This report presents the results of the October 1, 2019 actuarial valuation of the City of Satellite Beach Police Officers' and Firefighters' Retirement System. 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, 2019 and to determine the minimum required contribution under Chapter 112, Florida Statutes, for the 2020/21 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 minimum required contribution rate.

Minimum Required Contribution

Table I-A shows the development of the minimum required contribution for the 2020/21 plan year. The minimum required contribution rate is 37.59% of covered payroll, which represents a decrease of 2.58% of payroll from the prior valuation.

Table I-C provides a breakdown of the sources of change in the contribution rate. Significantly, the rate decreased by 0.42% of payroll due to investment gains, decreased by another 3.74% of payroll due to demographic experience, and increased by 1.58% of payroll due to the assumption change that is described below. The market value of assets only earned 5.32% during the 2018/19 plan year. However, the actuarial value of assets is based on a four-year average of



the market value returns. On this basis, the actuarial value of assets earned 7.97% during the 2018/19 plan year, whereas a 7.30% 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 amortization payment towards the unfunded liability, where the amortization period is no longer than 30 years and where both amounts are adjusted as necessary for administrative expenses and to reflect interest on any delayed payment of the contribution beyond the valuation date. On this basis, the City's 2020/21 minimum required contribution will be equal to 37.59% multiplied by the total pensionable earnings for the 2020/21 fiscal 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 2020/21 plan year. With respect to the 2018/19 plan year, the allowable portion of the Chapter 175/185 contribution was the entire distribution. With respect to the 2019/20 and 2020/21 plan years, the allowable portion of the Chapter 175/185 contribution will be 50% of the distribution. Future years' use of the Chapter 175/185 contribution after the 2020/21 plan year is subject to collective bargaining.

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 \$29,159,354. As illustrated in Table I-A, current assets are sufficient to cover \$20,549,416 of this amount, the employer's 2019/20 expected contribution will cover \$989,645 of this amount, the employer's 2020/21 expected contribution will cover \$969,992 of this amount, and future employee contributions are expected to cover \$1,313,290 of this amount, leaving \$5,337,011 to be covered by future employer funding beyond the 2020/21 fiscal year. Again, demographic and investment experience that differs from that assumed will either increase or decrease the future employer funding requirement.

Amortization of the Unfunded Liability

This plan uses the entry age normal cost method to develop an unfunded liability each year. The unfunded liability is then amortized or "paid off" over a period of time. The period over which the unfunded liability is amortized is often referred to as the "funding period" of the plan. Although under Chapter 112 the maximum allowable funding period is 30 years, the unfunded liability should be paid off within a period that does not exceed the expected future working life of the active employees who are covered by the plan. We recommend a 10-year amortization period for amortization components that arise after October 1, 2008. However, it is our understanding that the Board of Trustees has adopted a 30-year amortization period for this purpose and this report reflects the Board's decision. Table I-I shows the various components of the unfunded liability and the respective funding period for each component.

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 individual entry age normal funding method for this plan with level-dollar payments towards the unfunded accrued liability, which is expected to result in a contribution rate that decreases over time as a percentage of payroll. A brief description of the actuarial funding method is provided in Table IV-A.



Contents of the Report

Tables I-D through I-H 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. Specifically, Table II-A shows the development of the actuarial value of assets, which is based on the four-year average return on the market value of assets in order to provide a more stable and predictable contribution rate for the employer. 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, 2019, as well as a summary of the changes that have occurred since the previous valuation report was prepared.

Assumption Change

The interest (or discount) rate has been decreased from 7.30% per annum to 7.20% per annum to reflect lower anticipated investment earnings in the future as adopted by the pension board. This change increased the minimum required contribution for the 2020/21 plan year by 1.58% of payroll.

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, except as noted in Table IV-A, item 4. 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
Consulting Actuary
Southern Actuarial Services Company, Inc.

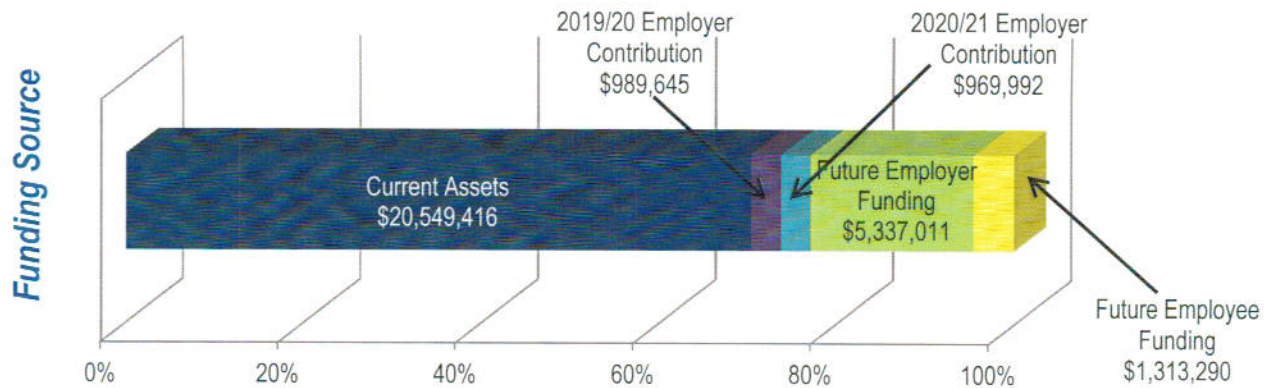
Enrolled Actuary No. 17-04927

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 2020/21 Plan Year

Entry Age Normal Cost for the 2019/20 Plan Year	\$702,998
Unfunded Liability Amortization Payment for the 2019/20 Plan Year	\$398,074
Expense Allowance for the 2019/20 Plan Year	\$30,796
Expected Employee Contribution for the 2019/20 Plan Year	(\$201,684)
	\$930,184
Adjustment to Reflect End-of-Quarter Employer Contributions	\$41,128
Expected Employer Contribution for the 2019/20 Plan Year	(\$989,645)
Remaining Contribution Due/(Credit) for the 2019/20 Plan Year	(\$18,333)
	x 0.072
One Year's Interest Charge/(Credit) on the Remaining Contribution	(\$1,320)
Preliminary Employer Contribution for the 2020/21 Plan Year	\$969,992
Expected Payroll for the 2020/21 Plan Year	÷ \$2,580,666

Minimum Required Contribution Rate **37.59%**

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

Additional Disclosures

Present Value of Future Compensation	\$16,416,130
Present Value of Future Employer Contributions	\$7,296,648
Present Value of Future Employee Contributions	\$1,313,290



Minimum Required Contribution

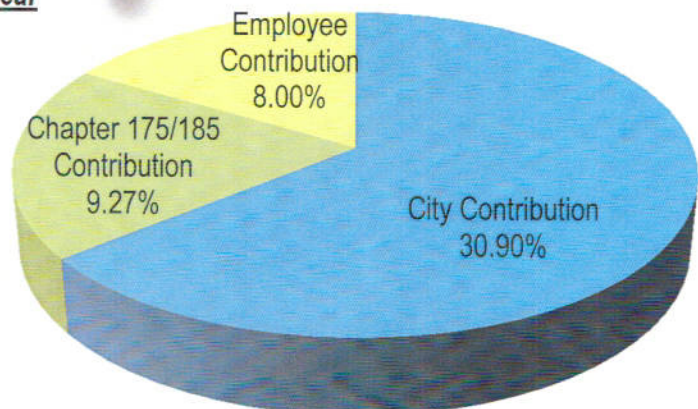
Table I-A
(continued)

The minimum required contribution rate of 37.59% includes both the City contribution and the allowable Chapter 175/185 contribution. In addition, employees are required to contribute 8.00% of pensionable earnings. The actual City contribution rate is expected to be approximately 28.74% based on the allowable Chapter 175/185 contribution for the previous year. The chart below shows the expected contribution rate by source for the 2020/21 plan year based on the expected payroll. A comparative chart shows the contribution rate by source for the previous plan year.

For the 2020/21 Plan Year

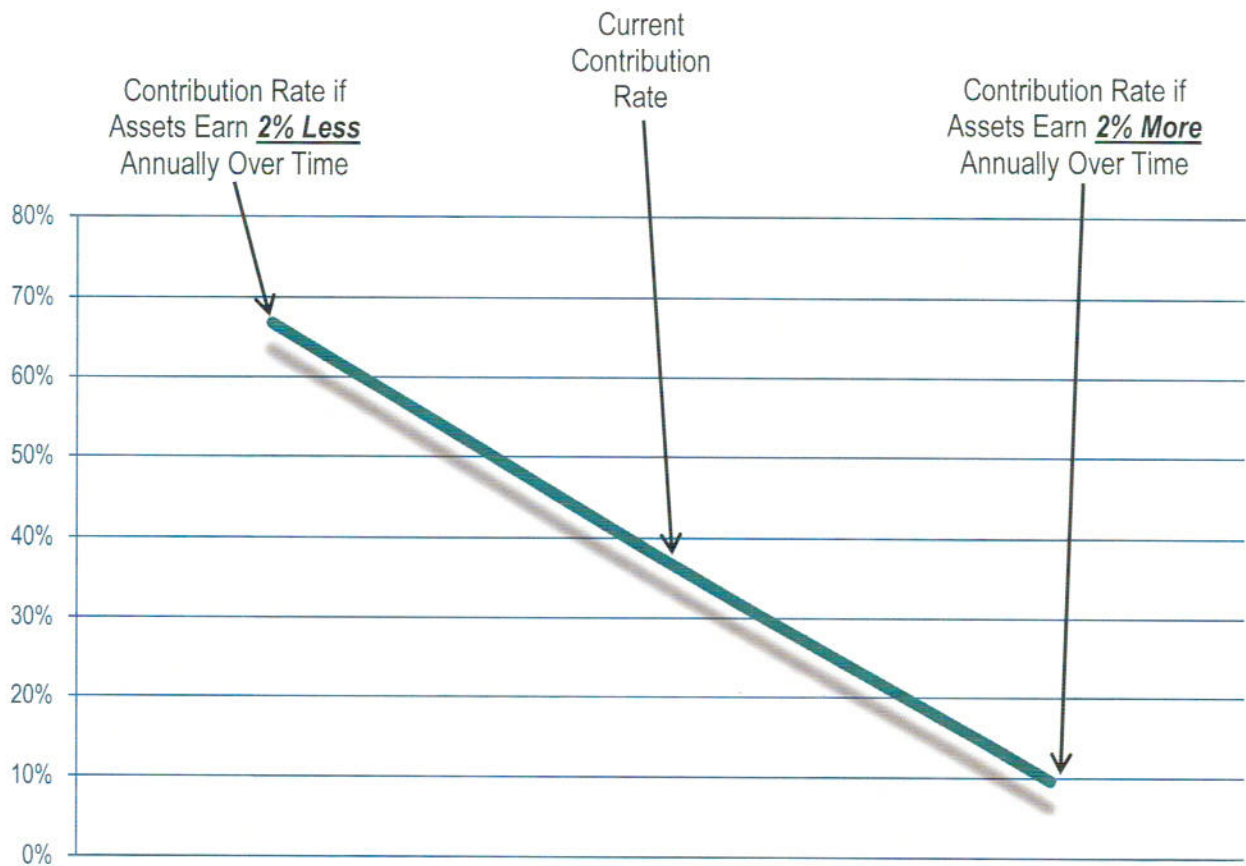


For the 2019/20 Plan Year



Sensitivity Analysis

Table I-B



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



Gain and Loss Analysis

Table I-C

Source of Change in the Contribution Rate

Previous minimum required contribution rate	40.17%
Increase (decrease) due to investment gains and losses	-0.42%
Increase (decrease) due to demographic experience	-3.74%
Increase (decrease) due to plan amendments	0.00%
Increase (decrease) due to actuarial assumption changes	1.58%
Increase (decrease) due to actuarial method changes	0.00%
Current minimum required contribution rate	<u>37.59%</u>

Source of Change in the Unfunded Liability

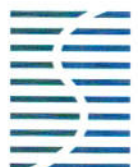
Previous unfunded liability	\$4,662,152
Increase due to employer normal cost for the prior year	\$495,660
Increase due to interest on normal cost and unfunded liability	\$376,520
Decrease due to employer contributions	(\$903,329)
Decrease due to interest on employer contributions	(\$58,256)
Expected unfunded liability	<u>\$4,572,747</u>
Increase (decrease) due to plan experience	(\$639,464)
Increase (decrease) due to plan amendments	\$0
Increase (decrease) due to actuarial assumption changes	\$272,670
Increase (decrease) due to actuarial method changes	\$0
Current unfunded liability	<u>\$4,205,953</u>



Present Value of Future Benefits

Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$14,736,926	\$14,736,926	\$14,983,719
Termination benefits	\$470,032	\$470,032	\$482,526
Disability benefits	\$1,118,754	\$1,118,754	\$1,138,176
Death benefits	\$45,699	\$45,699	\$46,351
Refund of employee contributions	\$16,108	\$16,108	\$16,133
Sub-total	\$16,387,519	\$16,387,519	\$16,666,905
<u>Deferred Vested Participants</u>			
Retirement benefits	\$534,826	\$534,826	\$544,659
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$534,826	\$534,826	\$544,659
<u>Due a Refund of Contributions</u>	\$13,719	\$13,719	\$13,719
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$5,985,005	\$5,985,005	\$6,037,251
Disability retirements	\$2,213,254	\$2,213,254	\$2,230,893
Beneficiaries receiving	\$412,354	\$412,354	\$413,843
DROP participants	\$3,014,944	\$3,014,944	\$3,046,882
Sub-total	\$11,625,557	\$11,625,557	\$11,728,869
<u>Grand Total</u>	<u>\$28,561,621</u>	<u>\$28,561,621</u>	<u>\$28,954,152</u>
Present Value of Future Payroll	\$16,311,642	\$16,311,642	\$16,416,130
Present Value of Future Employee Contribs.	\$1,304,934	\$1,304,934	\$1,313,290
Present Value of Future Employer Contribs.	\$6,911,167	\$6,911,167	\$7,296,648



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	\$9,010,139	\$9,010,139	\$9,129,026
Termination benefits	\$216,614	\$216,614	\$221,337
Disability benefits	\$774,902	\$774,902	\$786,483
Death benefits	\$26,446	\$26,446	\$26,700
Refund of employee contributions	\$8,066	\$8,066	\$8,071
Sub-total	\$10,036,167	\$10,036,167	\$10,171,617
<u>Deferred Vested Participants</u>			
Retirement benefits	\$534,826	\$534,826	\$544,659
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$534,826	\$534,826	\$544,659
<u>Due a Refund of Contributions</u>	\$13,719	\$13,719	\$13,719
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$5,985,005	\$5,985,005	\$6,037,251
Disability retirements	\$2,213,254	\$2,213,254	\$2,230,893
Beneficiaries receiving	\$412,354	\$412,354	\$413,843
DROP participants	\$3,014,944	\$3,014,944	\$3,046,882
Sub-total	\$11,625,557	\$11,625,557	\$11,728,869
<u>Grand Total</u>	<u>\$22,210,269</u>	<u>\$22,210,269</u>	<u>\$22,458,864</u>
<u>Funded Percentage</u>	88.11%	88.11%	87.14%

(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	\$8,991,486	\$8,991,486	\$9,110,178
Termination benefits	\$192,867	\$192,867	\$196,807
Disability benefits	\$774,902	\$774,902	\$786,483
Death benefits	\$25,884	\$25,884	\$26,125
Refund of employee contributions	\$25,655	\$25,655	\$25,766
Sub-total	\$10,010,794	\$10,010,794	\$10,145,359
<u>Deferred Vested Participants</u>			
Retirement benefits	\$534,826	\$534,826	\$544,659
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$534,826	\$534,826	\$544,659
<u>Due a Refund of Contributions</u>	\$13,719	\$13,719	\$13,719
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$5,985,005	\$5,985,005	\$6,037,251
Disability retirements	\$2,213,254	\$2,213,254	\$2,230,893
Beneficiaries receiving	\$412,354	\$412,354	\$413,843
DROP participants	\$3,014,944	\$3,014,944	\$3,046,882
Sub-total	\$11,625,557	\$11,625,557	\$11,728,869
<u>Grand Total</u>	<u>\$22,184,896</u>	<u>\$22,184,896</u>	<u>\$22,432,606</u>



Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$11,257,956	\$11,257,956	\$11,401,660
Termination benefits	\$277,309	\$277,309	\$283,218
Disability benefits	\$733,245	\$733,245	\$742,848
Death benefits	\$32,160	\$32,160	\$32,465
Refund of employee contributions	\$7,927	\$7,927	\$7,931
Sub-total	\$12,308,597	\$12,308,597	\$12,468,122
<u>Deferred Vested Participants</u>			
Retirement benefits	\$534,826	\$534,826	\$544,659
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$534,826	\$534,826	\$544,659
<u>Due a Refund of Contributions</u>	\$13,719	\$13,719	\$13,719
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$5,985,005	\$5,985,005	\$6,037,251
Disability retirements	\$2,213,254	\$2,213,254	\$2,230,893
Beneficiaries receiving	\$412,354	\$412,354	\$413,843
DROP participants	\$3,014,944	\$3,014,944	\$3,046,882
Sub-total	\$11,625,557	\$11,625,557	\$11,728,869
<u>Grand Total</u>	<u>\$24,482,699</u>	<u>\$24,482,699</u>	<u>\$24,755,369</u>
less Actuarial Value of Assets	(\$20,549,416)	(\$20,549,416)	(\$20,549,416)
<u>Unfunded Accrued Liability</u>	<u>\$3,933,283</u>	<u>\$3,933,283</u>	<u>\$4,205,953</u>



Entry Age Normal Cost

Table I-H

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
<u>Actively Employed Participants</u>			
Retirement benefits	\$579,090	\$579,090	\$592,314
Termination benefits	\$31,064	\$31,064	\$31,991
Disability benefits	\$71,151	\$71,151	\$72,490
Death benefits	\$1,915	\$1,915	\$1,951
Refund of employee contributions	\$4,241	\$4,241	\$4,252
Sub-total	\$687,461	\$687,461	\$702,998
<u>Deferred Vested Participants</u>			
Retirement benefits	\$0	\$0	\$0
Termination benefits	\$0	\$0	\$0
Disability benefits	\$0	\$0	\$0
Death benefits	\$0	\$0	\$0
Refund of employee contributions	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<u>Due a Refund of Contributions</u>	\$0	\$0	\$0
<u>Deferred Beneficiaries</u>	\$0	\$0	\$0
<u>Retired Participants</u>			
Service retirements	\$0	\$0	\$0
Disability retirements	\$0	\$0	\$0
Beneficiaries receiving	\$0	\$0	\$0
DROP participants	\$0	\$0	\$0
Sub-total	\$0	\$0	\$0
<u>Grand Total</u>	<u>\$687,461</u>	<u>\$687,461</u>	<u>\$702,998</u>



Unfunded Liability Bases

Table I-I

<u>Description</u>	<u>Original Amount</u>	<u>Outstanding Balance</u>	<u>Amortization Payment</u>	<u>Years Rem.</u>
	Total	\$4,205,953	\$398,074	
		↓	↓	
Initial Unfunded Liability	\$2,458,670	\$2,087,434	\$216,504	15
11/2004 Amendment	\$402,499	\$379,456	\$37,969	16
2004/05 Experience Loss	\$224,223	\$211,391	\$21,152	16
10/1/2005 Assumption Change	(\$497,315)	(\$468,844)	(\$46,913)	16
2005/06 Experience Gain	(\$200,230)	(\$189,319)	(\$18,340)	17
2006/07 Experience Gain	(\$208,490)	(\$206,066)	(\$19,386)	18
2007/08 Experience Loss	\$393,490	\$386,209	\$35,382	19
2008/09 Experience Loss	\$335,935	\$288,624	\$25,811	20
10/1/2009 Assumption Change	\$806,677	\$693,068	\$61,979	20
2009/10 Experience Loss	\$310,935	\$282,466	\$24,710	21
2010/11 Experience Loss	\$54,064	\$49,372	\$4,233	22
7/1/2011 Amendment	\$385,205	\$351,769	\$30,160	22
2011/12 Experience Gain	(\$128,845)	(\$117,041)	(\$9,852)	23
2012/13 Experience Gain	(\$534,105)	(\$492,886)	(\$40,794)	24
2013/14 Experience Gain	\$470,403	(\$444,628)	(\$36,235)	25
2014/15 Experience Gain	(\$244,295)	(\$235,412)	(\$18,914)	26
10/1/2015 Assumption Change	\$391,339	\$377,110	\$30,298	26
2015/16 Experience Loss	\$521,014	\$509,889	\$40,433	27
10/1/2016 Assumption Change	\$1,070,143	\$1,047,291	\$83,048	27
2016/17 Experience Gain	(\$147,164)	(\$145,670)	(\$11,413)	28
10/1/2017 Assumption Change	\$249,173	\$246,642	\$19,324	28
2017/18 Experience Gain	(\$300,855)	(\$299,350)	(\$23,194)	29
10/1/2018 Assumption Change	\$262,555	\$261,242	\$20,241	29
2018/19 Experience Gain	(\$639,464)	(\$639,464)	(\$49,040)	30
10/1/2019 Assumption Change	\$272,670	\$272,670	\$20,911	30



Actuarial Value of Assets

Table II-A

Market Value Rate of Return

For the 2015/16 plan year	6.21%
For the 2016/17 plan year	13.50%
For the 2017/18 plan year	7.02%
For the 2018/19 plan year	5.32%

Average return for the preceding four years
7.97%

Actuarial Value of Assets as of October 1, 2018	\$19,062,355
Plus contributions for the 2018/19 plan year	\$1,098,799
Minus benefit payments and administrative expenses for the 2018/19 plan year	(\$917,926)
Minus DROP account credits	(\$208,084)
Minus advance employer contribution	(\$2,928)
Minus excess Chapter 175/185 contribution	\$0

Adjustment for interest at the average rate shown above,
but restricted to an amount that keeps the actuarial value
of assets within an 80%-120% corridor of the market value

\$1,517,200

Actuarial Value of Assets as of October 1, 2019 **\$20,549,416**

Historical Actuarial Value of Assets

October 1, 2010	\$9,659,594
October 1, 2011	\$10,103,821
October 1, 2012	\$10,993,450
October 1, 2013	\$12,361,582
October 1, 2014	\$13,724,189
October 1, 2015	\$15,163,385
October 1, 2016	\$16,318,310
October 1, 2017	\$17,650,201
October 1, 2018	\$19,062,355
October 1, 2019	\$20,549,416

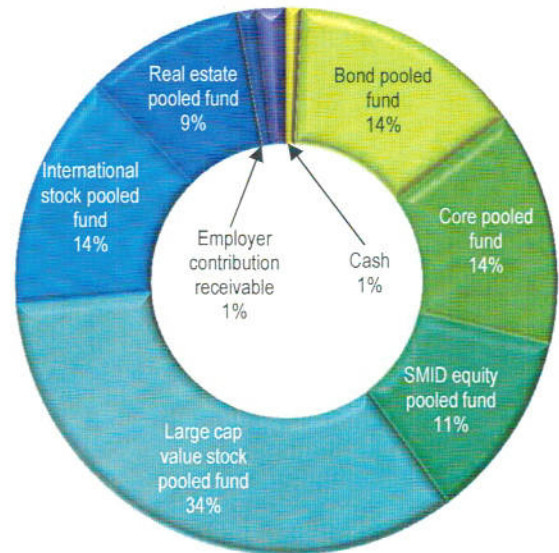


Market Value of Assets

Table II-B

As of October 1, 2019

Market Value of Assets	<u>\$20,034,323</u>
Cash	\$181,581
Bond pooled fund	\$2,905,305
Core pooled fund	\$2,885,129
SMID equity pooled fund	\$2,320,209
Large cap value stock pooled fund	\$7,000,978
International stock pooled fund	\$2,925,481
Real estate pooled fund	\$1,957,046
Employer contribution receivable	\$229,596
Share plan assets	(\$371,002)

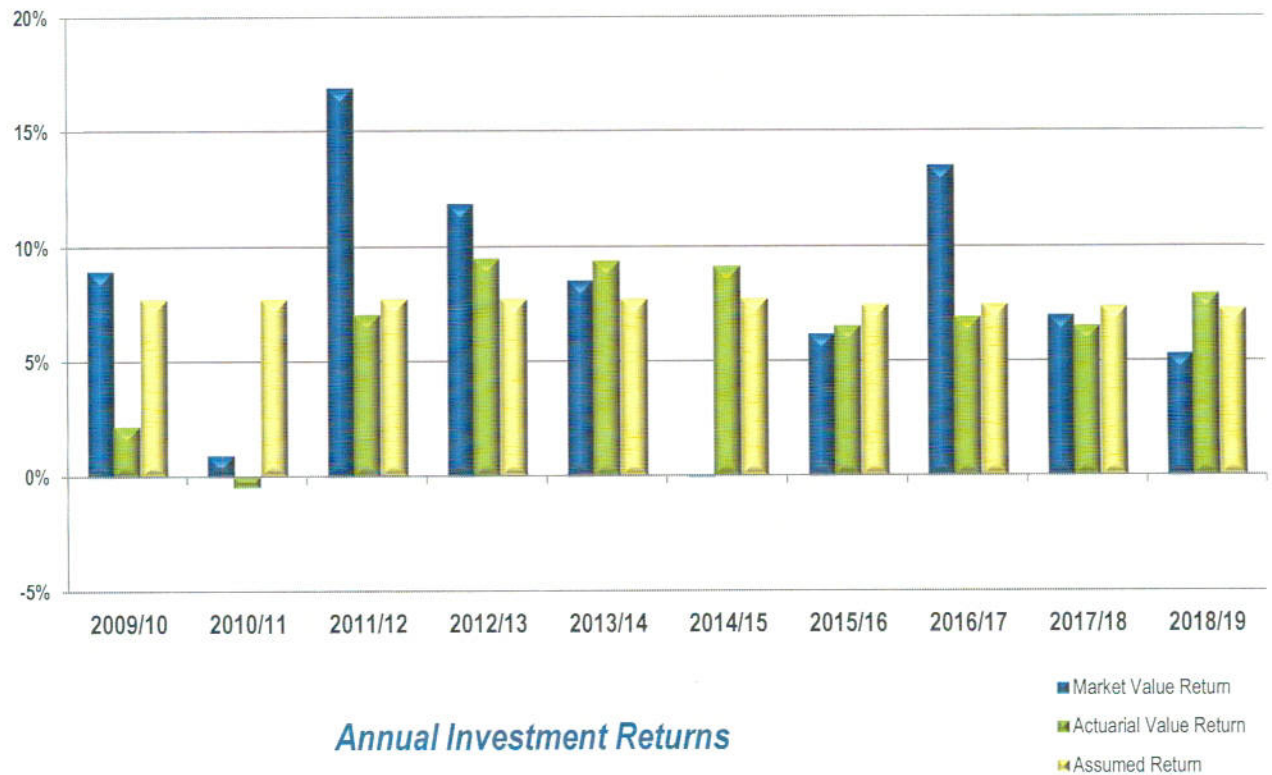
**Historical Market Value of Assets**

October 1, 2010	\$8,928,751
October 1, 2011	\$9,107,800
October 1, 2012	\$11,154,771
October 1, 2013	\$12,666,934
October 1, 2014	\$13,423,754
October 1, 2015	\$13,640,167
October 1, 2016	\$14,703,110
October 1, 2017	\$17,272,112
October 1, 2018	\$18,845,669
October 1, 2019	\$20,034,323



Investment Return

Table II-C

*Annual Investment Returns*

Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2009/10	8.99%	2.17%	7.75%
2010/11	0.92%	-0.44%	7.75%
2011/12	16.89%	7.08%	7.75%
2012/13	11.88%	9.50%	7.75%
2013/14	8.57%	9.41%	7.75%
2014/15	-0.04%	9.15%	7.75%
2015/16	6.21%	6.56%	7.50%
2016/17	13.50%	6.95%	7.50%
2017/18	7.02%	6.56%	7.40%
2018/19	5.32%	7.97%	7.30%
10yr. Avg.	7.81%	6.45%	7.62%



Asset Reconciliation

Table II-D

	<u>Market Value</u>	<u>Actuarial Value</u>
As of October 1, 2018	\$18,845,669	\$19,062,355
<i>Increases Due To:</i>		
Employer Contributions	\$677,791	\$677,791
Chapter 175/185 Contributions	\$228,466	\$228,466
Employee Contributions	\$187,949	\$187,949
Service Purchase Contributions	\$4,593	\$4,593
Total Contributions	<u>\$1,098,799</u>	<u>\$1,098,799</u>
Interest and Dividends	\$0	
Realized Gains (Losses)	\$0	
Unrealized Gains (Losses)	\$1,007,781	
Total Investment Income	<u>\$1,007,781</u>	\$1,517,200
Other Income	\$0	
Total Income	<u>\$2,106,580</u>	<u>\$2,615,999</u>
<i>Decreases Due To:</i>		
Monthly Benefit Payments	(\$811,555)	(\$811,555)
Refund of Employee Contributions	(\$53,304)	(\$53,304)
DROP Benefit Payments / Credits		(\$208,084)
Total Benefit Payments	<u>(\$864,859)</u>	<u>(\$1,072,943)</u>
Investment Expenses	\$0	
Administrative Expenses	(\$53,067)	(\$53,067)
Advance Employer Contribution		(\$2,928)
Excess Chapter 175/185 Contribution		\$0
Total Expenses	<u>(\$917,926)</u>	<u>(\$1,128,938)</u>
As of October 1, 2019	<u>\$20,034,323</u>	<u>\$20,549,416</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>Purchase</u>	<u>Dividends</u>	<u>Gains /</u>	<u>Gains /</u>	<u>Income</u>
				<u>Contribs.</u>		<u>Losses</u>	<u>Losses</u>	
2009/10	\$424,435	\$166,029	\$167,321	\$4,593	\$0	\$0	\$740,771	\$0
2010/11	\$654,482	\$163,393	\$160,499	\$4,593	\$0	\$0	\$82,578	\$353
2011/12	\$707,925	\$173,205	\$157,080	\$4,593	\$0	\$0	\$1,577,562	\$0
2012/13	\$560,152	\$219,955	\$156,539	\$4,593	\$0	\$0	\$1,335,905	\$0
2013/14	\$312,623	\$226,179	\$165,766	\$4,593	\$0	\$0	\$1,071,547	\$0
2014/15	\$511,600	\$243,714	\$169,730	\$4,593	\$0	\$0	-\$5,385	\$0
2015/16	\$486,422	\$246,530	\$184,625	\$4,593	\$0	\$0	\$1,141,505	-\$288,492
2016/17	\$870,225	\$215,523	\$195,465	\$4,593	\$0	\$0	\$2,022,209	\$0
2017/18	\$718,269	\$220,026	\$193,860	\$4,593	\$0	\$0	\$1,225,382	\$0
2018/19	\$677,791	\$228,466	\$187,949	\$4,593	\$0	\$0	\$1,007,781	\$0

Expenses

Plan	Monthly				<u>Other Actuarial Adjustments</u>		
<u>Year</u>	<u>Benefit</u>	<u>Contrib.</u>	<u>Admin.</u>	<u>Invest.</u>	<u>DROP</u>	<u>Advance</u>	<u>Excess</u>
	<u>Payments</u>	<u>Refunds</u>	<u>Expenses</u>	<u>Expenses</u>	<u>Credits</u>	<u>Employer</u>	<u>Chapter</u>
2009/10	\$429,220	\$29,993	\$31,483	\$0	-\$175,597	\$6,304	\$0
2010/11	\$492,323	\$1,875	\$29,946	\$0	-\$194,612	\$165,647	\$0
2011/12	\$540,329	\$0	\$33,065	\$0	\$127,131	\$171,252	\$2,431
2012/13	\$572,045	\$15,203	\$33,749	\$0	-\$48,144	\$9,673	\$49,181
2013/14	\$952,875	\$34,912	\$36,101	\$0	-\$271,135	-\$289,696	\$55,405
2014/15	\$670,595	\$0	\$37,244	\$0	\$36,221	-\$63,180	\$72,940
2015/16	\$671,112	\$4,247	\$36,881	\$0	\$55,431	\$0	-\$288,492
2016/17	\$699,053	\$0	\$39,960	\$0	\$66,461	\$288,845	\$0
2017/18	\$730,975	\$15,563	\$42,035	\$0	\$97,772	\$4,853	\$0
2018/19	\$811,555	\$53,304	\$53,067	\$0	\$208,084	\$2,928	\$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

DROP Account Reconciliation

DROP Balance as of October 1, 2018	\$255,885
DROP Benefit Credits	\$184,932
DROP Investment Credits	\$23,152
DROP Benefits Paid Out	\$0
Net DROP Credit	\$208,084
DROP Balance as of October 1, 2019	<u>\$463,969</u>

Advance Employer Contribution

Advance Employer Contribution as of October 1, 2018	\$293,698
Additional Employer Contribution	\$906,257
Minimum Required Contribution	(\$903,329)
Net Increase in Advance Employer Contribution	\$2,928
Advance Employer Contribution as of October 1, 2019	<u>\$296,626</u>

Excess Chapter 175/185 Contribution

Excess Chapter 175/185 Contribution as of October 1, 2018	\$0
Additional Chapter 175/185 Contribution	\$228,466
Allowable Chapter 175/185 Contribution	(\$228,466)
Transfer to Share Plan	\$0
Net Increase in Excess Chapter 175/185 Contribution	\$0
Excess Chapter 175/185 Contribution as of October 1, 2019	<u>\$0</u>



Historical Chapter 175/185 Contributions

Table II-G

Total Accumulated Excess Chapter 175/185 Contribution \$0

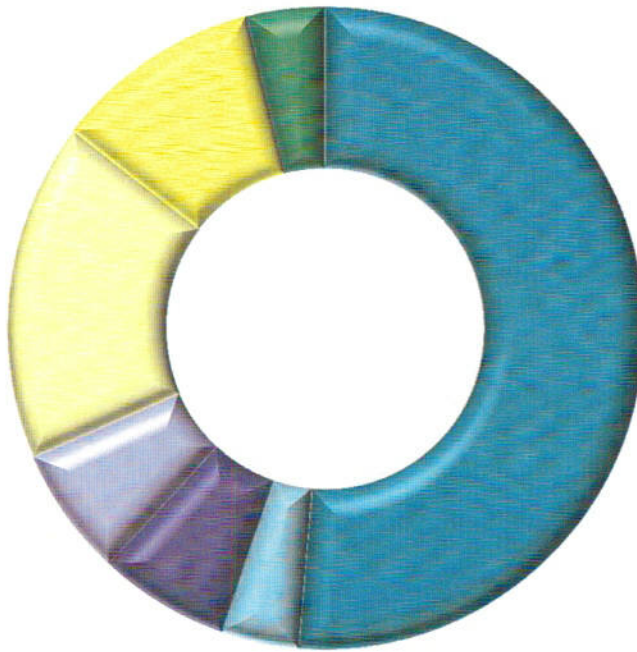
	Chapter 175 Regular Distribution	Chapter 175 Supplemental Distribution	Chapter 185 Distribution	Allowable Amount
1998 Distribution	\$28,094	\$0	\$60,060	(\$97,181)
1999 Distribution	\$33,941	\$15,339	\$56,457	(\$93,578)
2000 Distribution	\$31,740	\$19,366	\$58,257	(\$95,378)
2001 Distribution	\$37,929	\$16,678	\$67,811	(\$98,013)
2002 Distribution	\$41,006	\$21,026	\$71,249	(\$98,013)
2003 Distribution	\$43,820	\$22,849	\$82,900	(\$98,013)
2004 Distribution	\$49,580	\$26,317	\$84,223	(\$104,387)
2005 Distribution	\$57,269	\$28,635	\$85,357	(\$354,853)
2006 Distribution	\$67,822	\$31,885	\$85,124	(\$170,774)
2007 Distribution	\$83,675	\$57,762	\$84,791	(\$170,774)
2008 Distribution	\$68,416	\$65,678	\$75,217	(\$170,774)
2009 Distribution	\$68,791	\$21,629	\$75,609	(\$166,029)
2010 Distribution	\$63,479	\$22,142	\$77,772	(\$163,393)
2011 Distribution	\$65,192	\$27,640	\$80,373	(\$170,774)
2012 Distribution	\$101,389	\$35,399	\$83,167	(\$170,774)
2013 Distribution	\$114,037	\$22,671	\$89,471	(\$170,774)
2014 Distribution	\$113,359	\$35,056	\$95,299	(\$170,774)
2015 Distribution	\$123,692	\$24,066	\$98,772	(\$246,530)
2016 Distribution	\$108,870	\$13,246	\$93,407	(\$215,523)
2017 Distribution	\$119,601	\$0	\$100,425	(\$220,026)
2018 Distribution	\$122,772	\$609	\$105,085	(\$228,466)
Transfer to Share Plan				(\$288,492)



Summary of Participant Data

Table III-A

As of October 1, 2019

Actively Employed Participants

Active Participants	39
DROP Participants	3

Inactive Participants

Deferred Vested Participants	5
Due a Refund of Contributions	5
Deferred Beneficiaries	0

Participants Receiving a Benefit

Service Retirements	13
Disability Retirements	8
Beneficiaries Receiving	3

Total Participants 76Number of Participants Included in Prior Valuations

	<i>Active</i>	<i>DROP</i>	<i>Inactive</i>	<i>Retired</i>	<i>Total</i>
October 1, 2010	36	3	5	17	61
October 1, 2011	37	2	4	17	60
October 1, 2012	36	2	3	19	60
October 1, 2013	34	1	6	20	61
October 1, 2014	34	0	7	21	62
October 1, 2015	36	1	8	22	67
October 1, 2016	37	1	9	22	69
October 1, 2017	36	1	10	23	70
October 1, 2018	36	2	10	24	72
October 1, 2019	39	3	10	24	76



Data Reconciliation

Table III-B

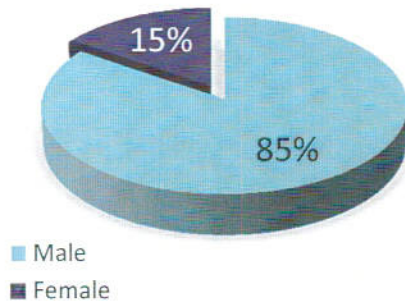
	<u>Active</u>	<u>DROP</u>	<u>Deferred Vested</u>	<u>Due a Refund</u>	<u>Def. Benef.</u>	<u>Service Retiree</u>	<u>Disabled Retiree</u>	<u>Benef. Rec'v.</u>	<u>Total</u>
<u>October 1, 2018</u>	36	2	7	3	0	13	9	2	72
<u>Change in Status</u>									
Re-employed									
Terminated	(2)			2					
Retired									
<u>Participation Ended</u>									
Transferred Out	(1)	1							(2)
Cashed Out			(2)						(1)
Died							(1)		
<u>Participation Began</u>									
Newly Hired	6								6
Transferred In									
New Beneficiary								1	1
<u>Other Adjustment</u>									
<u>October 1, 2019</u>	39	3	5	5	0	13	8	3	76



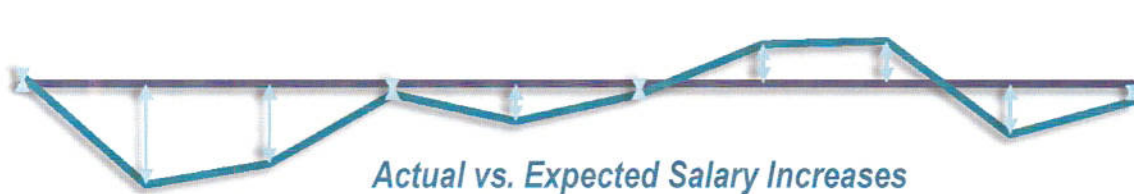
Active Participant Data

Table III-C

As of October 1, 2019

Gender Mix

Average Age	40.5 years
Average Service	10.2 years
Total Annualized Compensation for the Prior Year	\$2,428,810
Total Expected Compensation for the Current Year	\$2,463,643
Average Increase in Compensation for the Prior Year	3.48%
Expected Increase in Compensation for the Current Year	4.75%
Accumulated Contributions for Active Employees	\$2,743,747

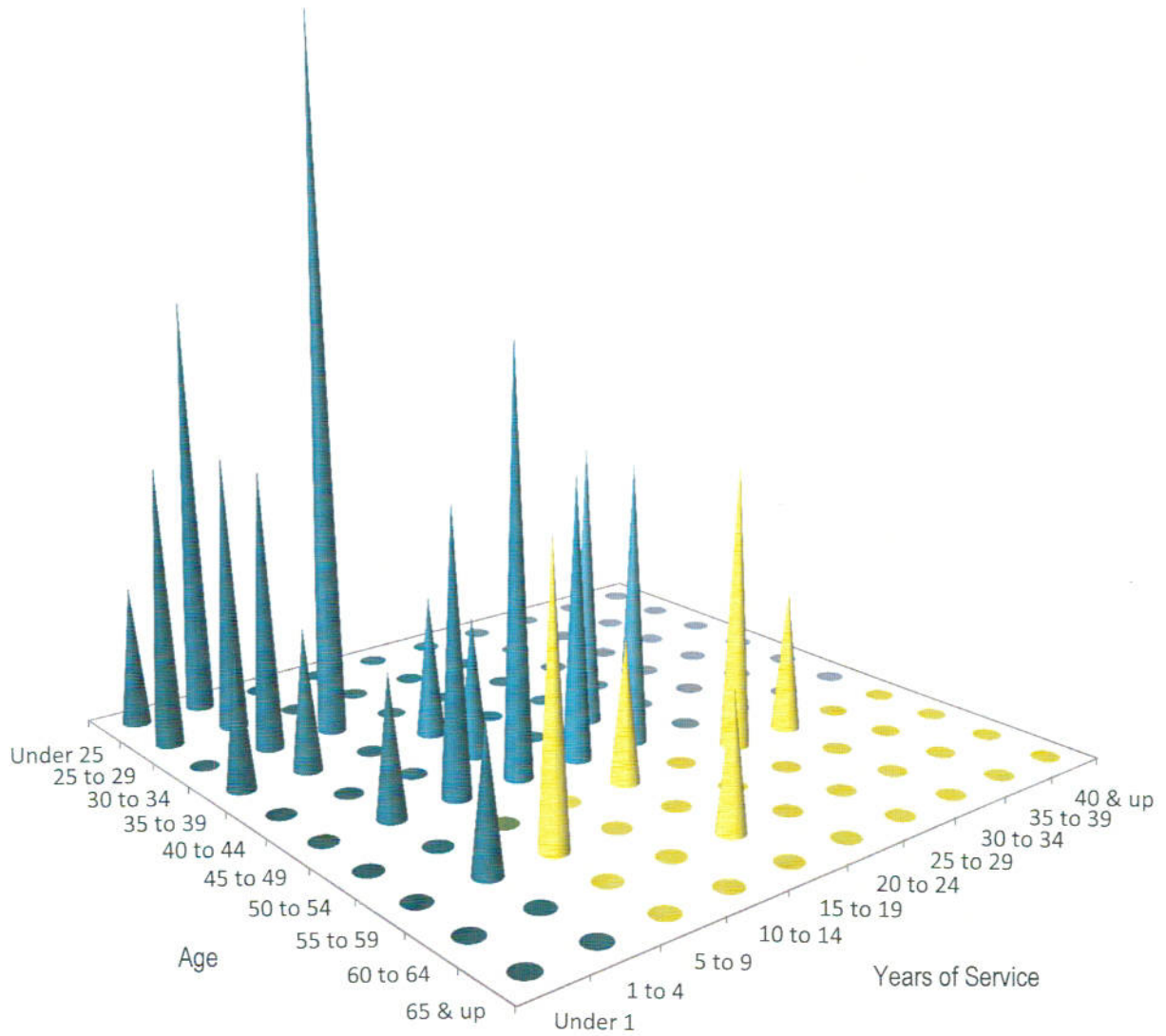
**Active Participant Statistics From Prior Valuations**

	Average Age	Average Service	Average Salary	Average Expected Salary Increase	Average Actual Salary Increase
October 1, 2010	37.9	7.8	\$55,906	4.75%	5.32%
October 1, 2011	39.2	8.7	\$54,458	4.75%	-2.72%
October 1, 2012	39.6	9.8	\$54,107	4.75%	-1.15%
October 1, 2013	41.0	10.8	\$57,116	4.75%	3.97%
October 1, 2014	41.2	11.5	\$58,428	4.75%	1.97%
October 1, 2015	40.1	11.0	\$57,527	4.75%	3.98%
October 1, 2016	41.1	11.6	\$62,975	4.75%	7.66%
October 1, 2017	41.3	11.9	\$66,181	4.75%	7.89%
October 1, 2018	41.1	10.9	\$62,799	4.75%	1.03%
October 1, 2019	40.5	10.2	\$62,277	4.75%	3.48%

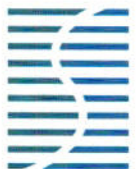


Active Age-Service Distribution

Table III-D



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



Active Age-Service-Salary Table

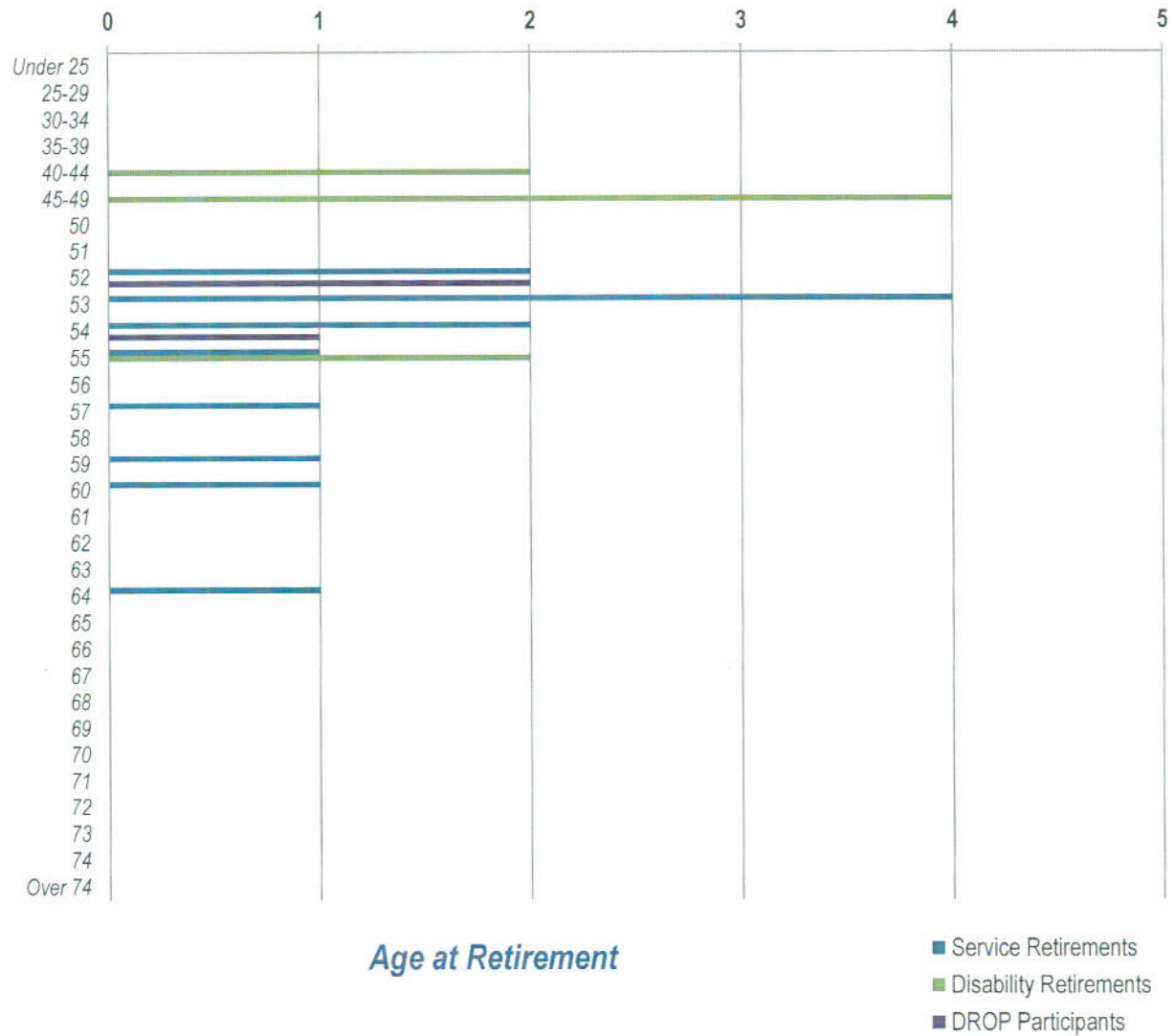
Table III-E

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	1	3	0	0	0	0	0	0	0	0	4
Avg. Pay	55,724	46,799	0	0	0	0	0	0	0	0	49,030
25 to 29	2	2	0	0	0	0	0	0	0	0	4
Avg. Pay	55,134	50,969	0	0	0	0	0	0	0	0	53,051
30 to 34	0	2	5	0	0	0	0	0	0	0	7
Avg. Pay	0	47,367	53,741	0	0	0	0	0	0	0	51,920
35 to 39	1	1	0	1	0	0	0	0	0	0	3
Avg. Pay	52,142	45,110	0	60,335	0	0	0	0	0	0	52,529
40 to 44	0	0	0	1	0	2	0	0	0	0	3
Avg. Pay	0	0	0	67,947	0	89,761	0	0	0	0	82,489
45 to 49	0	1	2	3	2	2	0	0	0	0	10
Avg. Pay	0	44,832	49,319	60,770	63,649	91,662	0	0	0	0	63,640
50 to 54	0	0	0	0	1	0	2	1	0	0	4
Avg. Pay	0	0	0	0	84,365	0	103,609	94,129	0	0	96,428
55 to 59	0	1	2	0	0	0	0	0	0	0	3
Avg. Pay	0	36,217	52,724	0	0	0	0	0	0	0	47,221
60 to 64	0	0	0	0	1	0	0	0	0	0	1
Avg. Pay	0	0	0	0	88,218	0	0	0	0	0	88,218
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	10	9	5	4	4	2	1	0	0	39
Avg. Pay	54,534	46,323	52,532	62,118	74,970	90,711	103,609	94,129	0	0	62,277



Inactive Participant Data

Table III-F

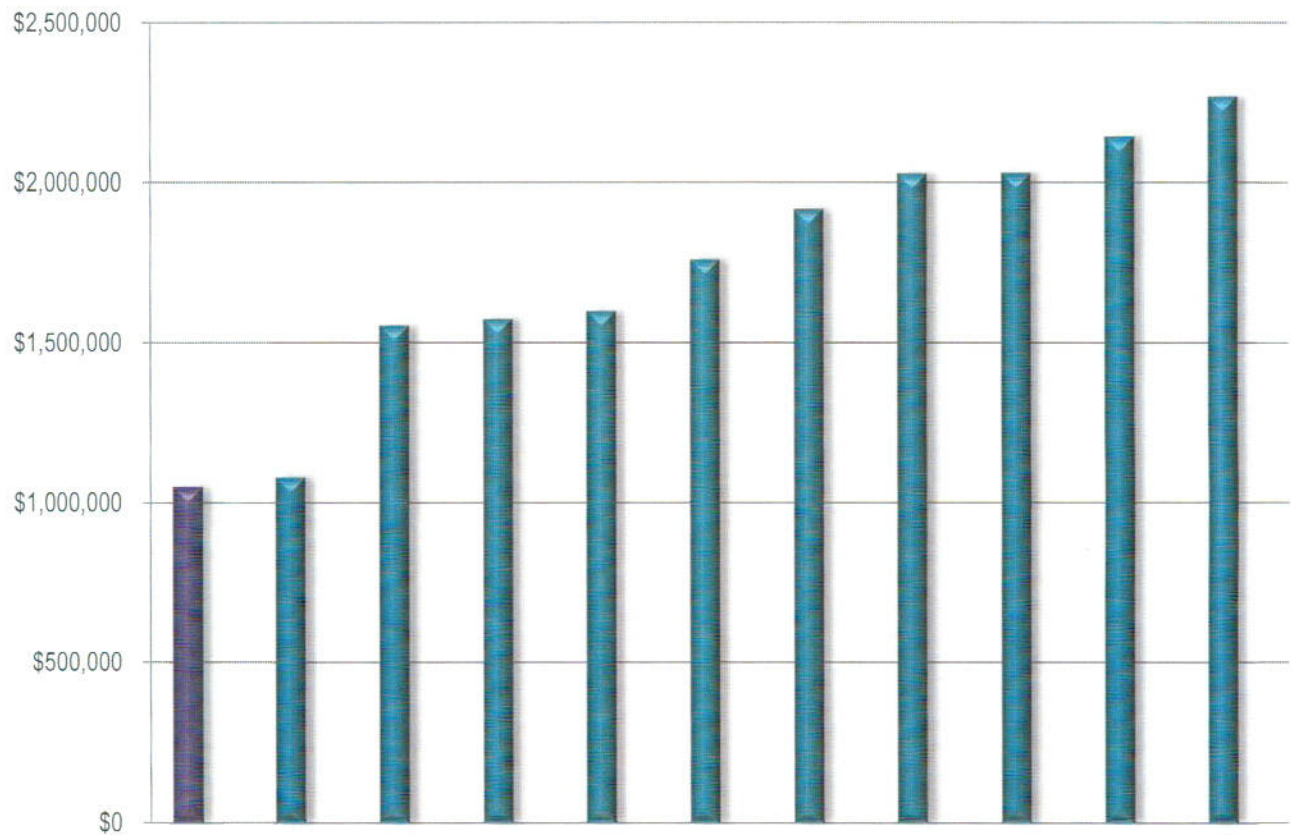
Average Monthly Benefit

Service Retirements	\$3,393.34
Disability Retirements	\$2,228.13
Beneficiaries Receiving	\$1,903.45
DROP Participants	\$6,544.80
Deferred Vested Participants	\$1,326.84
Deferred Beneficiaries	Not applicable



Projected Benefit Payments

Table III-G

Actual

For the period October 1, 2018 through September 30, 2019

\$1,049,791

Projected

For the period October 1, 2019 through September 30, 2020

\$1,080,724

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

\$1,555,185

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

\$1,575,872

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

\$1,600,884

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

\$1,762,251

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

\$1,919,237

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

\$2,029,088

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

\$2,029,974

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

\$2,142,130

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

\$2,266,840



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**

Individual entry age normal cost method. Under this actuarial cost method, a level funding cost is developed with respect to each benefit for each participant. The level funding cost for each benefit applies to the period beginning when the participant's service commences and ends when the participant is assumed to cease active participation due to each respective decrement. The actuarial accrued liability is equal to the accumulated level funding cost to the valuation date for all participants. The normal cost is equal to the level funding cost for the year immediately following the valuation date for all active participants.

2. **Amortization Method**

The unfunded actuarial accrued liability is amortized as a level dollar amount over a period of up to 30 years.

3. **Asset Method**

The actuarial value of assets is equal to the prior year's actuarial value of assets adjusted for contributions, benefit payments, and expenses and further adjusted by the average return on the market value of assets for the preceding four years; the actuarial value of assets is restricted to 80% to 120% of the market value.

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

7.20% per annum

(EXCEPTION: The actuary has recommended an assumed interest rate of 7.00% per annum based on the investment consultant's best estimate of the long-term expected rate of return for the plan's 60%/40% mix of stocks and fixed income investments. The Board of Trustees has elected to use a 7.20% interest rate assumption for this valuation, but has established a target rate of 7.00% to be realized by reducing the assumed interest rate by 0.10% per year for each of the next two years. It is anticipated that the 7.00% interest rate assumption will first be utilized for the October 1, 2021 actuarial valuation of the plan.)

5. **Salary Increases**

Plan compensation is assumed to increase at the rate of 4.75% per annum, unless actual plan compensation is known for a prior plan year. In addition, average monthly earnings have been adjusted for each active participant to reflect the anticipated payment of the number of hours of accrued sick leave and annual leave that were accumulated as of June 30, 2011.



Summary of Actuarial Methods and Assumptions

Table IV-A

(continued)

6. Decrements

- Pre-retirement mortality: Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB
- Post-retirement mortality: Sex-distinct rates set forth in the RP-2000 Combined Mortality Table, with full generational improvements in mortality using Scale BB
- Disability: Sex-distinct rates set forth in the Wyatt 1985 Disability Study (Class 4); All disabilities are assumed to be service-related.
- Termination: Sex-distinct rates set forth in the Scale 155 Table
- Retirement: Retirement is assumed to occur upon the attainment of age 52 with at least five years of service, except that those participants who have attained their normal retirement age as of the valuation date are assumed to retire one year after the valuation date. Alternatively, participants who have attained age 50 with at least 10 years of service are assumed to retire at the rate of 2.50% per annum.

7. Form of Payment

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

8. Beneficiary Age and Gender

Where beneficiary information is unavailable, beneficiaries have been assumed to be of the opposite gender of the participant, with males assumed to be three years older than females.

9. Expenses

Administrative expenses are assumed to be 1.25% of future payroll. In addition, the interest rate set forth in item 4. 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 changed from 7.30% per annum to 7.20% per annum.

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

- (1) Effective October 1, 2018, the interest (or discount) rate was decreased from 7.40% per annum to 7.30% per annum.*
- (2) Effective October 1, 2017, the interest (or discount) rate was decreased from 7.50% per annum to 7.40% per annum.*
- (3) Effective October 1, 2016, the mortality basis was changed from a 2007 projection of the RP-2000 Mortality Table for annuitants to a full generational projection using Scale BB of the RP-2000 Combined Mortality Table as required by State law.*
- (4) Effective October 1, 2015, the interest (or discount) rate was decreased from 7.75% per annum to 7.50% per annum.*
- (5) Effective October 1, 2012, the assumed payroll growth for purposes of amortizing the unfunded liability was eliminated.*
- (6) Effective October 1, 2011, the assumed payroll growth for purposes of amortizing the unfunded liability was decreased from 1.75% per year to 1.50% per year.*
- (7) Effective October 1, 2010, the assumed payroll growth for purposes of amortizing the unfunded liability was decreased from 5.00% per year to 1.75% per year.*
- (8) Effective October 1, 2009, the interest rate was decreased from 8.00% per annum to 7.75% per annum.*
- (9) Effective October 1, 2009, the salary increase rate was decreased from 5.00% per annum to 4.75% per annum.*
- (10) Effective October 1, 2009, the pre-retirement mortality basis was changed from the 1983 Group Annuity Mortality Table to the RP-2000 Mortality Table for non-annuitants.*
- (11) Effective October 1, 2009, the post-retirement mortality basis was changed from the 1983 Group Annuity Mortality Table to the RP-2000 Mortality Table for annuitants.*



Changes in Actuarial Methods and Assumptions

Table IV-B

(continued)

- (12) *Effective October 1, 2009, the assumed incidence of disability was changed from a range of rates (0.14% at age 20 graded up to 1.00% at age 50) to the sex-distinct rates set forth in the Wyatt 1985 Disability Study (Class 4).*
- (13) *Effective October 1, 2009, the assumed incidence of termination was changed from a range of rates (6.00% at age 20 graded down to 0.80% at age 50) to the sex-distinct rates set forth in the Scale 155 Table.*
- (14) *Effective October 1, 2009, the assumed incidence of retirement prior to normal retirement age was changed from 2.00% per annum to 2.50% per annum.*
- (15) *Effective October 1, 2009, the assumed administrative expenses were changed from \$22,500 per annum to 1.25% of future payroll.*



Summary of Plan Provisions

Table V-A

1. Benefit Formula

3% of Average Monthly Earnings multiplied by Credited Service (§46-58(b)(1))

2. Service Retirement

Normal retirement: Age 52 with at least five years of participation (§46-58(a)(1))

Early retirement: Age 50 with at least 10 years of credited service (§46-58(a)(2))

(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.) (§46-58(b)(2))

3. Disability Retirement

Service-based disability: Participant must be disabled during the course of his employment with the City. (§46-58(c)(1))

Non-service disability: Participant must have earned at least 10 years of credited service. (§46-58(c)(1))

The disability benefit is a monthly 10-year certain and life annuity equal to the larger of the monthly accrued benefit or either 42% of average monthly earnings (for service-based disability) or 25% of average monthly earnings (for non-service disability), but 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 (excluding social security benefits) from exceeding his average monthly earnings. A partial month's payment is made to cover the period between the date of the Board's approval and the end of the month. (§46-58(c)(4),(5),&(6))

(A participant is disabled if he is found to be mentally or physically incapacitated so as to be wholly unable to properly perform his duties as a police officer or firefighter and is likely to remain so disabled continuously and permanently. However, a participant will not be eligible for a disability benefit if his disability is caused by excessive and habitual use of drugs, intoxicants, or narcotics; by injury or disease sustained while serving in the armed forces; by injury or disease sustained while willfully and illegally participating in fights, riots, or civil insurrections, or while committing a crime; by injury or disease sustained after termination of employment; or by a self-inflicted injury.) (§§46-58(c)(1)&(2))



Summary of Plan Provisions

Table V-A

(continued)

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 actuarially reduced to account for the earlier commencement of the benefit. (§46-58(e)(1))

A non-vested participant who terminates employment receives his accumulated contributions. (§46-58(e)(2))

5. Vesting

A participant becomes 100% vested upon the attainment of five years of credited service. For this purpose, service includes service earned under the City of Satellite Beach General Employees' Retirement System. (§46-58(e)(1))

6. Pre-Retirement Death Benefit

If a vested participant dies prior to retirement, the participant's beneficiary receives a 10-year certain annuity equal to the participant's monthly accrued benefit payable beginning at the participant's early or normal retirement age. At the beneficiary's election and upon approval by the Board of Trustees, an actuarially equivalent benefit is payable at any time following the participant's death. In any event, the pre-retirement death benefit guarantees at least the return of the participant's accumulated contributions. (§46-58(d))

If a non-vested participant dies prior to retirement, the participant's beneficiary receives the participant's accumulated contributions. (§46-58(d)(1))

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 with a relative as the joint annuitant (*optional*);

Actuarially reduced 66⅔% joint and contingent annuity with a relative as the joint annuitant (*optional*);

Actuarially reduced 75% joint and contingent annuity with a relative as the joint annuitant (*optional*);



Summary of Plan Provisions

Table V-A

(continued)

Actuarially reduced 100% joint and contingent annuity with a relative as the joint annuitant (*optional*); or

Any other actuarially equivalent form of payment approved by the Board of Trustees (*optional*)

(*Note: All forms of payment guarantee at least the return of the participant's accumulated contributions.*)

(§46-58(b)(1), §46-59, & §46-60(a)(2))

8. Average Monthly Earnings

Average monthly earnings during the highest consecutive three years out of the 10 years immediately preceding the determination. Earnings include base pay, commissions, bonuses, maintenance pay, overtime pay, payments for accrued sick leave, and vacation pay, although payment for accrued sick and annual leave are limited to the number of hours accumulated as of June 30, 2011 multiplied by the pay rate that is in effect at the time of employment termination. Earnings cannot exceed the maximum amount allowed under IRC section 401(a)(17). (§46-56)

9. Credited Service

The service, expressed in years and completed months, from the participant's date of hire until his date of termination, retirement, or death, excluding periods during which the participant does not make the required employee contribution. Participants may also purchase up to five years of credited service for benefit accrual purposes only for previous full-time employment as a police officer or full-time or volunteer employment as a firefighter with any federal, state, county, or city government, including military service, by paying into the plan the full actuarial cost thereof, provided that no other retirement benefit is paid for such service. Payment for purchased service must be made within a period of time equal to the length of service being purchased. (§46-56 & §46-67)

10. Employee Contribution

Employees must contribute 8.00% of earnings and such contributions are accumulated with interest at the rate of 5.50% per annum. (§46-56 & §46-60(a)(1))

11. City Contribution

The City is required to make quarterly contributions as determined in the most recent actuarial valuation of the retirement system. (§46-60(b))



Summary of Plan Provisions

Table V-A

(continued)

12. Deferred Retirement Option Plan (DROP)

A DROP is available to those participants who have attained their normal retirement age, whereby the participant's monthly retirement benefit is accumulated on his behalf in a DROP account while he continues in active employment with the City. Individuals may participate in the DROP for a period of 12 to 60 months and neither earn additional benefits nor make the required employee contribution during the period of their DROP participation. DROP participants are considered to be retired for all other purposes under the plan and are not eligible for disability or pre-retirement death benefits. DROP accounts earn interest equal to the investment return realized by the market value of assets or the investment return realized by a stable return investment vehicle (as elected by the participant from time to time).

(§46-66)

13. Participant Requirement

All full-time firefighters and sworn police officers of the City of Satellite Beach, Florida, excluding civilian members of the fire and police departments and temporary and contract employees, are eligible to participate in the plan. (§46-57(a))

14. Actuarial Equivalence

Based on 8.00% interest per annum and the 1984 Uninsured Pensioner Mortality Table (§46-56)

15. Retiree Increases

Retirement benefits in payment status on October 1, 1997 were increased by 1.00%. (§46-58(b)(3))

16. Plan Effective Date

The plan was originally effective on May 22, 1973.



Summary of Plan Amendments

Table V-B

There were no significant plan amendments 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 June 6, 2018, a share plan was adopted. (Ordinance No. 1161)*
- (2) Effective July 20, 2016, a share plan was created to receive excess Chapter 175/185 contributions. (Ordinance No. 1120)*
- (3) Effective January 15, 2014, the 0.1875% daily administrative charge on the DROP accounts was eliminated retroactively for the period December 6, 2004 through July 3, 2013. (Ordinance No. 1083)*
- (4) Effective July 3, 2013, the 0.1875% daily administrative charge on the DROP accounts was eliminated. (Ordinance No. 1071)*
- (5) Effective during the 2010/11 fiscal year, the definition of plan compensation was amended to limit payments for accrued sick and annual leave to the number of hours accumulated as of June 30, 2011 multiplied by the pay rate in effect at the time of employment termination.*

