Employee Pension Plan of the City of Frostproof, Florida

Actuarial Valuation
As of October 1, 2020

Determines the Contribution
For the 2020/21 Fiscal Year

SOUTHERN ACTUARIAL SERVICES

Table of Contents

March 16, 2021

Introduction

This report presents the results of the October 1, 2020 actuarial valuation for the Employee Pension Plan of the City of Frostproof, Florida. 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, 2020 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 normal cost 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 18.04% of covered payroll, which represents an increase of 14.86% of payroll from the prior valuation.

The normal cost rate is 17.42%, which is 14.35% of payroll greater 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 0.11% of payroll due to investment gains, decreased by 0.15% of payroll due to demographic experience, increased by 15.68% of payroll due to the plan amendment that is described below, and decreased by 1.07% of payroll due to the assumption change that is described below. Although the market value of assets only earned 6.79% during

the 2019/20 plan year, the actuarial value of assets earned 7.42%, 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 2020/21 minimum required contribution will be equal to 18.04% multiplied by the total pensionable earnings for the 2020/21 fiscal year for the active employees who are covered by the plan.

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 $2,476,508. As illustrated in Table I-A, current assets are sufficient to cover $1,504,295 of this amount, the employer's 2020/21 expected contribution will cover $93,304 of this amount, and future employee contributions are expected to cover $52,773 of this amount, leaving $826,136 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.

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, 2020, the advance employer contribution is $125,183, which reflects the advance employer contribution of $140,723 as of October 1, 2019 minus $15,540 to cover the shortfall between actual employer contributions and the minimum required contribution for the 2019/20 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 2020/21 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, 2020 would reduce the minimum required contribution rate for the 2020/21 plan year to 15.59% of payroll.

Plan Amendment

Since the completion of the previous valuation, the plan was amended to increase the benefit formula multiplier from 1.50% to 2.50% for all actively-working participants and to allow for an employee contribution rate of up to 10% of pensionable earnings. The impact of this assumption change was to increase the normal cost rate by 15.68% of payroll.

Actuarial Assumption Change

Since the completion of the previous valuation, the mortality basis was changed from the RP-2000 Combined 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. The impact of this assumption change was to decrease the normal cost rate by 1.07% 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 liablities 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. Specifically, Table II-A shows the development of the actuarial value of assets, which is based on the market value of assets, adjusted to reflect the advance employer contribution. 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, 2020, 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

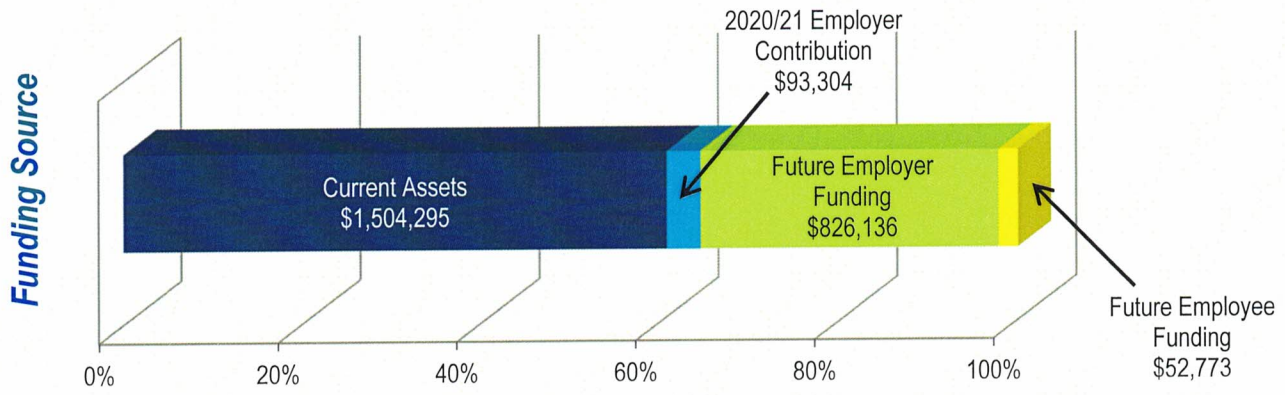
Charles T. Carr
Consulting Actuary
Southern Actuarial Services Company, Inc.

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

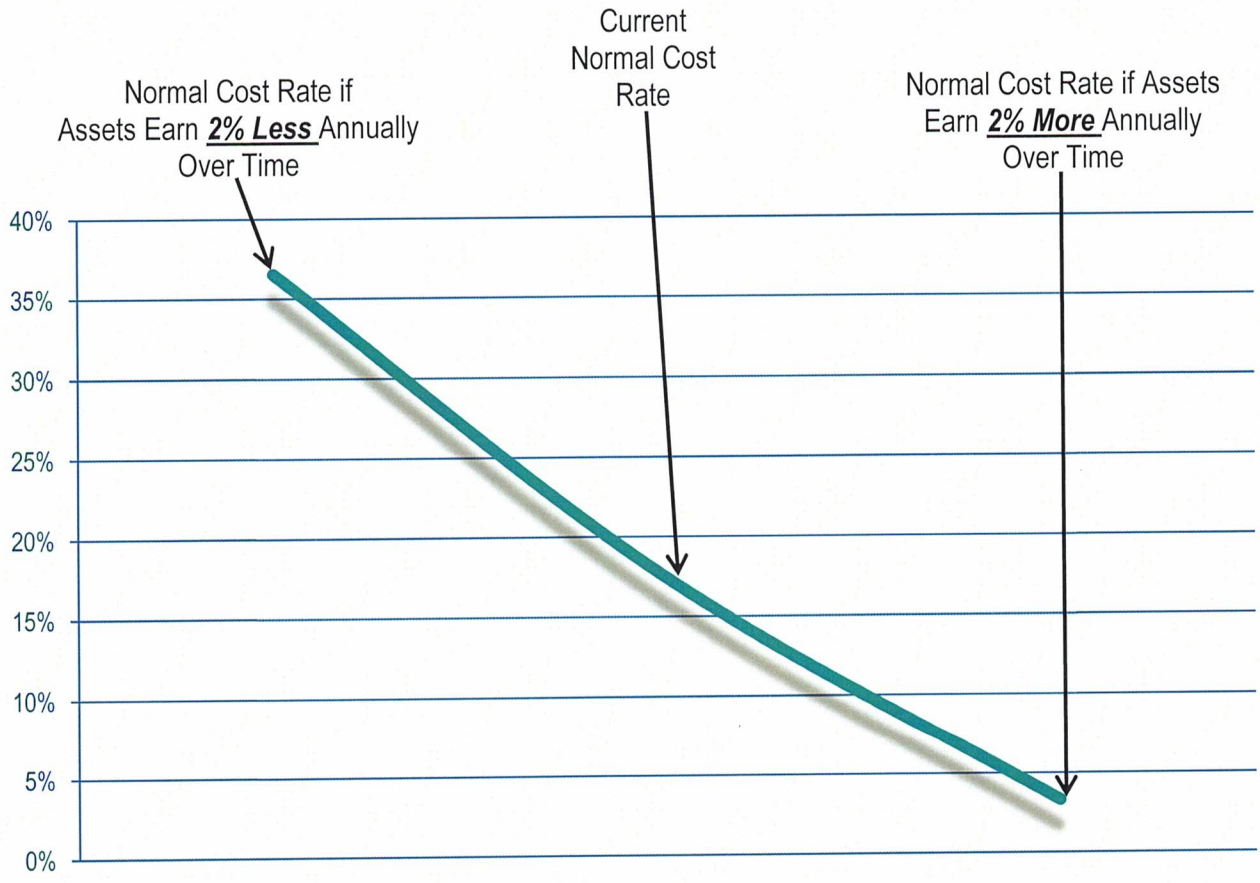


	For the 2020/21 Plan Year
Present Value of Future Benefits	$2,369,864
Present Value of Future Administrative Expenses	$106,644
Actuarial Value of Assets	($1,504,295)
Present Value of Future Employee Contributions	($52,773)
Present Value of Future Normal Costs	$919,440
Present Value of Future Payroll	*÷ $5,277,243*
Normal Cost Rate	*= 17.4227%*
Expected Payroll	*x $517,081*
Normal Cost	$90,090
Adjustment to Reflect Semi-Monthly Employer Contributions	$3,214
Preliminary Employer Contribution for the 2020/21 Plan Year	$93,304
Expected Payroll for the 2020/21 Plan Year	*÷ $517,081*
Minimum Required Contribution Rate	**18.04%**

(The actual contribution should be based on the minimum required contribution rate multiplied by the actual payroll for the 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	3.07%
Increase (decrease) due to investment gains and losses	-0.11%
Increase (decrease) due to demographic experience	-0.15%
Increase (decrease) due to plan amendments	15.68%
Increase (decrease) due to actuarial assumption changes	-1.07%
Increase (decrease) due to actuarial method changes	0.00%
Current normal cost rate	17.42%

Present Value of Future Benefits

Table I-D

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	$1,056,290	$1,760,481	$1,799,078
Termination benefits	$61,824	$103,044	$99,710
Disability benefits	$27,776	$46,291	$34,758
Death benefits	$38,190	$63,651	$39,884
Refund of employee contributions	$491	$491	$492
Sub-total	**$1,184,571**	**$1,973,958**	**$1,973,922**
Deferred Vested Participants			
Retirement benefits	$58,646	$58,646	$53,548
Termination benefits	$0	$0	$0
Disability benefits	$0	$0	$0
Death benefits	$0	$0	$0
Refund of employee contributions	$0	$0	$0
Sub-total	**$58,646**	**$58,646**	**$53,548**
Due a Refund of Contributions	**$14,366**	**$14,366**	**$14,366**
Deferred Beneficiaries	**$0**	**$0**	**$0**
Retired Participants			
Service retirements	$341,549	$341,549	$297,067
Disability retirements	$13,548	$13,548	$13,534
Beneficiaries receiving	$18,782	$18,782	$17,427
DROP participants	$0	$0	$0
Sub-total	**$373,879**	**$373,879**	**$328,028**
Grand Total	**$1,631,462**	**$2,420,849**	**$2,369,864**
Present Value of Future Payroll	$5,260,101	$5,260,101	$5,277,243
Present Value of Future Employee Contribs.	$52,601	$52,601	$52,773
Present Value of Future Employer Contribs.	$147,982	$972,891	$919,440

Present Value of Accrued Benefits

Table I-E

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	$358,808	$598,014	$612,229
Termination benefits	$28,697	$47,829	$46,536
Disability benefits	$14,730	$24,551	$18,380
Death benefits	$16,294	$27,160	$16,600
Refund of employee contributions	$203	$203	$203
Sub-total	**$418,732**	**$697,757**	**$693,948**
Deferred Vested Participants			
Retirement benefits	$58,646	$58,646	$53,548
Termination benefits	$0	$0	$0
Disability benefits	$0	$0	$0
Death benefits	$0	$0	$0
Refund of employee contributions	$0	$0	$0
Sub-total	**$58,646**	**$58,646**	**$53,548**
Due a Refund of Contributions	**$14,366**	**$14,366**	**$14,366**
Deferred Beneficiaries	**$0**	**$0**	**$0**
Retired Participants			
Service retirements	$341,549	$341,549	$297,067
Disability retirements	$13,548	$13,548	$13,534
Beneficiaries receiving	$18,782	$18,782	$17,427
DROP participants	$0	$0	$0
Sub-total	**$373,879**	**$373,879**	**$328,028**
Grand Total	**$865,623**	**$1,144,648**	**$1,089,890**
Funded Percentage	188.24%	142.36%	149.51%

(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
Actively Employed Participants			
Retirement benefits	$358,808	$598,014	$612,229
Termination benefits	$26,745	$44,577	$43,381
Disability benefits	$14,730	$24,551	$18,380
Death benefits	$16,315	$27,194	$16,633
Refund of employee contributions	$406	$406	$407
Sub-total	**$417,004**	**$694,742**	**$691,030**
Deferred Vested Participants			
Retirement benefits	$58,646	$58,646	$53,548
Termination benefits	$0	$0	$0
Disability benefits	$0	$0	$0
Death benefits	$0	$0	$0
Refund of employee contributions	$0	$0	$0
Sub-total	**$58,646**	**$58,646**	**$53,548**
Due a Refund of Contributions	**$14,366**	**$14,366**	**$14,366**
Deferred Beneficiaries	**$0**	**$0**	**$0**
Retired Participants			
Service retirements	$341,549	$341,549	$297,067
Disability retirements	$13,548	$13,548	$13,534
Beneficiaries receiving	$18,782	$18,782	$17,427
DROP participants	$0	$0	$0
Sub-total	**$373,879**	**$373,879**	**$328,028**
Grand Total	**$863,895**	**$1,141,633**	**$1,086,972**

Entry Age Normal Accrued Liability

Table I-G

	Old Assumptions w/o Amendment	Old Assumptions w/ Amendment	New Assumptions w/ Amendment
Actively Employed Participants			
Retirement benefits	$620,539	$1,034,230	$1,058,284
Termination benefits	$36,999	$61,665	$59,854
Disability benefits	$18,799	$31,332	$23,504
Death benefits	$23,365	$38,945	$23,669
Refund of employee contributions	$212	$212	$212
Sub-total	**$699,914**	**$1,166,384**	**$1,165,523**
Deferred Vested Participants			
Retirement benefits	$58,646	$58,646	$53,548
Termination benefits	$0	$0	$0
Disability benefits	$0	$0	$0
Death benefits	$0	$0	$0
Refund of employee contributions	$0	$0	$0
Sub-total	**$58,646**	**$58,646**	**$53,548**
Due a Refund of Contributions	**$14,366**	**$14,366**	**$14,366**
Deferred Beneficiaries	**$0**	**$0**	**$0**
Retired Participants			
Service retirements	$341,549	$341,549	$297,067
Disability retirements	$13,548	$13,548	$13,534
Beneficiaries receiving	$18,782	$18,782	$17,427
DROP participants	$0	$0	$0
Sub-total	**$373,879**	**$373,879**	**$328,028**
Grand Total	**$1,146,805**	**$1,613,275**	**$1,561,465**

Actuarial Value of Assets

Table II-A

Market Value of Assets as of October 1, 2020	$1,629,478
Minus advance employer contributions	($125,183)
Actuarial Value of Assets as of October 1, 2020	**$1,504,295**

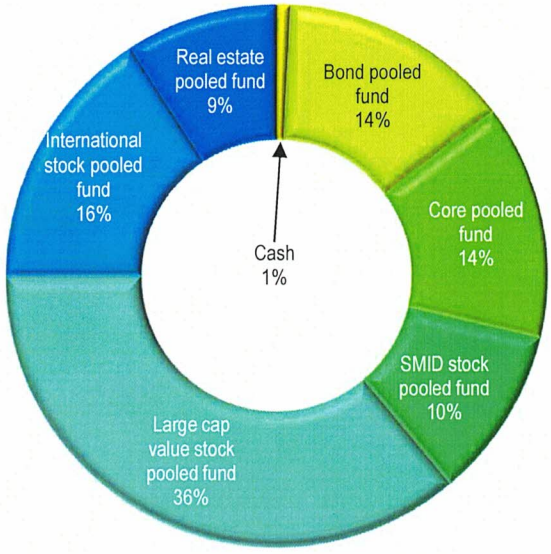
Historical Actuarial Value of Assets

October 1, 2011	$986,391
October 1, 2012	$1,106,835
October 1, 2013	$1,250,105
October 1, 2014	$1,284,071
October 1, 2015	$1,235,125
October 1, 2016	$1,203,578
October 1, 2017	$1,368,693
October 1, 2018	$1,455,839
October 1, 2019	$1,508,057
October 1, 2020	$1,504,295

Market Value of Assets

Table II-B

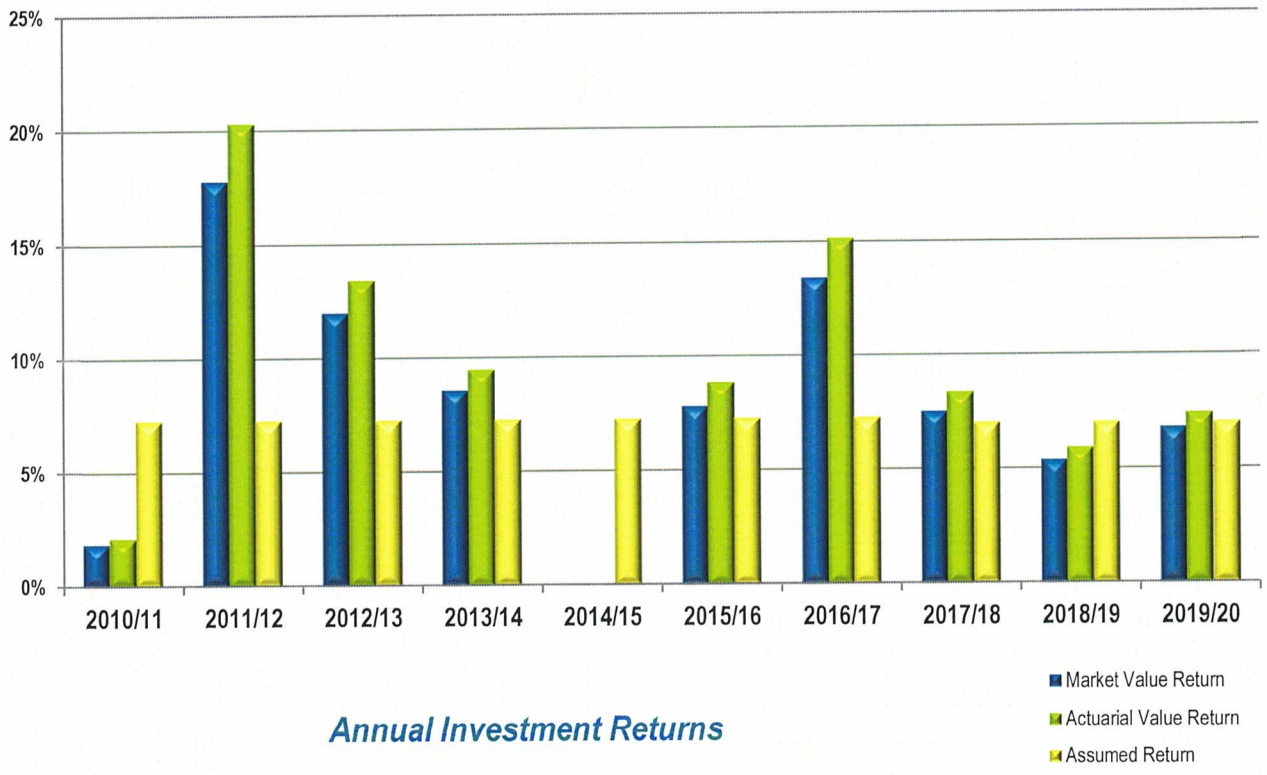
	As of October 1, 2020
Market Value of Assets	**$1,629,478**
Cash	$13,034
Bond pooled fund	$226,468
Core pooled fund	$228,097
SMID stock pooled fund	$166,185
Large cap value stock pooled fund	$588,165
International stock pooled fund	$259,054
Real estate pooled fund	$148,263
Employee contribution receivable	$212



Historical Market Value of Assets	
October 1, 2011	$1,119,463
October 1, 2012	$1,239,176
October 1, 2013	$1,381,206
October 1, 2014	$1,414,070
October 1, 2015	$1,389,126
October 1, 2016	$1,363,565
October 1, 2017	$1,523,865
October 1, 2018	$1,607,695
October 1, 2019	$1,648,780
October 1, 2020	$1,629,478

Investment Return

Table II-C



Annual Investment Returns

Plan Year	Market Value Return	Actuarial Value Return	Assumed Return
2010/11	1.87%	2.11%	7.25%
2011/12	17.81%	20.30%	7.25%
2012/13	12.00%	13.43%	7.25%
2013/14	8.57%	9.49%	7.25%
2014/15	0.06%	0.07%	7.25%
2015/16	7.80%	8.85%	7.25%
2016/17	13.40%	15.16%	7.25%
2017/18	7.52%	8.37%	7.00%
2018/19	5.38%	5.92%	7.00%
2019/20	6.79%	7.42%	7.00%
10yr. Avg.	8.00%	8.96%	7.17%

Asset Reconciliation

Table II-D

	Market Value	Actuarial Value
As of October 1, 2019	**$1,648,780**	**$1,508,057**
Increases Due To:		
Employer Contributions	$0	$0
Employee Contributions	$4,884	$4,884
Service Purchase Contributions	$0	$0
Total Contributions	$4,884	$4,884
Interest and Dividends	$0	
Realized Gains (Losses)	$0	
Unrealized Gains (Losses)	$107,691	
Total Investment Income	$107,691	$107,691
Other Income	$0	
Total Income	**$112,575**	**$112,575**
Decreases Due To:		
Monthly Benefit Payments	($120,237)	($120,237)
Refund of Employee Contributions	$0	$0
Total Benefit Payments	($120,237)	($120,237)
Investment Expenses	$0	
Administrative Expenses	($11,640)	($11,640)
Advance Employer Contribution		$15,540
Total Expenses	**($131,877)**	**($116,337)**
As of October 1, 2020	**$1,629,478**	**$1,504,295**

Historical Trust Fund Detail

Table II-E

Income

Plan Year	Employer Contribs.	Employee Contribs.	Service Purchase Contribs.	Interest / Dividends	Realized Gains / Losses	Unrealized Gains / Losses	Other Income
2010/11	$34,140	$5,690	$0	$0	$0	$21,249	$0
2011/12	$33,742	$5,624	$0	$0	$0	$192,891	$0
2012/13	$33,793	$5,632	$0	$0	$0	$148,295	$0
2013/14	$30,010	$5,002	$0	$0	$0	$114,850	$0
2014/15	$32,578	$5,394	$0	$0	$0	$827	$0
2015/16	$33,151	$5,521	$0	$0	$0	$103,295	$0
2016/17	$35,973	$5,981	$0	$0	$0	$181,290	$0
2017/18	$30,801	$5,133	$0	$0	$0	$113,453	$0
2018/19	$16,324	$5,918	$0	$0	$0	$85,229	$0
2019/20	$0	$4,884	$0	$0	$0	$107,691	$0

Expenses

Plan Year	Monthly Benefit Payments	Contrib. Refunds	Admin. Expenses	Invest. Expenses
2010/11	$32,979	$78,051	$9,132	$0
2011/12	$32,979	$74,647	$4,918	$0
2012/13	$32,979	$3,291	$9,420	$0
2013/14	$108,058	$4,020	$4,920	$0
2014/15	$51,462	$1,434	$10,847	$0
2015/16	$156,316	$397	$10,815	$0
2016/17	$51,462	$1,577	$9,905	$0
2017/18	$54,472	$0	$11,085	$0
2018/19	$55,845	$0	$10,541	$0
2019/20	$120,237	$0	$11,640	$0

Other Actuarial Adjustments

Plan Year	Advance Employer Contribs.
2010/11	-$742
2011/12	-$731
2012/13	-$1,240
2013/14	-$1,102
2014/15	$24,002
2015/16	$5,986
2016/17	-$4,815
2017/18	-$3,316
2018/19	-$11,133
2019/20	-$15,540

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

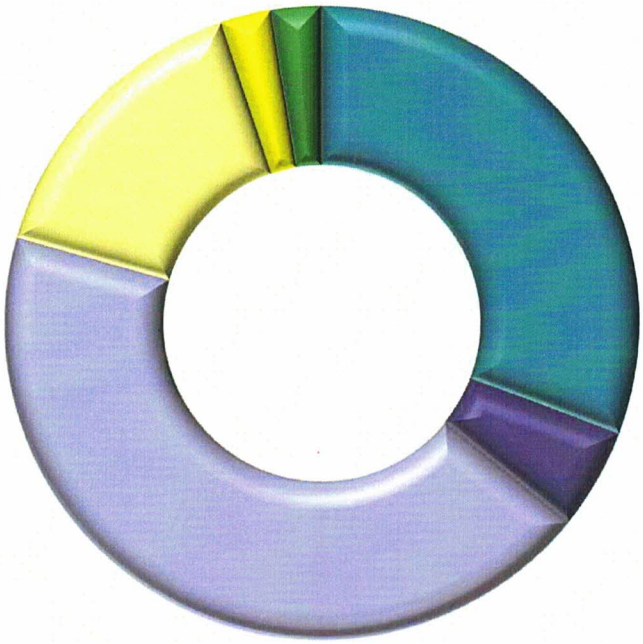
Table II-F

Advance Employer Contribution

Advance Employer Contribution as of October 1, 2019	$140,723
Additional Employer Contribution	$0
Minimum Required Contribution	($15,540)
Net Increase in Advance Employer Contribution	($15,540)
Advance Employer Contribution as of October 1, 2020	$125,183

Summary of Participant Data

Table III-A



Participant Distribution by Status

As of October 1, 2020

Actively Employed Participants	
Active Participants	12
DROP Participants	0
Inactive Participants	
Deferred Vested Participants	2
Due a Refund of Contributions	17
Deferred Beneficiaries	0
Participants Receiving a Benefit	
Service Retirements	6
Disability Retirements	1
Beneficiaries Receiving	1
Total Participants	**39**

Number of Participants Included in Prior Valuations

	Active	*DROP*	*Inactive*	*Retired*	*Total*
October 1, 2011	N/A	N/A	N/A	N/A	N/A
October 1, 2012	19	0	7	5	31
October 1, 2013	N/A	N/A	N/A	N/A	N/A
October 1, 2014	18	0	7	7	32
October 1, 2015	15	0	10	7	32
October 1, 2016	20	0	9	7	36
October 1, 2017	16	0	12	8	36
October 1, 2018	13	0	15	9	37
October 1, 2019	12	0	18	9	39
October 1, 2020	12	0	19	8	39

Data Reconciliation

Table III-B

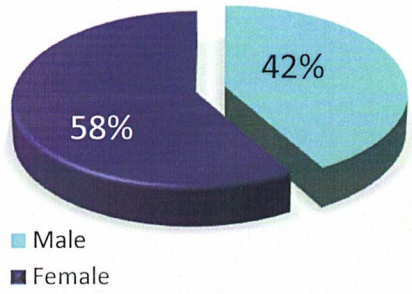
	Active	DROP	Deferred Vested	Due a Refund	Def. Benef.	Service Retiree	Disabled Retiree	Benef. Rec'v.	Total
October 1, 2019	12	0	3	15	0	7	1	1	**39**
Change in Status									
Re-employed									
Terminated	(2)			2					
Retired			(1)			1			
Participation Ended									
Transferred Out									
Cashed Out						(1)			**(1)**
Died						(1)			**(1)**
Participation Began									
Newly Hired	2								**2**
Transferred In									
New Beneficiary									
Other Adjustment									
October 1, 2020	12	0	2	17	0	6	1	1	**39**

Active Participant Data

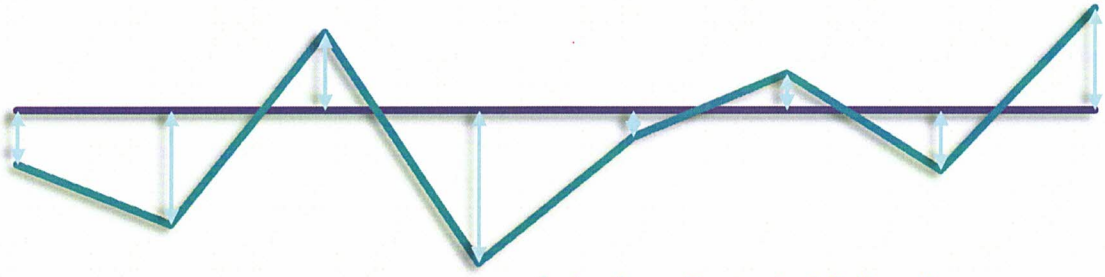
Table III-C

As of October 1, 2020

Gender Mix



Average Age	50.7 years
Average Service	12.7 years
Total Annualized Compensation for the Prior Year	$466,513
Total Expected Compensation for the Current Year	$517,081
Average Increase in Compensation for the Prior Year	10.34%
Expected Increase in Compensation for the Current Year	5.50%



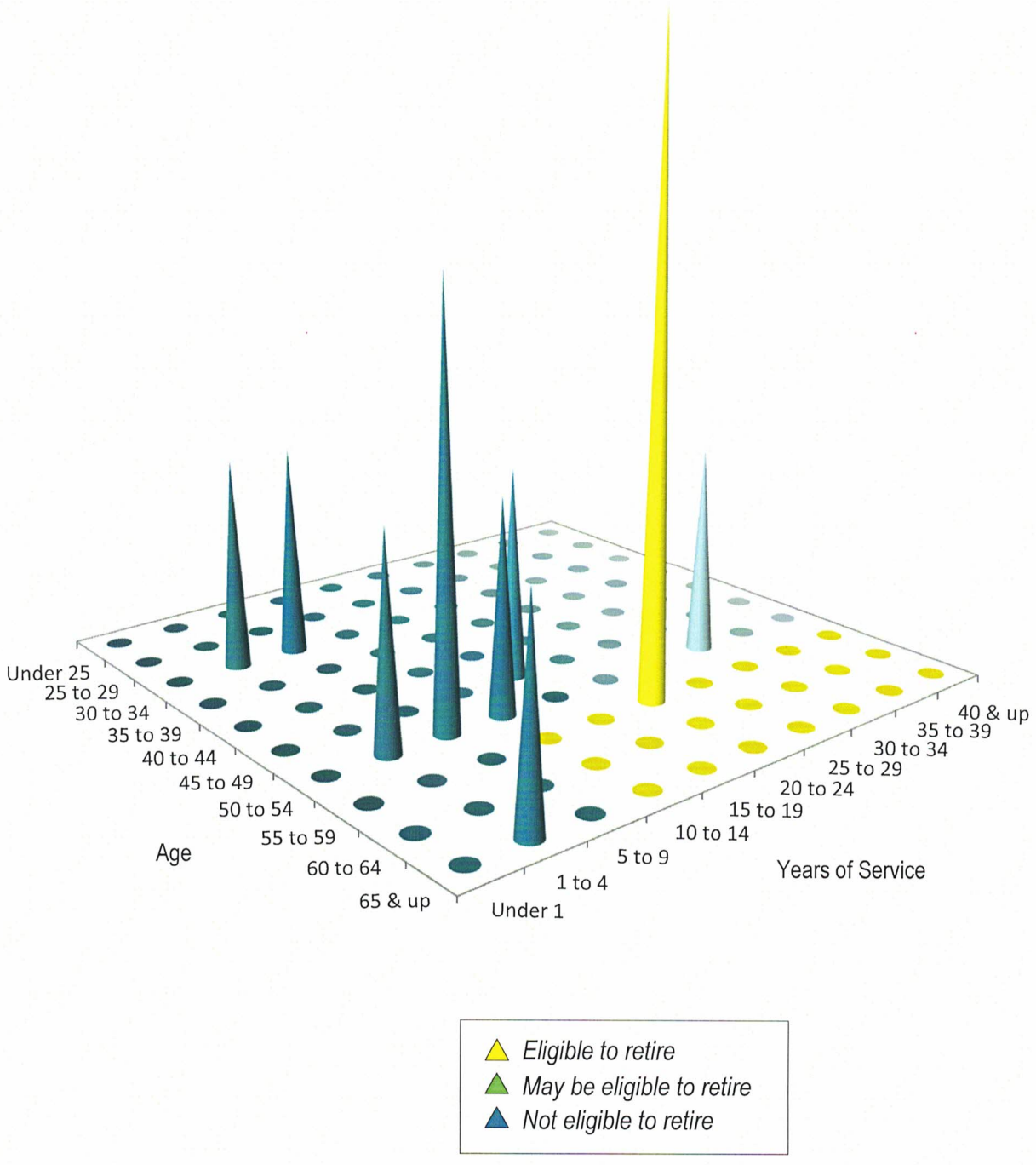
Actual vs. Expected Salary Increases

Active Participant Statistics From Prior Valuations

	Average Age	*Average Service*	*Average Salary*	*Average Expected Salary Increase*	*Average Actual Salary Increase*
October 1, 2011	N/A	N/A	N/A	5.50%	7.83%
October 1, 2012	46.1	9.4	$28,588	5.50%	4.67%
October 1, 2013	N/A	N/A	N/A	5.50%	2.91%
October 1, 2014	47.6	7.4	$25,763	5.50%	0.02%
October 1, 2015	46.7	9.1	$31,195	5.50%	9.21%
October 1, 2016	44.8	7.9	$26,615	5.50%	-1.82%
October 1, 2017	46.3	9.8	$33,547	5.50%	4.21%
October 1, 2018	47.2	11.7	$38,061	5.50%	7.25%
October 1, 2019	47.2	12.1	$36,870	5.50%	2.65%
October 1, 2020	50.7	12.7	$38,876	5.50%	10.34%

Active Age-Service Distribution

Table III-D



Active Age-Service-Salary Table

Table III-E

Attained Age	Completed Years of Service										
	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	Total
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	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
30 to 34	**0**	**1**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**2**
Avg.Pay	0	19,974	77,663	0	0	0	0	0	0	0	48,819
35 to 39	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
40 to 44	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**
Avg.Pay	0	0	0	0	0	0	0	0	0	0	0
45 to 49	**0**	**0**	**0**	**0**	**1**	**0**	**0**	**0**	**0**	**0**	**1**
Avg.Pay	0	0	0	0	42,525	0	0	0	0	0	42,525
50 to 54	**0**	**1**	**2**	**1**	**0**	**0**	**0**	**1**	**0**	**0**	**5**
Avg.Pay	0	53,352	37,431	61,908	0	0	0	51,118	0	0	48,248
55 to 59	**0**	**0**	**0**	**0**	**0**	**3**	**0**	**0**	**0**	**0**	**3**
Avg.Pay	0	0	0	0	0	27,757	0	0	0	0	27,757
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**	**1**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**0**	**1**
Avg.Pay	0	1,840	0	0	0	0	0	0	0	0	1,840
Total	**0**	**3**	**3**	**1**	**1**	**3**	**0**	**1**	**0**	**0**	**12**
Avg.Pay	0	25,055	50,842	61,908	42,525	27,757	0	51,118	0	0	38,876

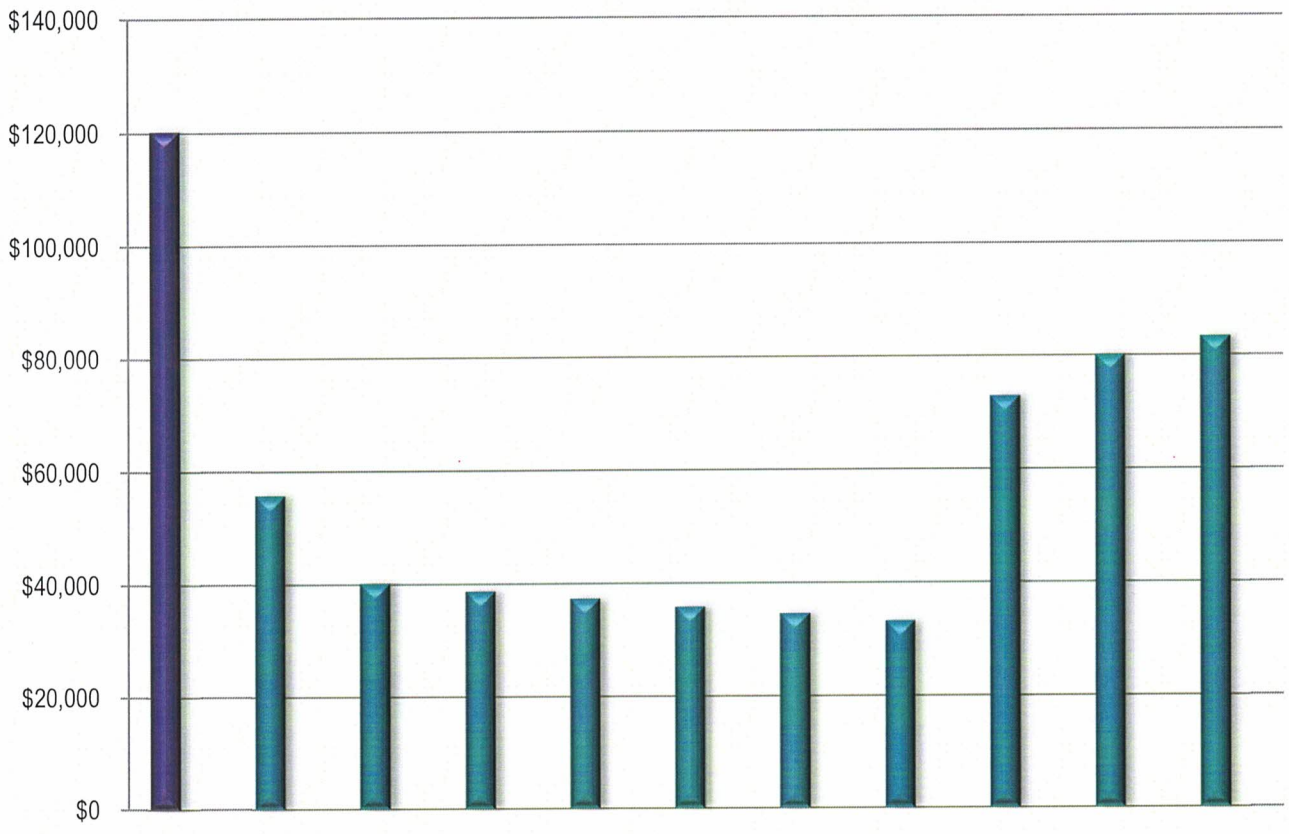
Inactive Participant Data

Table III-F

	Average Monthly Benefit
Service Retirements	*$514.30*
Disability Retirements	*$91.64*
Beneficiaries Receiving	*$376.68*
DROP Participants	*Not applicable*
Deferred Vested Participants	*$560.86*
Deferred Beneficiaries	*Not applicable*

Projected Benefit Payments

Table III-G



Actual	
For the period October 1, 2019 through September 30, 2020	$120,237
Projected	
For the period October 1, 2020 through September 30, 2021	$55,751
For the period October 1, 2021 through September 30, 2022	$40,099
For the period October 1, 2022 through September 30, 2023	$38,652
For the period October 1, 2023 through September 30, 2024	$37,305
For the period October 1, 2024 through September 30, 2025	$35,835
For the period October 1, 2025 through September 30, 2026	$34,557
For the period October 1, 2026 through September 30, 2027	$33,186
For the period October 1, 2027 through September 30, 2028	$72,826
For the period October 1, 2028 through September 30, 2029	$80,082
For the period October 1, 2029 through September 30, 2030	$83,294

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.

3. Interest (or Discount) Rate

7.00% per annum

4. Salary Increases

Plan compensation is assumed to increase at the rate of 5.50% per annum, unless actual plan compensation is known for a prior plan year. In addition, average monthly earnings have been loaded by 2.50% to account for accumulated sick leave and vacation payments upon termination of employment.

5. Decrements

- Pre-retirement mortality: Sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Below Median Employee Mortality Table for general employees, with full generational improvements in mortality using Scale MP-2018 and with male ages set back one year

- Post-retirement mortality: Sex-distinct rates set forth in the PUB-2010 Headcount-Weighted Below Median Healthy Retiree Mortality Table for general employees, with full generational improvements in mortality using Scale MP-2018 and with male ages set back one year

Summary of Actuarial Methods and Assumptions — Table IV-A

(continued)

Disability:	Age-based rates of disability were assumed, ranging from 0.03% at age 20 to 0.80% at age 60; no disabilities are assumed to be service-related.
Termination:	With respect to participants with less than seven years of service, the termination rates are service-based, ranging from 8.70% for participants with less than one year of service to 6.00% for participants with between six and seven years of service; with respect to participants with at least seven years of service, the termination rates are age-based, ranging from 5.40% at age 20 to 0.00% at age 60.
• Retirement:	20% of eligible participants are assumed to retire at age 62, 10% of eligible participants are assumed to retire at each of ages 63 and 64, and 100% of eligible participants are assumed to retire at age 65.

6. Form of Payment

Future retirees have been assumed to select the single life annuity.

7. Expenses

The total projected benefit liability has been loaded by 4.50% 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 mortality basis was changed from the RP-2000 Combined 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.

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

(1) *Effective October 1, 2017, the interest (or discount) rate was decreased from 7.25% per annum to 7.00% per annum.*

(2) *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.*

(3) *Effective October 1, 2010, the administrative expense assumption was changed from a flat $5,000 per year to a 4.50% loading of the total projected benefit liability.*

Summary of Plan Provisions

Table V-A

1. Monthly Accrued Benefit

2.50% of Final Monthly Compensation multiplied by Credited Service

2. Normal Retirement Age and Benefit

- **Age**
  Age 65 with at least 10 years of Vested Service
- **Amount**
  Monthly Accrued Benefit
- **Form of Payment**
  Single life annuity (normal form of payment);
  Actuarially reduced certain and life annuity (optional);
  Actuarially reduced joint and contingent annuity with 50% to 100% of the benefit payable to the participant's spouse for life after the participant's death (optional);
  Actuarially equivalent series of fixed monthly installments (optional); or
  Actuarially equivalent lump sum distribution (automatic if the single sum value of the participant's benefit is less than or equal to $3,500)

3. Early Retirement Age and Benefit

- **Age**
  Age 55 with at least 10 years of Vested Service
- **Amount**
  Monthly Accrued Benefit (payable at Normal Retirement Age); or
  Actuarial Equivalent of the Monthly Accrued Benefit (payable at Early Retirement Age)
- **Form of Payment**
  Same as for Normal Retirement

4. Delayed Retirement Age and Benefit

- **Age**
  After Normal Retirement Age
- **Amount**
  Monthly Accrued Benefit
- **Form of Payment**
  Same as for Normal Retirement

Summary of Plan Provisions

Table V-A

(continued)

5. Disability Eligibility and Benefit

- **Eligibility**
  All participants are eligible.
- **Condition**
  A licensed physician selected by the Trustees must find that the participant is wholly prevented from engaging in any occupation for wage or profit and that he is likely to remain so disabled on a continuous and permanent basis.
- **Amount Payable**
  A monthly single life annuity equal to the Actuarial Equivalent of the Monthly Accrued Benefit which would otherwise be payable at Normal Retirement Age

6. Deferred Vested Benefit

- **Age**
  Any age with at least five years of Vested Service
- **Amount**
  Monthly Accrued Benefit multiplied by the Vested Percentage (payable at Normal Retirement Age); or
  Actuarial Equivalent of the Monthly Accrued Benefit multiplied by the Vested Percentage (payable at Early Retirement Age)
- **Form of Payment**
  Same as for Normal Retirement

7. Pre-Retirement Death Benefit

In the case of the death of a participant prior to retirement, his beneficiary will receive the participant's Monthly Accrued Benefit reduced actuarially as if the participant had elected to retire on his date of death. This benefit is payable as a five-year certain monthly annuity beginning as of the first day of the month following the participant's date of death. In lieu of receiving the five-year certain annuity, the beneficiary may elect to receive an actuarially equivalent single lump sum payment.

8. Final Monthly Compensation

Average of the highest five consecutive plan years of Compensation out of the last 10 plan years of employment

Summary of Plan Provisions

Table V-A

(continued)

9. Compensation

Compensation includes regular earnings and overtime payments, but excludes bonuses, commissions, expense allowances, and all other extraordinary compensation; annual compensation in excess of $200,000 (as indexed) is excluded in accordance with Internal Revenue Code (IRC) §401(a)(17).

10. Credited Service

Years and completed months of employment, to a maximum of 30 years

11. Vested Service

Plan years during which the participant earns at least 1,000 hours of service

12. Vested Percentage

50% for participants who have earned at least five years of vested service; 60% for participants who have earned at least six years of vested service; 70% for participants who have earned at least seven years of vested service; 80% for participants who have earned at least eight years of vested service; 90% for participants who have earned at least nine years of vested service; or 100% for participants who have earned at least 10 years of vested service

13. Participation Requirement

All employees of the City of Frostproof, Florida, automatically become a participant in the plan on the one-year anniversary of their date of hire, other than firefighters, police officers, and those employees who work less than 20 hours per week or less than five hours per day.

14. Accumulated Contributions

The Employee Contributions accumulated with interest at the rate of 5% per annum; if the participant terminates his employment with less than 10 years of Credited Service, he receives his Accumulated Contributions in lieu of any other benefits payable from the plan.

15. Participant Contribution

1.00% of pensionable earnings *(may be increased to as much as 10.00% of pensionable earnings)*

Summary of Plan Provisions

Table V-A

(continued)

16. Definition of Actuarially Equivalent

- **Interest Rate**
  8.00% per annum
- **Mortality Table (Applied Only After Retirement Age)**
  1984 Uninsured Pensioner (UP-84) Mortality Table

17. Plan Effective Date

October 1, 1985

Summary of Plan Amendments

Table V-B

Since the completion of the previous valuation, Ordinance 2020-04A was adopted on April 20, 2020 to be effective on that date. This ordinance increased the benefit formula multiplier from 1.50% to 2.50% and allows the employee contribution rate to be increased from 1.00% of pensionable earnings to as much as 10.00% of pensionable earnings.

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

(1) Effective January 8, 2018, a graded vesting schedule was added for those participants who have earned between five and 10 years of vested service. (Ordinance 2017-14)