

August 27, 2019

William P. Hanes, Esq.
Administrator
Town of Palm Beach Retirement System
P.O. Box 2112
Palm Beach, FL 33480

Re: Town of Palm Beach Retirement System– Actuarial Impact Statement

Dear Bill:

As requested, we are enclosing an Actuarial Impact Statement for the proposed Ordinance, illustrating the first-year impact of proposed plan changes to the Town of Palm Beach Retirement System. The results are based on census and asset data as of September 30, 2018.

Please refer to the enclosed exhibits for details. The following is a brief description of the proposed changes included in this Actuarial Impact Statement.

- **Current Plan** – Same plan provisions as described in the September 30, 2018 Actuarial Valuation Report. The normal retirement eligibility condition under Plan B (benefits earned after April 30, 2012) for police officers and non-bargaining unit firefighters is age 56 with at least 10 years of service. The member contribution rate for police officers and firefighters is subject to adjustment based on the assumed investment return and the actual rate of investment return for the plan year ending on the valuation date, net of investment expenses, such that the ratio of employer to member contributions for the plan year ending on the valuation date is maintained for the plan year following the adjustment; subject in any event to a minimum member contribution rate of 8% and a maximum member contribution rate of 12% of compensation. The adjusted member contribution rate for the fiscal year ending in 2020 is 10.38% for firefighters and 10.47% for police officers. No benefit provisions exist specifically for conditions or impairments of health that are caused by cancer, hepatitis, meningococcal meningitis, tuberculosis, hypertension, or heart disease.
- **Plan Changes** – The following plan changes would occur as a result of the proposed Ordinance:
 - Effective October 1, 2019, The Normal Retirement eligibility for police officers and non-bargaining unit firefighters under Plan B is the earlier of age 55 with at least 10 years of service or age 52 with at least 25 years of service. This applies to non-bargaining unit firefighters and police officers who are participating in the DROP on October 1, 2019, and who retire or enter the DROP on or after that date, but does not apply to members who retired or separated from employment before October 1, 2019.
 - Effective the first full pay period after October 1, 2019, the member contribution rate for police officers and non-bargaining unit firefighters is a fixed rate of 8.5% per year.

- In compliance with newly adopted Florida Statutes Chapter 112.1816, the following additional provisions are added to the Plan for firefighters:
 - Effective July 1, 2019, if a firefighter is initially diagnosed with cancer while employed as a firefighter for the town, and as a result of the diagnosis of cancer or circumstances arising from the treatment of such cancer, he or she is determined to be wholly prevented from rendering useful and efficient service as a firefighter, and likely to remain so disabled continuously and permanently, the board of trustees shall consider the disability to be a line-of-duty disability.
 - If a DROP participant's disability was caused by cancer and the cancer was initially diagnosed during DROP participation and on or after July 1, 2019, the following provisions will apply:
 - If a DROP participant elects to receive line-of-duty disability benefits as the result of an initial diagnosis of cancer, DROP participation will terminate, and the former DROP participant shall receive payment of his or her accumulated DROP benefits. Thereafter, the former DROP participant's retirement benefit shall be the greater of sixty percent of monthly average final compensation, or his/her monthly benefit at the time of disability.
 - If such DROP participant dies as the result of such cancer or the treatment thereof, his beneficiary(ies) shall be entitled to line-of-duty death benefits.
- In compliance with Florida Statutes Chapter 112.181, the following provisions are added to the Plan for firefighters and police officers:
 - Disability resulting from a condition or impairment of health that is caused by hepatitis, meningococcal meningitis, tuberculosis, hypertension or heart disease resulting in a member being determined to be wholly prevented from rendering useful and efficient service as a police officer, and likely to remain so disabled continuously and permanently shall be presumed to have been accidental and suffered in the line of duty unless the contrary is shown by competent evidence.
 - Death resulting from a condition or impairment of health that is caused by hepatitis, meningococcal meningitis, or tuberculosis shall be presumed to have been accidental and suffered in the line of duty unless the contrary is shown by competent evidence.

The proposed Ordinance would also make certain clarifying changes for existing practices associated with benefits under the Plan, as listed below. In our opinion, the following changes would have no actuarial impact on the current cost of the Plan:

- Amending part (d)(2) of Section 82-54, *Credited service; loss of credited service; reinstatement of credited service*, to include additional language stating that a vested member who purchases credited service may pay the required purchase amount through payroll deduction in accordance with Internal Revenue Code section 414(h).

- Deleting parts (l) and (m) of Section 82-57, *Board of trustees; administrative duties; investment of retirement system assets*, to remove the provision of the Board providing administrative support and coordination for the town's defined contribution plan, retirement health savings plan, and 457 plan; and to remove provisions concerning the administrative responsibilities of the prior separate police, fire and general pension boards in the months leading up to the creation of the consolidated plan and board on April 1, 2012.
- Amending part (c) of Section 82-96, *Optional forms of payment of a pension for firefighters*; part (c) of Section 82-116, *Optional forms of payment of a pension for police officers*; and part (c) of Section 82-136, *Optional forms of payment of a pension for benefit group general and benefit group lifeguard*, to include additional language clarifying that elections of an optional form of payment shall be in writing and filed with the board "upon separation from employment but in no event later than" the date retirement is effective.

We recommend that you send a copy of this letter and the Ordinance to the Bureau of Local Retirement Systems before the final public hearing on the Ordinance.

Summary of Findings

- As a result of the Plan changes, the aggregate required employer contribution amount for the fiscal year ending September 30, 2020 increases by \$180,510, from \$10,542,818 to \$10,723,328 (assuming October 1st payment timing). The required contribution for Firefighters increases by \$78,254 and the required contribution for Police Officers increases by \$102,256.
- As a result of the Plan changes, the aggregate unfunded actuarial accrued liability of the Plan increases by \$333,498. The unfunded accrued liability increases by \$215,815 for Firefighters and by \$117,683 for Police Officers.
- As a result of the Plan changes, the aggregate funded ratio of the Plan (actuarial value of assets divided by actuarial accrued liability) remains unchanged at 69.2 %. The funded ratio decreases from 63.9% to 63.8% for Firefighters and remains unchanged at 71.1% for Police Officers.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Risk measures are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Examples of risk that may reasonably be anticipated to significantly affect the Plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the either assumed or forecasted returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the Plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return is less (or more) than the assumed rate, the cost of the Plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

Risk assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. We have previously performed projections with stress test scenarios for the Plan under a separate cover. We are prepared to perform additional assessment to aid the Board in the decision making process.

Additional Disclosures

This report was prepared at the request of the Plan Administrator and is intended for use by the Town of Palm Beach and the Retirement System and those designated or approved by the Town or the System. This report may be provided to parties other than the System only in its entirety and only with the permission of the Town or Board of Trustees.

The purpose of this report is to describe the immediate financial effect of the proposed plan changes. This report should not be relied on for any purpose other than the purpose described above.

The results in this report are based on census and asset data as of September 30, 2018, as provided by the Plan Administrator for the September 30, 2018 Actuarial Valuation concerning Plan benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We

reviewed this information for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator. Refer to the September 30, 2018 Actuarial Valuation report, dated February 26, 2019, for all actuarial assumptions, methods and disclosures.

The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based on the assumptions, methods, and plan provisions outlined in this report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the author of the report prior to relying on information in the report.

The computed contribution amounts presented herein may be considered as a minimum contribution that complies with the pension Board's funding policy and the State statutes. The timely receipt of the actuarially determined contributions is critical to support the financial health of the Plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Town of Palm Beach Retirement System as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Peter N. Strong and Jeffrey Amrose are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Respectfully submitted,



Peter N. Strong, FSA, MAAA, FCA
Enrolled Actuary No. 17-06975



Jeffrey Amrose, MAAA, FCA
Enrolled Actuary No. 17-06599

TOWN OF PALM BEACH RETIREMENT SYSTEM

Impact Statement – August 27, 2019

Description of Amendments

The proposed Ordinance amends the Plan as follows:

- Effective October 1, 2019, the Normal Retirement eligibility condition under Plan B (post April 30, 2012 benefits) for police Officers and non-bargaining firefighters is changed from age 56 with at least 10 years of service to the earlier of age 55 with at least 10 years of service or age 52 with at least 25 years of service. This change applies to police officers and non-bargaining firefighter members who are participating in the DROP on October 1, 2019, and to members who retire or enter the DROP on or after that date, but shall not apply to members who retired or separated from employment before October 1, 2019.
- Effective the first full pay period after October 1, 2019, the member contribution rate for police officers and non-bargaining Firefighters is changed from a variable rate based on the assumed investment return and the actual rate of investment return for the plan year ending on the valuation date, net of investment expenses, and such that the ratio of employer to member contributions for the plan year ending on the valuation date is maintained for the plan year following the adjustment (subject in any event to a minimum member contribution rate of 8% and a maximum member contribution rate of 12% of compensation), to a fixed rate of 8.5% per year.
- The following additional provisions are added for firefighters as a result of the newly adopted Florida Statutes Chapter 112.1816:
 - Effective July 1, 2019, if a firefighter is initially diagnosed with cancer while employed as a firefighter for the town, and as a result of the diagnosis of cancer or circumstances arising from the treatment of such cancer, he or she is determined to be wholly prevented from rendering useful and efficient service as a firefighter, and likely to remain so disabled continuously and permanently, the board of trustees shall consider the disability to be a line-of-duty disability.
 - If a DROP participant's disability was caused by cancer and the cancer was initially diagnosed during DROP participation and on or after July 1, 2019, the following provisions will apply:
 - If a DROP participant elects to receive line-of-duty disability benefits as the result of an initial diagnosis of cancer, DROP participation will terminate, and the former DROP participant shall receive payment of his or her accumulated DROP benefits. Thereafter, the former DROP participant's retirement benefit shall be the greater of sixty percent of monthly average final compensation, or his/her monthly benefit at the time of disability.
 - If such DROP participant dies as the result of such cancer or the treatment thereof, his beneficiary(ies) shall be entitled to line-of-duty death benefits.

- The following provisions are added to the Plan for police officers and firefighters in compliance with Florida Statutes Chapter 112.181:
 - Disability resulting from a condition or impairment of health that is caused by hepatitis, meningococcal meningitis, tuberculosis, hypertension or heart disease resulting in a member being determined to be wholly prevented from rendering useful and efficient service as a police officer, and likely to remain so disabled continuously and permanently shall be presumed to have been accidental and suffered in the line of duty unless the contrary is shown by competent evidence.
 - Death resulting from a condition or impairment of health that is caused by hepatitis, meningococcal meningitis, or tuberculosis shall be presumed to have been accidental and suffered in the line of duty unless the contrary is shown by competent evidence.

Funding Implications of Amendment

An actuarial cost estimate is attached.

Certification of Administrator

I believe the amendment to be in compliance with Part VII, Chapter 112, Florida Statutes and Section 14, Article X of the Constitution of the State of Florida.

For the Board of Trustees
as Plan Administrator

SUPPLEMENTAL ACTUARIAL VALUATION REPORT

Plan

Town of Palm Beach Retirement System

Valuation Date

September 30, 2018

Date of Report

August 27, 2019

Report Requested by

Board of Trustees

Prepared by

Peter N. Strong

Group Valued

All active and inactive police officers and firefighters

Changes in Plan ProvisionsPresent Provision Before Change

The Normal Retirement eligibility condition under Plan B (post April 30, 2012 benefits) for police officers and firefighters is age 56 with at least 10 years of service.

The member contribution rate for police officers and firefighters is subject to adjustment based on the assumed investment return and the actual rate of investment return for the plan year ending on the valuation date, net of investment expenses, and such that the ratio of employer to member contributions for the plan year ending on the valuation date is maintained for the plan year following the adjustment; subject in any event to a minimum member contribution rate of 8% and a maximum member contribution rate of 12% of compensation. The adjusted member contribution rate for the fiscal year ending September 30, 2020 is 10.38% for firefighters and 10.47% for police officers.

No benefit provisions exist specifically for conditions or impairments of health that are caused by cancer, hepatitis, meningococcal meningitis, tuberculosis, hypertension, or heart disease.

Proposed Provision After Change

Effective October 1, 2019, the Normal Retirement eligibility condition under Plan B (post April 30, 2012 benefits) for police officers and non-bargaining firefighters is changed from age 56 with at least 10 years of service to the earlier of age 55 with at least 10 years of service or age 52 with at least 25 years of service. This change applies to police officers and non-bargaining firefighters who are participating in the DROP on October 1, 2019, and to members who retire or enter the DROP on or after that date, but shall not apply to members who retired or separated from employment before October 1, 2019.

Effective the first full pay period after October 1, 2019, the member contribution rate for police officers and non-bargaining firefighters is changed from a variable rate based on the assumed investment return and the actual rate of investment return for the plan year ending on the valuation date (subject in any event to a minimum member contribution rate of 8% and a maximum member contribution rate of 12% of compensation), to a fixed rate of 8.5% per year.

The following additional provisions are added for firefighters as a result of the newly adopted Florida Statutes Chapter 112.1816:

- Effective July 1, 2019, if a firefighter is initially diagnosed with cancer while employed as a firefighter for the town, and as a result of the diagnosis of cancer or circumstances arising from the treatment of such cancer, he or she is determined to be wholly prevented from rendering useful and efficient service as a firefighter, and likely to remain so disabled continuously and permanently, the board of trustees shall consider the disability to be a line-of-duty disability.
- If a DROP participant's disability was caused by cancer and the cancer was initially diagnosed during DROP participation and on or after July 1, 2019, the following provisions will apply:
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The following provisions are added to the Plan for police officers and firefighters in compliance with Florida Statutes Chapter 112.181:

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- Death resulting from a condition or impairment of health that is caused by hepatitis, meningococcal meningitis, or tuberculosis shall be presumed to have been accidental and suffered in the line of duty unless the contrary is shown by competent evidence.

Changes in Actuarial Assumptions and Methods

In conjunction with the proposed benefit provision changes, the proportion of firefighter disabilities and deaths that are assumed to be service-connected (versus non-service connected) was increased from 50% to 75%.

Current and proposed normal retirement rates for Plan B Police Officers and Non-Bargaining unit firefighters used in this supplemental valuation are shown below.

Current Retirement Rates		Proposed Retirement Rates	
Retirement		Year of Normal Retirement	
Ages	Percent Retiring	Eligibility	Percent Retiring
56	70%	1	70%
57	70%	2	70%
58	70%	3	70%
59	70%	4	70%
60	100%	5	100%

All other actuarial assumptions and methods are the same as those used in the September 30, 2018 Actuarial Valuation Report.

Some of the key assumptions/methods are:

- Investment Return – 7.20% per year
- Payroll Growth Assumption – 2.75% per year
- Mortality and Mortality Improvement Projection Scale – same assumptions as used in the July 1, 2018 Actuarial Valuation of the Florida Retirement System

Amortization Period for New Changes in Actuarial Accrued Liability

15 years (for changes in plan provisions)

Actuarial Impact of Changes

See attached page(s).

Special Risks Involved with the Changes That the Plan Has Not Been Exposed to Previously

None

ACTUARIALLY DETERMINED CONTRIBUTION (ADC) - FIREFIGHTERS

A. Valuation Date	September 30, 2018 <i>Firefighters Valuation</i>	September 30, 2018 <i>Firefighters Plan Changes</i>	<i>Total Increase/ (Decrease) from Valuation</i>
B. ADC to Be Paid During Fiscal Year Ending	9/30/2020	9/30/2020	
C. Covered Annual Payroll (expected)	\$ 4,318,561	\$ 4,318,561	\$ 0
D. Annual Payment to Amortize Unfunded Actuarial Liability Rate As Illustrative \$	83.56 % 3,608,590	84.02 % 3,628,455	0.46 % 19,865
E. Total Employer Normal Cost Rate As Illustrative \$	9.20 % 397,308	10.46 % 451,721	1.26 % 54,413
F. Total Unadjusted Contribution Rate Employer Normal Cost Amortization Total	9.20 % <u>83.56</u> 92.76	10.46 % <u>84.02</u> 94.48	1.26 % <u>0.46</u> 1.72
G. Adjustments to Computed Contribution			
a. Town funding for additional premium tax revenue shortfall in prior fiscal year	0.00 %	0.00 %	0.00 %
b. Additional Member Cost Sharing	(0.38)	(0.22)	0.16
c. Full funding credit	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
d. Total Adjustments As Illustrative \$	(0.38) (16,411)	(0.22) (9,704)	0.16 6,707
H. Total Adjusted ADC as % of Covered Payroll	92.38 %	94.26 %	1.88 %
I. Total Adjusted ADC as Illustrative \$	\$ 3,989,487	\$ 4,070,472	\$ 80,985
J. Total Adjusted ADC if contributed October 1st	\$ 3,854,982	\$ 3,933,236	\$ 78,254

ACTUARIAL VALUE OF BENEFITS AND ASSETS - FIREFIGHTERS

A. Valuation Date	September 30, 2018 <i>Firefighters Valuation</i>	September 30, 2018 <i>Firefighters After Changes</i>	<i>Increase/ (Decrease) from Valuation</i>
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ 13,095,647	\$ 13,238,506	\$ 142,859
b. Vesting Benefits	527,327	486,093	(41,234)
c. Disability Benefits	706,952	733,655	26,703
d. Preretirement Death Benefits	368,812	428,538	59,726
e. Return of Member Contributions	248,371	236,978	(11,393)
f. Total	<u>14,947,109</u>	<u>15,123,770</u>	<u>176,661</u>
2. Inactive Members			
a. Retired Members & Beneficiaries	87,153,934	87,153,934	0
b. Terminated Vested Members	6,035,946	6,045,613	9,667
c. DROP and Share Account Balances	5,096,088	5,096,088	0
d. Total	<u>98,285,968</u>	<u>98,295,635</u>	<u>9,667</u>
3. Total for All Members	113,233,077	113,419,405	186,328
C. Actuarial Present Value of Future Normal Costs	6,437,823	6,408,336	(29,487)
D. Actuarial Accrued (Past Service) Liability	106,795,254	107,011,069	215,815
E. Plan Assets			
1. Market Value	67,896,339	67,896,339	0
2. Actuarial Value	68,240,193	68,240,193	0
F. Unfunded Actuarial Accrued Liability:	38,555,061	38,770,876	215,815
G. Funded Ratio: E2/D	63.9 %	63.8 %	(0.1) %
H. Actuarial Present Value of Projected Covered Payroll	40,352,891	38,655,882	(1,697,009)
I. Actuarial Present Value of Projected Member Contributions	4,035,289	3,660,405	(374,884)
J. Accumulated Value of Active Member Contributions	1,981,963	1,981,963	0

CALCULATION OF EMPLOYER NORMAL COST - FIREFIGHTERS

A. Valuation Date	September 30, 2018 <i>Firefighters Valuation</i>		September 30, 2018 <i>Firefighters After Changes</i>		<i>Increase/(Decrease) from Valuation</i>	
B. Normal Cost for						
1. Service Retirement Benefits	\$ 501,128	12.09%	\$ 517,309	12.48%	\$ 16,181	0.39%
2. Vesting Benefits	38,944	0.94%	37,406	0.90%	(1,538)	(0.04)%
3. Disability Benefits	55,967	1.35%	63,848	1.54%	7,881	0.19%
4. Preretirement Death Benefits	29,192	0.70%	36,776	0.89%	7,584	0.19%
5. Return of Member Contributions	49,394	1.19%	45,929	1.11%	(3,465)	(0.08)%
6. Total for Future Benefits	<u>674,625</u>	<u>16.27%</u>	<u>701,268</u>	<u>16.92%</u>	<u>26,643</u>	<u>0.65%</u>
7. Assumed Amount for Administrative Expenses	<u>121,477</u>	<u>2.93%</u>	<u>121,477</u>	<u>2.93%</u>	<u>0</u>	<u>0.00%</u>
8. Total Normal Cost	<u>796,102</u>	<u>19.20%</u>	<u>822,745</u>	<u>19.85%</u>	<u>26,643</u>	<u>0.65%</u>
C. Expected Member Contribution	414,598	10.00%	389,235	9.39%	(25,363)	(0.61)%
D. Employer Normal Cost: B8-C	381,504	9.20%	433,510	10.46%	52,006	1.26%
E. Employer Normal Cost as a % of Covered Payroll	9.20 %		10.46 %		1.26 %	

PARTICIPANT DATA - FIREFIGHTERS		
	September 30, 2018 <i>Firefighters Valuation</i>	September 30, 2018 <i>Firefighters Plan Changes</i>
ACTIVE MEMBERS		
Number	57	57
Covered Annual Payroll	\$ 4,146,355	\$ 4,146,355
Average Annual Payroll	\$ 72,743	\$ 72,743
Average Age	37.1	37.1
Average Past Service	6.4	6.4
Average Age at Hire	30.7	30.7
RETIREES, BENEFICIARIES & DROP		
Number	99	99
Annual Benefits	\$ 5,801,971	\$ 5,801,971
Average Annual Benefit	\$ 58,606	\$ 58,606
Average Age	63.8	63.8
DISABILITY RETIREES		
Number	9	9
Annual Benefits	\$ 341,725	\$ 341,725
Average Annual Benefit	\$ 37,969	\$ 37,969
Average Age	65.2	65.2
TERMINATED VESTED MEMBERS		
Number	32	32
Annual Benefits	\$ 570,779	\$ 570,779
Average Annual Benefit	\$ 17,837	\$ 17,837
Average Age	42.6	42.6

ACTUARIALLY DETERMINED CONTRIBUTION (ADC) - POLICE OFFICERS

A. 1. Valuation Date 2. Scenario	September 30, 2018 <i>Police Officers Valuation</i>	September 30, 2018 <i>Police Officers Plan Changes</i>	<i>Increase/ (Decrease) from Valuation</i>
B. ADC to Be Paid During Fiscal Year Ending	9/30/2020	9/30/2020	
C. Covered Annual Payroll (expected)	\$ 3,752,645	\$ 3,752,645	\$ 0
D. Annual Payment to Amortize Unfunded Actuarial Liability Rate As Illustrative \$	79.16 % 2,970,594	79.45 % 2,981,476	0.29 % 10,882
E. Total Employer Normal Cost Rate As Illustrative \$	9.58 % 359,503	11.64 % 436,808	2.06 % 77,305
F. Total Unadjusted Contribution Rate Employer Normal Cost Amortization Total	9.58 % <u>79.16</u> 88.74	11.64 % <u>79.45</u> 91.09	2.06 % <u>0.29</u> 2.35
G. Adjustments to Computed Contribution			
a. Town funding for additional premium tax revenue shortfall in prior fiscal year	0.00 %	0.00 %	0.00 %
b. Additional Member Cost Sharing	(0.47)	0.00	0.47
c. Full funding credit	<u>0.00</u>	<u>0.00</u>	<u>0.00</u>
d. Total Adjustments As Illustrative \$	(0.47) (17,637)	0.00 0	0.47 17,637
H. Total Adjusted ADC as % of Covered Payroll	88.27 %	91.09 %	2.82 %
I. Total Adjusted ADC as Illustrative \$	\$ 3,312,460	\$ 3,418,284	\$ 105,824
J. Total Adjusted ADC if Contributed October 1st	\$ 3,200,781	\$ 3,303,037	\$ 102,256

ACTUARIAL VALUE OF BENEFITS AND ASSETS - POLICE OFFICERS

A. 1. Valuation Date 2. Scenario	September 30, 2018 <i>Police Officers Valuation</i>	September 30, 2018 <i>Police Officers Plan Changes</i>	<i>Increase/ (Decrease) from Valuation</i>
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	\$ 14,293,345	\$ 14,397,641	\$ 104,296
b. Vesting Benefits	440,437	365,264	(75,173)
c. Disability Benefits	571,463	433,207	(138,256)
d. Preretirement Death Benefits	309,667	256,222	(53,445)
e. Return of Member Contributions	177,077	157,893	(19,184)
f. Total	<u>15,791,989</u>	<u>15,610,227</u>	<u>(181,762)</u>
2. Inactive Members			
a. Retired Members & Beneficiaries	85,169,729	85,169,729	0
b. Terminated Vested Members	2,871,039	2,882,319	11,280
c. DROP and Share Account Balances	2,713,934	2,713,934	0
d. Total	<u>90,754,702</u>	<u>90,765,982</u>	<u>11,280</u>
3. Total for All Members	106,546,691	106,376,209	(170,482)
C. Actuarial Present Value of Future Normal Costs	5,026,276	4,738,111	(288,165)
D. Actuarial Accrued (Past Service) Liability	101,520,415	101,638,098	117,683
E. Plan Assets			
1. Market Value	71,824,909	71,824,909	0
2. Actuarial Value	72,220,886	72,220,886	0
F. Unfunded Actuarial Accrued Liability:	29,299,529	29,417,212	117,683
G. Funded Ratio: E2/D	71.1 %	71.1 %	- %
H. Actuarial Present Value of Projected Covered Payroll	32,552,020	29,235,495	(3,316,525)
I. Actuarial Present Value of Projected Member Contributions	3,255,202	2,485,017	(770,185)
J. Accumulated Value of Active Member Contributions	2,053,166	2,053,166	0

CALCULATION OF EMPLOYER NORMAL COST - POLICE OFFICERS

A. Valuation Date	September 30, 2018 <i>Police Officers Valuation</i>		September 30, 2018 <i>Police Officers Plan Changes</i>		<i>Increase/(Decrease) from Valuation</i>	
B. Normal Cost for						
1. Service Retirement Benefits	\$ 423,565	11.76%	\$ 453,474	12.75%	\$ 29,909	0.99%
2. Vesting Benefits	33,403	0.93%	29,880	0.84%	(3,523)	(0.09)%
3. Disability Benefits	48,287	1.35%	41,547	1.17%	(6,740)	(0.18)%
4. Preretirement Death Benefits	26,438	0.74%	24,365	0.69%	(2,073)	(0.05)%
5. Return of Member Contributions	44,728	1.24%	38,738	1.09%	(5,990)	(0.15)%
6. Total for Future Benefits	<u>576,421</u>	<u>16.02%</u>	<u>588,004</u>	<u>16.54%</u>	<u>11,583</u>	<u>0.52%</u>
7. Assumed Amount for Administrative Expenses	<u>128,129</u>	<u>3.56%</u>	<u>128,129</u>	<u>3.60%</u>	<u>-</u>	<u>0.04%</u>
8. Total Normal Cost	<u>704,550</u>	<u>19.58%</u>	<u>716,133</u>	<u>20.14%</u>	<u>11,583</u>	<u>0.56%</u>
C. Expected Member Contribution	359,914	10.00%	302,188	8.50%	(57,726)	(1.50)%
D. Employer Normal Cost: B8-C	344,636	9.58%	413,945	11.64%	69,309	2.06%
E. Employer Normal Cost as a % of Covered Payroll	9.58 %		11.64 %		2.06 %	

PARTICIPANT DATA - POLICE OFFICERS		
	September 30, 2018 <i>Police Officers Valuation</i>	September 30, 2018 <i>Police Officers Plan Changes</i>
ACTIVE MEMBERS		
Number	50	50
Covered Annual Payroll	\$ 3,603,005	\$ 3,603,005
Average Annual Payroll	\$ 72,060	\$ 72,060
Average Age	38.5	38.5
Average Past Service	7.3	7.3
Average Age at Hire	31.2	31.2
RETIREES, BENEFICIARIES & DROP		
Number	98	98
Annual Benefits	\$ 5,841,903	\$ 5,841,903
Average Annual Benefit	\$ 59,611	\$ 59,611
Average Age	64.3	64.3
DISABILITY RETIREES		
Number	5	5
Annual Benefits	\$ 175,679	\$ 175,679
Average Annual Benefit	\$ 35,136	\$ 35,136
Average Age	55.4	55.4
TERMINATED VESTED MEMBERS		
Number	24	24
Annual Benefits	\$ 287,010	\$ 287,010
Average Annual Benefit	\$ 11,959	\$ 11,959
Average Age	45.6	45.6