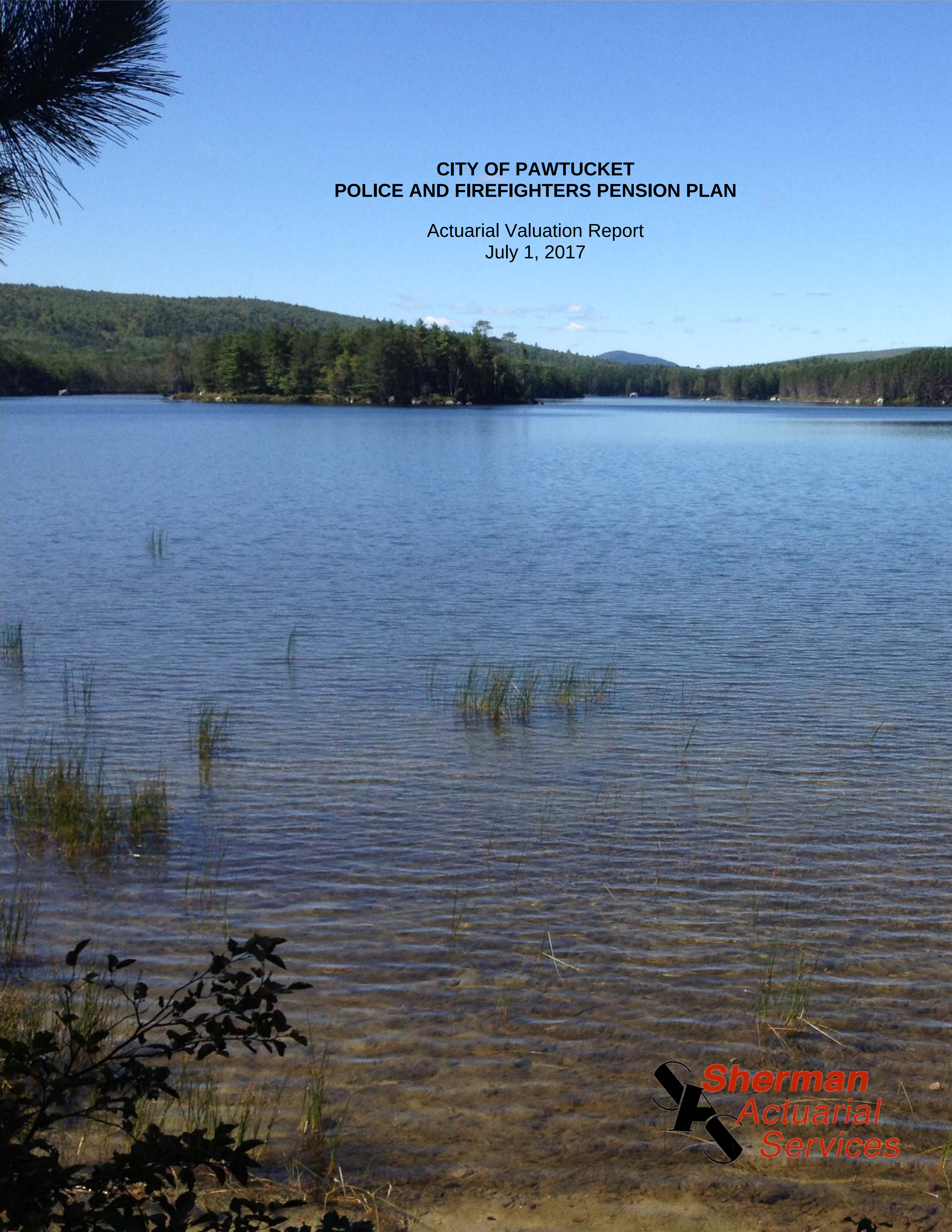
CITY OF PAWTUCKET
POLICE AND FIREFIGHTERS PENSION PLAN

Actuarial Valuation Report
July 1, 2017



Sherman Actuarial Services

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Report Summary:

Highlights for the "New Plan"	July 1, 2016	July 1, 2017
Contributions		
Funding Schedule FY 2018	$13,760,338	$13,760,338
Funding Schedule FY 2019	14,230,398	14,458,472
Funded Ratios		
GAS No. 25	42.2%	43.7%
Participants		
Actives	262	274
Retirees and Beneficiaries	368	370
Vested	0	0
Inactives	0	0
Disabled	44	47
Total	674	691
Payroll		
Payroll of Active Members	$18,353,315	$19,504,659
Average Payroll	70,051	71,185
Normal Cost		
Employer	2,069,160	2,203,268
Employee	1,547,671	1,642,657
Administrative Expenses	105,000	105,000
Total	3,721,831	3,950,925
Actuarial Accrued Liabilities		
Actives	62,734,496	65,663,914
Retirees, Beneficiaries, Disabilities and Inactives	192,847,426	202,059,336
Total	255,581,922	267,723,250
Actuarial Value of Assets	107,973,720	116,912,411
Unfunded Actuarial Accrued Liabilities	$147,608,202	$150,810,839

Introduction

The purpose of this report is to present the findings of an actuarial valuation as of July 1, 2017, of City of Pawtucket Police and Firefighters Pension Plan. Results are shown for the “New Plan” as well as the “Old Plan”. Firefighters who were hired prior to July 1, 1972 and police officers who were hired prior to July 1, 1973 are part of the “Old” plan.

The Old Plan has been frozen to new participants since July 1, 1973 and all of the “Old” plan participants are now retirees or beneficiaries. The City has been and will continue to fund the obligation of the Old Plan on a Pay-as-you-go basis. Although 9 of the participants receive COLAs, the expectation is that mortality will continue to decrease the City’s costs from year-to-year.

The actuarial valuation is based on:

- Provisions of Collective Bargaining Agreements with the Police and Firefighters unions.
- Employee data provided by the City
- Asset information reported the City
- Actuarial assumptions approved by the City

The valuation and forecast do not account for:

- Any subsequent changes in the law
- Any subsequent changes in plan provisions

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability, and withdrawal rates as well as both payroll, salary increases, and investment returns. A comparison of the current valuation and the prior valuation is made to determine how closely actual experience corresponded to anticipated occurrences. This analysis of the system provides insight into the overall quality of the actuarial assumptions and helps explain any change in the annual appropriation.

During the last year, the total unfunded actuarial accrued liability increased to $150,810,839 from $147,608,202. The increase is the result of net unfavorable actuarial experience during the preceding year. The sources of actuarial (gains) and losses are as follows:

Assets	1,014,417
Salaries	3,256,675
New Participants	0
Retirements	(1,317,631)
Terminations	(835,536)
Active Mortality	(48,762)
Disabilities	380,459
Inactive - Mortality and data adjustments	3,032,717
Benefit Payments	(1,187,169)
Other	(8,083)
Total Actuarial (Gains) and Losses	4,287,088

Actuarial Costs and Liabilities:

"New Plan" Normal Costs

The normal cost is the sum of the individual normal costs determined for each member as if the assumptions underlying the cost determinations had been exactly realized. An individual normal cost represents that part of the cost of a member's future benefits which are assigned to the current year as if the costs are to remain level as a percentage of the member's pay. Benefits payable under all circumstances (i.e., retirement, death, disability, and terminations) are included in this calculation. Anticipated employee contributions to be made during the year are subtracted from the total normal cost to determine employer normal cost. The total normal cost is divided by total payroll to determine the normal cost as a percent of pay. The normal cost is shown in Table I.

Table I

	July 1, 2016	July 1, 2017
Superannuation*	$2,881,409	$3,063,725
Termination	188,953	199,577
Death	144,006	153,436
Disability	402,463	429,187
Administrative Expenses	105,000	105,000
Total Normal Cost	3,721,831	3,950,925
% of Pay	20.3%	20.3%
Employee Contributions	1,547,671	1,642,657
% of Pay	8.4%	8.4%
Employer Normal Cost	$2,174,160	$2,308,268
% of Pay	11.8%	11.8%

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"New Plan" Present Value of Actuarial Accrued Liabilities

The actuarial accrued liabilities (AAL) represents today's value of all benefits earned by the actives and inactives. The AAL can be compared to the assets to determine the funded status of the Plan. The value of these earned benefits is shown in Table II below.

Table II

	July 1, 2016	July 1, 2017
Actives		
Superannuations	$61,091,567	$63,926,883
Termination	18,281	(331)
Death	891,139	982,693
Disability	733,509	754,669
Subtotal	62,734,496	65,663,914
Retirees and Inactives		
Retirees and Beneficiaries	168,342,168	173,911,192
Vested	0	0
Terminated (Refund)	0	0
Disabled	24,505,258	28,148,144
Subtotal	192,847,426	202,059,336
Total	$255,581,922	$267,723,250

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"New Plan" Present Value of Future Benefits

The present value of future benefits represents today's value of all benefits earned by the inactive participants as well as all benefits earned and expected to be earned in the coming years by the active participants. The difference betwee the present value of future benefits and the present value of actuarial accrued liabilities is the value of benefits to be earned in the coming years. The value of the total expected benefits is shown in Table III.

Table III

	July 1, 2016	July 1, 2017
Actives		
Superannuation	$88,491,666	$93,363,421
Termination	1,818,829	1,922,866
Death	2,248,741	2,436,107
Disability	4,513,148	4,811,313
Subtotal	97,072,384	102,533,707
Retirees and Inactives		
Retirees and Beneficiaries	168,342,168	173,911,192
Vested	0	0
Terminated (Refund)	0	0
Disabled	24,505,258	28,148,144
Subtotal	192,847,426	202,059,336
Total	$289,919,810	$304,593,043

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Funded Status and Appropriations:

"New Plan" Market and Actuarial Value of Plan Assets

The trust fund composition on a market value basis is shown in Table IV.

Table IV

	July 1, 2016	July 1, 2017
Cash equivalents	$3,643,362	$3,397,213
Short term investments	0	0
Fixed income securities	28,394,915	30,084,112
Equities	71,077,529	80,939,153
International	0	0
Real Estate	0	0
Venture Capital	0	0
Other	0	0
Accounts receivable	359,935	811,517
Accounts payable	(6,000)	(365,084)
Accrued income	0	0
Total Market Value	$103,469,741	$114,866,911
Total Actuarial Value	$107,973,720	$116,912,411

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Actuarial Value of Assets

The actuarial value of assets is determined by projecting the market value of assets as of the beginning of the prior plan year with the assumed rate of return during that year (7.5%) and accounting for deposits and disbursements with interest at the assumed rate of return. An adjustment is then applied to recognize the difference between the actual investment return and expected return over a five year period. This preliminary actuarial value is not allowed to differ from the market value of assets by more than 10%. The calculation of the actuarial value of assets as of July 1, 2017 is presented in Table V.

Table V

		July 1, 2017
(1)	Market value at July 1, 2016	$103,469,741
(2)	2017 Contributions	$15,601,591
(3)	2017 Payments	($15,008,304)
(4)	Net interest adjustment at 7.5% on (1), (2), and (3) to June 30, 2017	$7,782,479
(5)	Expected market value on July 1, 2017 (1) + (2) + (3) + (4)	$111,845,507
(6)	Actual market value on July 1, 2017	$114,866,911
(7)	2017 (Gain) / Loss	($3,021,404)
(8)	80% of 2016 (Gain) / Loss	($2,417,123)
(9)	2016 (Gain) / Loss	$9,105,064
(10)	60% of 2015 (Gain) / Loss	$5,463,038
(11)	2015 (Gain) / Loss	$1,371,325
(12)	40% of 2014 (Gain) / Loss	$548,530
(13)	2014 (Gain) / Loss	($7,744,722)
(14)	20% of 2013 (Gain) / Loss	($1,548,944)
(15)	Actuarial value on July 1, 2017, (6) + (8) + (10) + (12) + (14) but not less than 80% nor greater than 120% of (6)	$116,912,411
(16)	Ratio of actuarial value to market value	101.78%
(17)	Actuarial Value Return for 2016	6.97%
(18)	Actuarial Value Return for 2017	7.71%
(19)	Market Value Return for 2016	-1.24%
(20)	Market Value Return for 2017	10.41%

"New Plan" Unfunded Actuarial Accrued Liabilities

Under the Entry Age Normal Actuarial Cost Method, the Actuarial Accrued Liability represents what the accumulated assets would have been as of the valuation date if:

- current plan provisions and assumptions had always been in effect,
- experience conformed exactly to assumptions, and
- the normal cost had been contributed each year since inception.

The actuarial value of the Fund's assets as of the end of the prior year are subtracted from the Actuarial Accrued Liability (AAL) to determine the Unfunded Actuarial Accrued Liability (UAAL) as of the valuation date. Over time, annual pension contributions will accumulate Plan assets equal to the AAL, and the UAAL will be eliminated. Thereafter, annual contributions equal to the normal cost will keep the Plan's assets and liabilities in balance. The UAAL is developed in Table VI.

Table VI

	July 1, 2016	July 1, 2017
Actuarial Accrued Liability	$255,581,922	$267,723,250
Actuarial Assets	107,973,720	116,912,411
Unfunded Actuarial Accrued Liability	$147,608,202	$150,810,839
Funded Status	42.2%	43.7%

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"New Plan" Appropriations

The pension appropriation for the upcoming fiscal years have been calculated in accordance with the desire of the City of Pawtucket. The pension appropriation is the sum of the:

- Employer normal cost,
- Increasing amortization of the unfunded actuarial accrued liability by June 30, 2035
  $ 150,810,839 over 18 years with 3.60% increasing payments
- Interest adjustment for payments contributed quarterly over fiscal year.

The pension appropriation is shown in Table VII.

Table VII

	July 1, 2016	July 1, 2017
Normal cost	$2,174,160	$2,308,268
Amortization payment of the unfunded liability	10,802,529	11,262,164
Total cost	$12,976,689	$13,570,432
% of Pay	70.7%	69.6%
Fiscal 2018 appropriation	$13,760,338	$13,760,338
Fiscal 2019 appropriation	$14,230,398	$14,458,472

Appropriation Forecast

The following exhibit forecasts employer and employee contributions over the next 32 years under the adopted funding schedule.

Note that the forecast is based upon an "open group" method. This method assumes that sufficient employees will be hired each year to keep the number constant. The total payroll of the system is expected to increase 4% per year. Payments are assumed to be made quarterly.

The employer total cost is expected to increase during the next 18 years until the unfunded liabilities are completely paid off, at which time only the normal cost will remain. The total cost represents about 71% of payroll, decreasing to 67% by the time the unfunded liabilities are fully paid off, leaving only a normal cost of 11.6%, thereafter.

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"New Plan" Appropriation Forecast

Fiscal Year Ending	Payroll	Employee Contribution	Employer Normal Cost with Interest	Amortization Payments with Interest	Employer Total Cost with Interest	Employer Total Cost % of Payroll	Funded Ratio %**
2018	$19,504,659	$1,642,657	$2,371,241	$11,389,097	$13,760,338	70.5	43.7
2019	$20,284,845	$1,716,740	$2,457,485	$12,000,987	$14,458,472	71.3	45.8
2020	$21,096,239	$1,794,121	$2,546,835	$12,433,022	$14,979,857	71.0	48.0
2021	$21,940,089	$1,874,946	$2,639,402	$12,880,611	$15,520,013	70.7	50.3
2022	$22,817,692	$1,959,367	$2,735,298	$13,344,313	$16,079,611	70.5	52.7
2023	$23,730,400	$2,047,541	$2,834,643	$13,824,709	$16,659,352	70.2	55.2
2024	$24,679,616	$2,139,634	$2,937,559	$14,322,398	$17,259,957	69.9	57.8
2025	$25,666,801	$2,235,818	$3,044,173	$14,838,004	$17,882,177	69.7	60.5
2026	$26,693,473	$2,336,274	$3,154,617	$15,372,173	$18,526,790	69.4	63.3
2027	$27,761,212	$2,441,189	$3,269,024	$15,925,571	$19,194,595	69.1	66.3
2028	$28,871,660	$2,550,759	$3,387,538	$16,498,891	$19,886,429	68.9	69.4
2029	$30,026,526	$2,665,189	$3,510,301	$17,092,851	$20,603,152	68.6	72.6
2030	$31,227,587	$2,784,692	$3,637,466	$17,708,194	$21,345,660	68.4	76.0
2031	$32,476,691	$2,909,491	$3,769,188	$18,345,689	$22,114,877	68.1	79.5
2032	$33,775,759	$3,039,818	$3,905,627	$19,006,134	$22,911,761	67.8	83.2
2033	$35,126,789	$3,161,411	$4,061,852	$19,690,355	$23,752,207	67.6	87.1
2034	$36,531,861	$3,287,867	$4,224,326	$20,399,207	$24,623,533	67.4	91.2
2035	$37,993,135	$3,419,382	$4,393,299	$21,133,579	$25,526,878	67.2	95.5
2036	$39,512,860	$3,556,157	$4,569,031	$0	$4,569,031	11.6	100.0
2037	$41,093,375	$3,698,404	$4,751,792	$0	$4,751,792	11.6	100.0
2038	$42,737,110	$3,846,340	$4,941,864	$0	$4,941,864	11.6	100.0
2039	$44,446,594	$4,000,193	$5,139,539	$0	$5,139,539	11.6	100.0
2040	$46,224,458	$4,160,201	$5,345,120	$0	$5,345,120	11.6	100.0
2041	$48,073,436	$4,326,609	$5,558,925	$0	$5,558,925	11.6	100.0
2042	$49,996,374	$4,499,674	$5,781,282	$0	$5,781,282	11.6	100.0
2043	$51,996,229	$4,679,661	$6,012,533	$0	$6,012,533	11.6	100.0
2044	$54,076,078	$4,866,847	$6,253,035	$0	$6,253,035	11.6	100.0
2045	$56,239,121	$5,061,521	$6,503,156	$0	$6,503,156	11.6	100.0
2046	$58,488,686	$5,263,982	$6,763,282	$0	$6,763,282	11.6	100.0
2047	$60,828,233	$5,474,541	$7,033,814	$0	$7,033,814	11.6	100.0
2048	$63,261,362	$5,693,523	$7,315,166	$0	$7,315,166	11.6	100.0
2049	$65,791,817	$5,921,264	$7,607,773	$0	$7,607,773	11.6	100.0

** Beginning of Fiscal Year

EXHIBITS

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Exhibit 1 - Age/Service Distribution with Average Salary as of July 1, 2017

Attained Age	Service <5	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	Total
< 20	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
20-24	9	0	0	0	0	0	0	0	0	9
	54,791	0	0	0	0	0	0	0	0	54,791
25-29	40	4	0	0	0	0	0	0	0	44
	52,671	65,054	0	0	0	0	0	0	0	53,797
30-34	23	16	14	0	0	0	0	0	0	53
	48,763	70,606	71,624	0	0	0	0	0	0	61,396
35-39	5	14	15	4	0	0	0	0	0	38
	58,210	70,143	72,556	82,125	0	0	0	0	0	70,787
40-44	5	5	13	17	1	0	0	0	0	41
	64,687	69,302	73,877	80,099	76,077	0	0	0	0	74,832
45-49	1	1	11	16	15	0	0	0	0	44
	70,765	69,061	72,020	80,071	82,121	0	0	0	0	78,295
50-54	0	2	5	4	12	1	1	0	0	25
	0	68,978	70,815	83,150	84,940	72,140	77,109	0	0	79,727
55-59	0	0	0	4	3	3	7	1	0	18
	0	0	0	76,495	75,075	77,307	82,108	72,021	0	78,328
60-64	0	0	0	0	0	2	0	0	0	2
	0	0	0	0	0	77,263	0	0	0	77,263
65-69	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
70+	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0
Total Employees	83	42	58	45	31	6	8	1	0	274
Average Salary	53,093	69,653	72,375	80,220	82,336	76,431	81,483	72,021	0	68,886

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Exhibit 2 - Retiree Distribution as of July 1, 2017

	Number of Retirees			Total Monthly Payments		
Attained Age	Female	Male	Total	Female	Male	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	0	0	0	0	0
35-39	1	0	1	1,885	0	1,885
40-44	1	1	2	1,701	1,885	3,586
45-49	5	12	17	11,211	47,273	58,484
50-54	6	33	39	7,968	125,262	133,230
55-59	5	49	54	11,334	199,452	210,786
60-64	8	38	46	16,885	144,627	161,512
65-69	14	54	68	22,670	178,783	201,453
70-74	9	53	62	11,702	171,237	182,939
75-79	9	22	31	14,020	54,033	68,052
80-84	12	18	30	12,243	39,765	52,008
85-89	4	12	16	7,635	26,086	33,721
90-94	4	1	5	3,501	2,567	6,069
95+	0	0	0	0	0	0
Total	78	293	371	122,753	990,970	1,113,723
Average (Age/Payment)	69.62	66.02	66.77	1,574	3,382	3,002
Frequency Percent	21.0	79.0	100	11.0	89.0	100

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Exhibit 3 - Disabled Retiree Distribution as of July 1, 2017

	Number of Retirees			Total Monthly Payments		
Attained Age	Female	Male	Total	Female	Male	Total
< 20	0	0	0	0	0	0
20-24	0	0	0	0	0	0
25-29	0	0	0	0	0	0
30-34	0	2	2	0	8,870	8,870
35-39	1	3	4	4,274	12,115	16,389
40-44	0	2	2	0	7,454	7,454
45-49	0	6	6	0	19,490	19,490
50-54	1	9	10	2,796	30,625	33,421
55-59	0	3	3	0	9,989	9,989
60-64	0	12	12	0	40,530	40,530
65-69	0	7	7	0	23,673	23,673
70-74	0	0	0	0	0	0
75-79	0	1	1	0	4,336	4,336
80-84	0	0	0	0	0	0
85-89	0	0	0	0	0	0
90-94	0	0	0	0	0	0
95-99	0	0	0	0	0	0
Total	2	45	47	7,070	157,082	164,152
Average (Age/Payment)	45.45	55.57	55.14	3,535	3,491	3,493
Frequency Percent	4.3	95.7	100	4.3	95.7	100

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EXHIBIT 4 - "NEW PLAN" CASHFLOW FORECAST

The following is a 30 year forecast of benefit payments, Contribution Income and Investment Returns.

Fiscal Year Ending	Benefit Payments	Employee Contributions	Employer Contributions	Investment Returns 7.5%	Net change in plan assets
2018	$15,291,279	$1,642,657	$13,760,338	$9,606,631	$9,718,348
2019	15,739,909	1,716,740	14,458,472	10,164,511	10,599,814
2020	16,397,127	1,794,121	14,979,857	10,984,256	11,361,107
2021	17,079,501	1,874,946	15,520,013	11,862,019	12,177,478
2022	17,723,148	1,959,367	16,079,611	12,801,968	13,117,799
2023	18,383,655	2,047,541	16,659,352	13,813,432	14,136,669
2024	19,040,875	2,139,634	17,259,957	14,902,341	15,261,058
2025	19,762,444	2,235,818	17,882,177	16,076,647	16,432,198
2026	20,480,881	2,336,274	18,526,790	17,339,894	17,722,076
2027	21,322,071	2,441,189	19,194,595	18,701,033	19,014,746
2028	22,144,180	2,550,759	19,886,429	20,160,313	20,453,321
2029	23,081,666	2,665,189	20,603,152	21,728,723	21,915,398
2030	24,004,933	2,784,692	21,345,660	23,408,072	23,533,491
2031	24,965,130	2,909,491	22,114,877	25,210,107	25,269,345
2032	25,963,736	3,039,818	22,911,761	27,143,713	27,131,557
2033	27,002,285	3,161,411	23,752,207	29,218,021	29,129,354
2034	28,082,376	3,287,867	24,623,533	31,443,618	31,272,642
2035	29,205,671	3,419,382	25,526,878	33,831,470	33,572,058
2036	30,373,898	3,556,157	4,569,031	35,405,101	13,156,390
2037	31,588,854	3,698,404	4,751,792	36,401,842	13,263,183
2038	32,852,408	3,846,340	4,941,864	37,406,992	13,342,788
2039	34,166,505	4,000,193	5,139,539	38,418,529	13,391,756
2040	35,533,165	4,160,201	5,345,120	39,434,173	13,406,329
2041	36,954,492	4,326,609	5,558,925	40,451,359	13,382,402
2042	38,432,671	4,499,674	5,781,282	41,467,220	13,315,504
2043	39,969,978	4,679,661	6,012,533	42,478,550	13,200,766
2044	41,568,777	4,866,847	6,253,035	43,481,781	13,032,886
2045	43,231,528	5,061,521	6,503,156	44,472,950	12,806,098
2046	44,960,789	5,263,982	6,763,282	45,447,657	12,514,131
2047	46,302,979	5,474,541	7,033,814	46,401,035	12,606,411

EXHIBIT 5 – SUMMARY OF PLAN PROVISIONS:

This summary is prepared in accordance with Collective Bargaining Agreements as of July 1, 2017, and does not take into account any subsequent changes.

1. Administration

The City of Pawtucket administers the plan.

2. Participation

Participation is mandatory for employees of the City of Pawtucket who are covered under a collective bargaining agreement between the City of Pawtucket and the Pawtucket Fire Fighters Independent Union and the City of Pawtucket and the Pawtucket Lodge No. 4, Fraternal Order of Police.

3. Salary

Salary is defined as gross regular salary to include the base salary, holiday pay, longevity, out of grade pay and shift differential (if applicable).

4. Member Contributions

Employees hired after May 1, 2013 contribute 9%. Members contribute 8.5%, increasing to 9% commencing July 1, 2016.

5. Creditable Service

In general, creditable service is awarded during the period in which a member contributes to the pension plan.

6. Service Retirement

a. Eligibility:

Completion of 20 years of service

b. Benefit Amount:

Police: 50% of final average compensation plus an additional 2% of final average compensation for each year of service over 20 years, not to exceed 10 years. Final average compensation is defined as the highest 3 year average salary rate over the last 10 years.

Fire: 50% of final average compensation plus an additional 2% of final average compensation for each year of service over 20 years, not to exceed 10 years. Final average compensation is defined as the latest 3 year average salary rate.

7. Accidental Disability

a. Eligibility:

Participants are eligible for an accidental disability benefit, regardless of service or age, if they become permanently and totally incapacitated for further duty as a result of personal injury sustained while in the performance of duties.

b. Benefit Amount:

The accidental disability amount is 66 2/3% of compensation at date of disability plus an additional 10% of compensation for each dependent child (until the child attains age 21), not to exceed 80% of compensation, payable to normal retirement date. If the date of disability is after 20 years of service, the disability benefit is payable until the member would have completed 25 years of employment. A normal retirement benefit is payable after the disability benefit is no longer payable.

8. Termination Vested

a. Eligibility:

Ten years of service

b. Benefit Amount:

Annual annuity payable at what would have been the 20th anniversary of employment.

9. Termination Non-Vested

c. Eligibility:

None

d. Benefit Amount:

Refund of employee contributions, plus interest (noncompounded).

10. Survivor Benefits

a. Eligibility:

None

b. Benefit Amount:

50% of compensation at date of death plus an additional 10% of compensation for each dependent child (until the child attains age 21), not to exceed 70% of compensation, payable for the lifetime of the surviving spouse or until the spouse remarries

12. Cost-of-Living Increases

Fire

Effective Date	Increase	Compounded
April 1, 1984	3.00%	Every 3 Years
July 1, 1986	1.50%	Annually
July 1, 1994	1.75%	Annually
July 1, 1995	2.00%	Annually
July 1, 1999	3.00%	Annually
July 1, 2004	3.00%	Annually

Police

Effective Date	Increase	Compounded
July 1, 1988	1.00%	Annually
July 1, 1989	1.50%	Annually
July 1, 1994	1.75%	Annually

July 1, 1996	2.00%	Annually
July 1, 1998	3.00%	Annually
July 1, 2004	3.00%	Annually

The cost-of-living adjustment is made on the service retirement benefit and the continuation of the service retirement benefit during the 10-year certain period. It is not applicable to a disability benefit or to a survivor benefit except as noted above.

Under the new plan provisions for active Members the COLA begin at the earlier of age 55 or 10 years following retirement.

13. <u>Postretirement Death Benefits</u>

Benefit payable for the remainder of the 10-year certain period. Then a benefit of 67½% of the participant's pension benefit is payable to the surviving spouse. In addition, a $15,000 funeral allowance is payable for Firefighters who die in the line of duty.

EXHIBIT 6 – ACTUARIAL METHODS AND ASSUMPTIONS:

The actuarial cost method, factors, and assumptions used in determining cost estimates are presented below.

1. Member Data

The member data used in the determination of cost estimates consist of pertinent information with respect to the active, inactive, retired, and disabled members of the employer as supplied by the employer to the actuary.

2. Valuation Date

July 1, 2017.

3. Actuarial Cost Method

The costs of the Plan have been determined in accordance with the individual entry age normal actuarial cost method.

4. Rate of Investment Return

It is assumed that the assets of the fund will accumulate at a compound annual rate of 7.5% per annum, net of investment expenses.

5. Salary Scale

It is assumed that salaries including longevity will increase according to the following rates:

Years of Service	Salary Increase
0-1	8.50%
2-4	3.25%
5	11.00%
6-9	3.50%
10	4.25%
11-14	3.75%
15	4.50%
16-19	3.75%
20	4.75%
21-24	3.25%
25+	2.00%

6. Cost-of-Living Increases

Cost-of-living increases have been assumed to be 3.0% per year.

7. Value of Investments

Assets held by the fund are valued at market value. The actuarial value of assets is determined using a five-year smoothing of asset returns greater than or less than the assumed rate of return.

8. Annual Rate of Withdrawal Prior to Retirement

According to the following table.

Service	Rate
0	0.06000
1	0.03168
2	0.02886
3	0.02616
4	0.02364
5	0.02124
6	0.01896
7	0.01686
8	0.01494
9	0.01314
10	0.01146
11	0.00996
12	0.00858
13	0.00738
14	0.00630
15	0.00540
16	0.00462
17	0.00402
18	0.00354
19+	0.00000

9. Annual Rate of Mortality

It is assumed that both pre-retirement and post retirement mortality are represented by the RP-2000 combined mortality table adjusted to Blue Collar (male tables) with 1 year setback, and Scale AA improvement through 2011. Disabled mortality is assumed to follow The RP-2000 combined mortality table adjusted to blue Collar (male tables) set forward 1 year for males and 2 years for females, and Scale AA improvement through 2011.

10. Service Retirement

Based on an analysis of experience and anticipated changes in behavior, the assumed annual retirement rates are illustrated as follows for Police:

Service	Rate	Service	Rate
20	0.20	30	0.25
21	0.20	31	0.20
22	0.20	32	0.20
23	0.05	33	0.35
24	0.05	34	0.35
25	0.05	35	0.50
26	0.05	36	0.50
27	0.05	37	0.50
28	0.05	38	0.50
29	0.05	39+	1.00

Based on an analysis of experience and anticipated changes in behavior, the assumed annual retirement rates are illustrated as follows for Firefighters:

Service	Rate	Service	Rate
20	0.10	28	0.10
21	0.15	29	0.10
22	0.15	30	0.25
23	0.15	31	0.20
24	0.10	32	0.20
25	0.10	33	0.35
26	0.10	34	0.35
27	0.10	35+	0.60

At 65 the rate is 100%, regardless of the number of years of service.

11. Annual Rate of Disability Prior to Retirement

Based on an analysis of experience, the assumed annual rates of disability may best be illustrated by the following rates at the following ages:

Attained Age	Rate
25	.0020
30	.0020
35	.0020
40	.0020
45	.0050
50	.0063
55	.0060
60	.0043

12. Family Composition

It is assumed that 90% of male members and 75% of female members will be survived by a spouse and that females (males) are three years younger (older) than members.

13. Administrative Expenses

The normal cost is increased by an amount equal to the anticipated administrative expenses for the upcoming fiscal year. The amount for fiscal year 2017 is $105,000 and is anticipated to increase at 4% per year.

EXHIBIT 7 – GLOSSARY OF TERMS:

This glossary summarizes the technical terms contained in this report.

1. <u>Actuarial Accrued Liability</u>

That portion of the Actuarial Present Value of projected plan benefits that is not provided for by future employer Normal Costs or employee contributions.

2. <u>Actuarial Assumptions</u>

Assumptions as to the occurrence of future events affecting the Retirement System such as:

- Rates of investment returns
- Increases in a member's salary
- Inflation
- The probability of mortality, turnover, disablement
- Retirement at each age and other relevant items

3. <u>Actuarial Cost Method</u>

A procedure for allocating the Actuarial Present Value of projected pension plan benefits between Normal Cost and Actuarial Accrued Liability.

4. <u>Actuarial Present Value</u>

The single sum amount required at the valuation date that is required to provide for anticipated future events based upon the terms of the plan and the Actuarial Assumptions.

5. <u>Forecast</u>

A projection of future benefit payments or contribution requirements based upon the terms of the plan, the current asset amounts, the Actuarial Assumptions, and additional assumptions as to the replacement of terminating employees with new employees.

6. Normal Cost

That portion of the Actuarial Present Value of future benefits that is assigned to the current year.

7. Unfunded Actuarial Accrued Liability

That portion of the Actuarial Accrued Liability that is not provided for by current actuarial value of assets.

8. Actuarial Valuation Method

The method used to divide the cost of future benefits among the Actuarial Accrued Liability, the current year's Normal Costs, and future years' Normal Costs. The resulting current funding requirement is then determined as the current year's Normal Cost plus the payment necessary to amortize the Unfunded Actuarial Liability.

9. Vested Liability

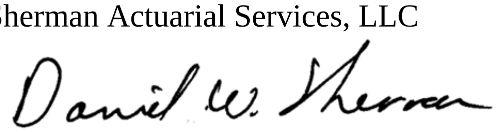
That portion of the Actuarial Present Value of Accrued Benefits that a member would be entitled to if the member terminated employment with the employer as of the valuation date.

CERTIFICATION:

This report fairly represents the actuarial position of the City of Pawtucket Police and Firefighters Pension Plan contributing as of July 1, 2017, in accordance with generally accepted actuarial principles applied consistently with the preceding valuation. In our opinion, the actuarial assumptions used to compute actuarial accrued liability and normal cost are reasonably related to plan experience and to reasonable expectations, and represents our best estimate of anticipated plan experience.

The report was prepared under the supervision of Daniel Sherman, an Associate of the Society of Actuaries and a Member of the American Academy of Actuaries, who takes responsibility for the overall appropriateness of the analysis, assumptions and results. Daniel Sherman is deemed to meet the General Qualification Standard and the basic education and experience requirement in the pension area. Based on over thirty years of performing valuations of similar complexity, Mr. Sherman is qualified by experience.. Daniel Sherman has met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Sherman Actuarial Services, LLC



Daniel W. Sherman, ASA, MAAA

November, 2017

"OLD PLAN"

	July 1, 2017	July 1, 2016
Pensioners:		
Number	12	13
Average Age	92.10	91.15
Average Monthly benefit	$1,667	$1,633
Beneficiaries:		
Number	24	23
Average Age	87.24	86.13
Average Monthly benefit	$809	$797
Actuarial Accrued Liability	$2,379,232	$2,462,092