

The City of Cranston Fire and Police Department Pension Plans

Actuarial Valuation Report
as of July 1, 2016

December 2016





Christopher Kozlow

Director, Consulting Actuary

christopher.kozlow@xerox.com

tel 203.352.1673

fax 203.967.3139

Buck Consultants, LLC.

595 Summer Street, Suite 3 S

Stamford, CT 06901

December 7, 2016

Mr. Robert F. Strom
Finance Director
City of Cranston
869 Park Avenue
Cranston, Rhode Island 02910

Dear Mr. Strom:

The City of Cranston retained Buck Consultants, LLC (Buck) to complete this actuarial valuation of the Fire and Police Department Pension Plans. This report presents the results of the valuation of the Pension Plans, prepared as of July 1, 2016 and shows the current funded position of the Pension Plans and the projected contributions needed to fund these pension obligations.

Future actuarial measurements may differ significantly from **current** measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, Buck performed no analysis of the potential range of such future differences. An analysis of the potential range of such future differences is beyond the scope of this valuation.

Plan Provisions

Note the valuation results are based on two separate sets of benefit provisions. The first is the State Superior Court approved provision changes that the City negotiated with the Plan members and the second is for the members who opted out of those Court approved changes. A summary of the plan provisions as used for valuation purposes is presented in Schedule C.

Data Used

Buck performed the calculations using participant data as of July 1, 2016 and financial data supplied by the City as of June 30, 2016. Buck did not audit the data, however, they were reviewed for reasonableness and assumptions were made for consistency with the prior year data. The results of the valuation are dependent on the accuracy of the data.

Actuarial Assumptions

The assumptions used in the valuation were generally those used in the prior year. The assumption changes are summarized below:

- Holiday load was decreased from 8.14% to 7.04% of regular pay to reflect updated experience.
- The mortality assumption with respect to pre-retirement experience was updated by one year per the assumptions.

Actuarial Certification

The plan sponsor selected the assumptions used for the funding policy calculations in the report with our advice based upon an experience study conducted in 2015. Based on the individually reasonable assumptions used in the preparation of this report, and on the data furnished to us, we certify that projection of the costs under this plan has been made using generally accepted actuarial principles and practices, and that the contribution amounts are consistent with the funding policy adopted by the plan sponsor and reviewed by the Superior Court in line with negotiations between the sponsor and participants. It is important to note that because of the low funded position of the plan that adherence to a policy of making substantial contributions in order to make adequate provision for the substantial benefit payments required each year is critical to the success of the plan..

The valuation was prepared under the supervision of Christopher Kozlow, a Fellow of the Society of Actuaries, an Enrolled Actuary, and a Member of the American Academy of Actuaries and Aaron Shapiro, a Fellow of the Society of Actuaries, an Enrolled Actuary, and a Member of the American Academy of Actuaries, who have each met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about it.

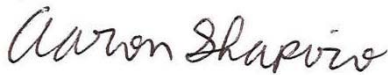
The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,

BUCK CONSULTANTS, LLC



Christopher Kozlow, FSA, EA, MAAA
Director, Consulting Actuary



Aaron Shapiro, FSA, EA, MAAA
Principal, Consulting Actuary

CK/NJ:ln

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Section 1 – Summary of Principal Results

For convenience of reference, the principal results of the valuation are summarized below:

Valuation Date: July 1, 2016	Fire	Police	Total
Active plan members	23	5	28
Average active age	55.32	51.35	54.61
Average active service	30.40	25.26	29.48
Annual regular pay with holiday/longevity load*	\$ 2,218,724	\$ 445,250	\$ 2,663,974
Number of service retirees, disability retirees and beneficiaries**	217	207	424
Average inactive age	69.24	67.48	68.38
Annual retirement allowances	\$ 13,743,737	\$ 10,917,720	\$ 24,661,457
Number of former members entitled to deferred benefits	0	0	0
Valuation assets without receivable	\$ 39,946,656	\$ 22,770,720	\$ 62,717,376
Valuation assets with receivable***	\$ 51,600,168	\$ 32,115,896	\$ 83,716,064
Unfunded actuarial accrued liability without receivable	\$ 137,413,043	\$ 108,604,903	\$ 246,017,946
Total normal contribution rate	26.08%	33.18%	27.59%
City FYE 2018 contribution assumed payable January 1, 2018	\$ 12,596,836	\$ 9,969,515	\$ 22,566,351

* Includes 7.04% of Holiday load and 11% Longevity load.

** Includes 16 Fire retirees and 58 Police retirees that opted out of the Court approved plan.

*** The contribution receivable is the sum of the City FYE 2017 budgeted amount of \$21,403,849, adjusted for timing, and the State contribution of \$393,283 that was made on July 1, 2016. The \$393,283 was split 55.53% and 44.47% between Fire and Police, respectively.

Comments on the valuation results as of July 1, 2016 are given in Section 4 and the appropriation payable by the City during the fiscal period beginning July 1, 2017 is set out in Schedule A.

Section 1 – Summary of Principal Results (continued)

Actuarial Experience

In performing the actuarial valuation, various assumptions are made regarding such factors as mortality, retirement, disability and withdrawal rates as well as 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 plan 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 (UAL) was expected to decrease from \$239,632,074 to \$237,852,008. The actual UAL at the end of the year was \$246,017,946. The chart below reconciles the actual to expected UAL. As can be seen in the table below, the primary source of change was due to the investment return being less than expected.

The sources of the (Gain)/Loss are as follows:

	Demographic (Gain)/Loss	Other (Gain)/Loss	Experience Study (Gain)/Loss	UAL
Expected UAL				\$237,852,008
Salary increases	\$46,560			
Retiree mortality	(753,798)			
Active retirement decrement	713,694			
Active mortality decrement	(1,607)			
Active disability decrement	(60,976)			
Other	<u>836,042</u>			
Subtotal	779,915			
Assumption revision to reflect additional year of mortality improvement		73,904		
Holiday Load Assumption Change		(216,849)		
Investment (Gain)/Loss		<u>7,528,969</u>		
Subtotal		\$7,386,024		
Total change in UAL				<u>8,165,939</u>
Actual UAL				\$246,017,946

Section 1 – Summary of Principal Results (continued)

Schedule A of this report presents the results of the valuation and shows the present and prospective assets and liabilities of the Pension Plans as of July 1, 2016.

Schedule B of this report outlines the actuarial assumptions and methods used in the preparation of the valuation. All methods and assumptions have been selected in accordance with the applicable Actuarial Standards of Practice (ASOPs) and we have determined that the assumptions are reasonable individually and in the aggregate.

Schedule C of this report presents a summary of the main provisions of the Pension Plans used in the valuations.

Schedule D details the age and service breakdown of the active participants and the salary used in the valuation.

Schedule E provides a forecast of the appropriation payments over the amortization period through FYE 2045 assuming payments are made mid-fiscal year. The appropriation for FYE 2017 will remain as budgeted, while results of this report will officially go into effect for the FYE 2018 appropriation.

Section 2 – Employee Data

Employee and inactive participant data was provided by the City. Buck did not audit the data, however, they were reviewed for reasonableness and assumptions were made for consistency with the prior year data. The validity of the actuarial computations presented in this report is dependent upon the accuracy of the data provided.

Schedule D shows the number and annual salaries of active members.

The number and annual retirement allowances of retired and disabled lives and beneficiaries as of July 1, 2016 that are subject to the Court approved negotiated benefit changes are as follows:

	Number	Average Age	Annual Allowances
Retired Lives	207	67.31	\$14,060,896
Disabled Lives	53	66.67	\$ 3,068,676
Beneficiaries	90	77.54	\$ 3,428,409
Total	350	69.84	\$20,557,981

The number and annual retirement allowances of retired and disabled lives and beneficiaries as of July 1, 2016 that opted out of the Court approved negotiated benefit changes are as follows:

	Number	Average Age	Annual Allowances
Retired Lives	53	62.04	\$ 2,953,534
Disabled Lives	21	60.07	\$ 1,149,943
Beneficiaries	0	0	\$ 0
Total	74	61.48	\$ 4,103,477

Section 3 – Assets

The amount of the assets taken into account in the valuation was obtained from information submitted by the City and the validity of the results presented in this report is dependent upon the accuracy of the financial information provided.

The value of the assets of the system as of July 1, 2016 was as follows:

Fund	Fire	Police	Total
Cash	\$358,594	\$205,209	\$563,804
PIMCO Bond Account	3	3	6
JMS Other Investments (REIT)	320,067	180,037	500,104
Janney-Equities Stock/Options	21,281,245	12,537,101	33,818,346
Janney-Fx Inc Mut Fnd/ETF/UIT	11,435,897	6,667,887	18,103,784
JMS Taxable Dividends	3,804,727	2,140,159	5,944,886
JMS Account	2,746,123	1,040,324	3,786,447
Due From State of RI	0	0	0
Total Market Value of Assets	\$ 39,946,656	\$ 22,770,720	\$ 62,717,376
Contribution Receivable	<u>11,653,512</u>	<u>9,345,176</u>	<u>20,998,688</u>
Valuation Value of Assets with Receivable	\$ 51,600,168	\$ 32,115,896	\$ 83,716,064

Section 4 – Comments on Valuation

Schedule A of this report presents the results of the valuation and shows the present and prospective assets and liabilities of the Pension Plans as of July 1, 2016. Total aggregate actuarial liabilities equal (a) \$287,668,364, which equals the present value of obligations to retired members and their beneficiaries, plus (b) \$23,738,592, which equals the value of prospective benefits of active members, for a total of \$311,406,956. Against these prospective liabilities, the Plans have present assets of \$ 62,717,376. This leaves \$248,689,580 to be met by future contributions.

The unadjusted unfunded accrued liability amounts to \$246,017,946, leaving \$2,671,634 to be met by future normal contributions. We recommend normal contribution rates of 26.08% for Fire and 33.18% for Police. Applying these rates to the compensation of active members and assuming payment in FYE 2018 would produce a total normal contribution of \$777,160. Estimated employee contributions are \$296,891, leaving \$480,269 as the City's normal contribution.

Before amortizing the unfunded liability for the past service contribution payment, adjustments were made under the assumption that payment begins in FYE 2018. After adjusting for interest, an asset receivable of \$20,998,688 and mid-year payments, the new adjusted unfunded accrued liability amounts to \$252,702,813. The asset receivable is comprised of the FYE 2017 budgeted contribution payment of \$21,403,849, discounted to July 1, 2016, and a state allocation of \$393,283,.

The adjusted unfunded accrued liability for the members who opted out of the Court approved benefit design will be amortized through FYE 2037, resulting in a past service contribution of \$4,104,188, commencing in FYE 2018.

The adjusted unfunded accrued liability for the members subject to the Court approved benefit design will be amortized through FYE 2042, resulting in a past service contribution of \$17,981,894, commencing in FYE 2018.

Section 5 – Accounting Information

On June 25, 2012 GASB released Statement Nos. 67 and 68, which supersede the requirements of Statement Nos. 25 and 27, respectively. The effective date for the financial reporting for pension plans under Statement No. 68 is for the financial reporting year commencing after June 15, 2015, i.e. the July 1, 2015 – June 30, 2016 fiscal year for the pension plan.

The disclosure requirements under GASB 67 will be presented in a separate report. Please refer to that document for all of the relevant accounting information.

The disclosure requirements under GASB 68 will be presented in a separate report. Please refer to that document for the relevant accounting information. Such report will be used in lieu of Schedule F provided in previous valuation reports.

Schedule A – Results of the Valuation as of July 1, 2016

	Fire	Police	Total
1. Actuarial Liabilities			
(a) Present Value of Benefits to be Paid on Account of Active Members	\$ 19,898,451	\$ 3,840,141	\$ 23,738,592
(b) Present Value of Benefits Payable to Retired Member and Beneficiaries	159,449,662	128,218,702	287,668,364
(c) Total Actuarial Liabilities	\$ 179,348,113	\$ 132,058,843	\$ 311,406,956
2. Market Value of Assets*	\$ 39,946,656	\$ 22,770,720	\$ 62,717,376
3. Total Prospective Contributions by the City (1(c) - 2.)	\$ 139,401,457	\$ 109,288,123	\$ 248,689,580
4. Unfunded Accrued Liability	\$ 137,413,043	\$ 108,604,903	\$ 246,017,946
5. Present Value of Future Normal Contributions	\$ 1,988,414	\$ 683,220	\$ 2,671,634
6. Present Value of Future Salaries of Present Active Members	\$ 7,623,000	\$ 2,059,000	\$ 9,682,000
7. Normal Contribution Rate (5. / 6.)	26.08%	33.18%	27.59%
8. Valuation Payroll Used for Contribution Purposes	\$ 2,285,286	\$ 458,608	\$ 2,743,894
9. Normal Cost Including Interest			
(a) Employees	\$ 249,253	\$ 47,638	\$ 296,891
(b) City	\$ 369,845	\$ 110,424	\$ 480,269
(c) Total (7. x 8., plus interest)	\$ 619,098	\$ 158,062	\$ 777,160
10. Asset Receivable as of July 1, 2016	\$ 11,653,512	\$ 9,345,176	\$ 20,998,688
11. Adjusted UAL for FYE 2018 payment	\$ 141,336,771	\$ 111,366,042	\$ 252,702,813
12. City Contribution to Amortize UAL			
(a) Court Approved Members through FYE 2042	\$ 11,479,065	\$ 6,502,829	\$ 17,981,894
(b) Opt Outs through FYE 2037	\$ 747,926	\$ 3,356,262	\$ 4,104,188
(c) Total	\$ 12,226,991	\$ 9,859,091	\$ 22,086,082
13. Total Contribution (Employees plus City) (9(c) + 12(c))	\$ 12,846,089	\$ 10,017,153	\$ 22,863,242
14. City Contribution for FYE 2018 payment (13. – 9(a))	\$ 12,596,836	\$ 9,969,515	\$ 22,566,351

* Due to different amortization period for the retirees that opted out of the Court approved agreement, Market Value of Assets were allocated in proportion of each group's accrued liability to the total accrued liability.

Schedule B – Summary of Assumptions (continued)

Actuarial Funding Assumptions

Funding valuation interest rate

7.90% per annum

Healthy Mortality

For pre-retirement mortality, the RP-2000 Combined with Blue Collar Adjustment and mortality improvements projected to 2026 with Scale AA. The prior valuation assumed the same table but mortality improvements were projected to 2025.

For post-retirement mortality: For males, reflect 115% of the RP-2000 Combined Healthy for Males mortality table with White Collar adjustments, projected generationally with Scale AA from 2000 for healthy retirees and beneficiaries. For females, reflect 95% of the RP-2000 Combined Healthy for Females mortality table with White Collar adjustments, projected generationally with Scale AA from 2000 for healthy retirees and beneficiaries.

For pre-retirement mortality, it was also assumed that 92.5% of deaths are service related.

Disabled Mortality

Pre-retirement mortality, set forward 3 years.

Disability Incidence

Age	Rate
20	0.12%
25	0.17%
30	0.22%
35	0.29%
40	0.44%
45	0.72%
50	1.21%
55	1.21%

92.5% assumed to be accidental disabilities and 7.5% assumed to be ordinary disabilities

Turnover

Death and disability

Schedule B – Summary of Assumptions (continued)

Retirement age

Rates according to the following table:

Years of Service	Percent Retiring
Less than 20	0%
20	20%
21 – 24	4%
25	15%
26 – 29	10%
30	50%
31 and greater	20%

100% upon the attainment of age 65 regardless of service

Actuarial Funding Method

Attained Age Normal method with the UAAL funded on a level dollar basis over a closed period. For the Court approved plan provisions, the closed period is through FYE 2042. For the Opt Out plan the closed period is through FYE 2037.

Actuarial Value of Assets

Equal to Market Value of Assets

Expenses

Paid by the city

Definition of Pay

Regular pay plus a 18.81% holiday/longevity load (7.04% for holiday and 11% for longevity).

Pay Increase

3.0% for all future years.

Marriage Assumption

80% of active employees are assumed to be married with the husband assumed to be 3 years older than the wife.

Schedule C – Summary of Main Provisions of Pension Systems

The plan is closed to employees hired on or after July 1, 1995.

Final compensation is the member's base compensation rate, including longevity and holiday pay at retirement.

Service is total employment by the City plus any purchased service.

Service Pension

Eligibility	20 years of service.
Amount	A pension equal to 2½% of the member's final compensation for each year of service up to 20 years plus 2% of final compensation for each year of service, up to 10 years, in excess of 20 years. An additional 5% of final compensation is added to the pension at age 55.

Deferred Pension

Eligibility	10 years of service.
Amount	A deferred pension commencing at age 55, equal to 2½% of final compensation for each year of total service.

Ordinary Disability Pension

Eligibility	Total and permanent disability at any age.
Amount	A pension equal to 50% of final compensation.

Work Related Disability Pension

Eligibility	Work related total and permanent disability at any age. Impairment due to heart condition or hypertension presumed to be work related.
Amount	A pension of $66\frac{2}{3}\%$ of final compensation, but not less than the service pension.

Death Benefit

Eligibility	Death in active service after 1 year of service or after termination with a deferred pension. (No service requirement if death is work related).
Amount	A pension of $33\frac{1}{3}\%$ of the member's final compensation is paid to his widow until she dies or remarries. The benefit increases to $67\frac{1}{2}\%$ of final compensation if the member has 20 years of service. (The pension is 50% if death is work related). In the event of death after termination with a deferred pension, the widow receives $67\frac{1}{2}\%$ of the deferred pension starting when the member would have been age 55.

Benefit upon Death after Retirement

Upon death of a retired member, $67\frac{1}{2}\%$ of his pension is paid to his widow. No benefits are payable upon the death of unmarried members. Note that there is no actuarial reduction for the spouse coverage.

Schedule C – Summary of Main Provisions of Pension Systems

Cost of Living Adjustment

For members in Court approved Plan:

Every other year COLA freeze for a ten year period, effective July 1, 2013. In years 11 and 12 a 1.5% COLA would apply and then a 3.0% COLA for each year thereafter.

For members that opted out of Court approved Plan:

No COLAs will be paid for a ten year period effective July 1, 2013. Upon the expiration of the ten year period, 3.0% annually thereafter, effective each July 1.

Contributions by Members

Firefighters	10.5% of base compensation plus longevity and holiday pay
Police	10.0% of base compensation plus longevity and holiday pay

Section D – Employee Data – Active Participant Count and Regular Pay Scatter

Age	Less than 10 Regular Pay	10 to 14 Regular Pay	15 to 19 Regular Pay	Service 20 to 24 Regular Pay	25 to 29 Regular Pay	30 and Over Regular Pay	Total Regular Pay
35 to 39	0	0	0	0	0	0	0
40 to 44	0	0	0	0	0	0	0
45 to 49	0	0	0	2	1	0	3
50 to 54	0	0	0	0	8	5	13
55 to 59	0	0	0	0	3	7	10
60 to 64	0	0	0	0	1	1	2
65 and Over	0	0	0	0	0	0	0
Total	0	0	0	2	13	13	28 2,242,214

Notes:

1. Regular Pay not shown in cells with fewer than 20 participants.
2. Total Regular Pay shown is before the holiday/longevity load.

Section E – Development of NPO for Fiscal Year Ending June 30, 2016

City of Cranston - Fire & Police Pension Plans

Members of Plan that Opted Out of Court Approved Negotiated Benefits

Funding Policy = 100% of Scenario ARC plus additional contribution for State allocation

Amortization Period Extended Through FYE 2037

Fiscal Year Ending	Employer Normal Cost	UAL Amortization	ARC	Employer Contribution	Funded Ratio	Benefit Payments
6/30/2017	0	3,929,447	3,929,447	3,808,893	19.2%	4,128,775
6/30/2018	0	4,104,189	4,104,189	4,104,189	20.7%	4,126,304
6/30/2019	0	4,104,189	4,104,189	4,104,189	22.4%	4,101,308
6/30/2020	0	4,104,189	4,104,189	4,104,189	24.4%	4,069,500
6/30/2021	0	4,104,189	4,104,189	4,104,189	26.5%	4,039,287
6/30/2022	0	4,104,189	4,104,189	4,104,189	28.8%	4,000,998
6/30/2023	0	4,104,189	4,104,189	4,104,189	31.4%	3,963,042
6/30/2024	0	4,104,189	4,104,189	4,104,189	34.1%	4,036,179
6/30/2025	0	4,104,189	4,104,189	4,104,189	36.9%	4,106,835
6/30/2026	0	4,104,189	4,104,189	4,104,189	39.9%	4,174,581
6/30/2027	0	4,104,189	4,104,189	4,104,189	43.1%	4,238,847
6/30/2028	0	4,104,189	4,104,189	4,104,189	46.6%	4,298,969
6/30/2029	0	4,104,189	4,104,189	4,104,189	50.3%	4,354,079
6/30/2030	0	4,104,189	4,104,189	4,104,189	54.4%	4,403,308
6/30/2031	0	4,104,189	4,104,189	4,104,189	58.9%	4,446,034
6/30/2032	0	4,104,189	4,104,189	4,104,189	63.8%	4,481,603
6/30/2033	0	4,104,189	4,104,189	4,104,189	69.4%	4,509,382
6/30/2034	0	4,104,189	4,104,189	4,104,189	75.6%	4,528,997
6/30/2035	0	4,104,189	4,104,189	4,104,189	82.7%	4,539,976
6/30/2036	0	4,104,189	4,104,189	4,104,189	90.8%	4,541,570
6/30/2037	0	4,104,189	4,104,189	4,104,189	100.0%	4,533,227
6/30/2038	0	0	0	0	100.0%	4,514,094
6/30/2039	0	0	0	0	100.0%	4,483,282
6/30/2040	0	0	0	0	100.0%	4,439,756
6/30/2041	0	0	0	0	100.0%	4,381,998
6/30/2042	0	0	0	0	100.0%	4,309,059
6/30/2043	0	0	0	0	100.0%	4,220,225
6/30/2044	0	0	0	0	100.0%	4,114,367

Section E – Development of NPO for Fiscal Year Ending June 30, 2016

City of Cranston - Fire & Police Pension Plans

Only Members that Agreed to Court Approved Negotiated Benefits

Funding Policy = 100% of Scenario ARC plus additional contribution for State allocation

Amortization Period Extended Through FYE 2042

Fiscal Year Ending	Employer Normal Cost	UAL Amortization	ARC	Employer Contribution	Funded Ratio	Benefit Payments
6/30/2017	561,127	17,248,654	17,809,781	18,003,479	21.4%	20,666,884
6/30/2018	480,269	17,981,894	18,462,163	18,462,163	22.3%	20,783,423
6/30/2019	386,207	17,981,894	18,368,101	18,368,101	23.1%	21,320,168
6/30/2020	310,241	17,981,894	18,292,135	18,292,135	23.9%	21,313,012
6/30/2021	228,163	17,981,894	18,210,057	18,210,057	24.7%	21,700,415
6/30/2022	178,830	17,981,894	18,160,724	18,160,724	25.5%	21,488,476
6/30/2023	147,229	17,981,894	18,129,123	18,129,123	26.4%	21,731,820
6/30/2024	121,380	17,981,894	18,103,274	18,103,274	27.3%	21,713,891
6/30/2025	91,997	17,981,894	18,073,891	18,073,891	28.3%	21,676,934
6/30/2026	59,698	17,981,894	18,041,592	18,041,592	29.3%	21,826,598
6/30/2027	39,454	17,981,894	18,021,348	18,021,348	30.5%	21,949,566
6/30/2028	22,322	17,981,894	18,004,216	18,004,216	31.7%	21,992,092
6/30/2029	17,977	17,981,894	17,999,871	17,999,871	33.1%	22,017,089
6/30/2030	10,600	17,981,894	17,992,494	17,992,494	34.7%	22,001,357
6/30/2031	5,747	17,981,894	17,987,641	17,987,641	36.5%	21,938,847
6/30/2032	3,830	17,981,894	17,985,724	17,985,724	38.6%	21,832,743
6/30/2033	3,078	17,981,894	17,984,972	17,984,972	41.0%	21,691,890
6/30/2034	467	17,981,894	17,982,361	17,982,361	43.9%	21,497,761
6/30/2035	0	17,981,894	17,981,894	17,981,894	47.3%	21,252,229
6/30/2036	0	17,981,894	17,981,894	17,981,894	51.3%	20,954,511
6/30/2037	0	17,981,894	17,981,894	17,981,894	56.1%	20,603,356
6/30/2038	0	17,981,894	17,981,894	17,981,894	62.0%	20,195,982
6/30/2039	0	17,981,894	17,981,894	17,981,894	69.0%	19,732,051
6/30/2040	0	17,981,894	17,981,894	17,981,894	77.4%	19,212,901
6/30/2041	0	17,981,894	17,981,894	17,981,894	87.6%	18,639,252
6/30/2042	0	17,981,894	17,981,894	17,981,894	100.0%	18,012,838
6/30/2043	0	0	0	0	100.0%	17,337,252
6/30/2044	0	0	0	0	100.0%	16,615,410

Section E – Development of NPO for Fiscal Year Ending June 30, 2016

City of Cranston - Fire & Police Pension Plans

Appropriation Forecast for ALL MEMBERS After Approved Pension Reform

Fiscal Year Ending	Employer Normal Cost*	UAL Amortization	ARC	Employer Contribution	Funded Ratio	Benefit Payments
6/30/2017	561,127	21,178,101	21,739,228	21,812,371	21.1%	24,795,659
6/30/2018	480,269	22,086,082	22,566,351	22,566,351	22.1%	24,909,727
6/30/2019	386,207	22,086,082	22,472,289	22,472,289	23.0%	25,421,476
6/30/2020	310,241	22,086,082	22,396,323	22,396,323	24.0%	25,382,512
6/30/2021	228,163	22,086,082	22,314,245	22,314,245	25.0%	25,739,702
6/30/2022	178,830	22,086,082	22,264,912	22,264,912	26.1%	25,489,474
6/30/2023	147,229	22,086,082	22,233,311	22,233,311	27.2%	25,694,862
6/30/2024	121,380	22,086,082	22,207,462	22,207,462	28.5%	25,750,069
6/30/2025	91,997	22,086,082	22,178,079	22,178,079	29.8%	25,783,769
6/30/2026	59,698	22,086,082	22,145,780	22,145,780	31.2%	26,001,179
6/30/2027	39,454	22,086,082	22,125,536	22,125,536	32.7%	26,188,413
6/30/2028	22,322	22,086,082	22,108,404	22,108,404	34.4%	26,291,061
6/30/2029	17,977	22,086,082	22,104,059	22,104,059	36.2%	26,371,169
6/30/2030	10,600	22,086,082	22,096,682	22,096,682	38.3%	26,404,665
6/30/2031	5,747	22,086,082	22,091,829	22,091,829	40.6%	26,384,881
6/30/2032	3,830	22,086,082	22,089,912	22,089,912	43.3%	26,314,346
6/30/2033	3,078	22,086,082	22,089,160	22,089,160	46.4%	26,201,273
6/30/2034	467	22,086,082	22,086,549	22,086,549	49.9%	26,026,759
6/30/2035	0	22,086,082	22,086,082	22,086,082	54.1%	25,792,205
6/30/2036	0	22,086,082	22,086,082	22,086,082	59.0%	25,496,081
6/30/2037	0	22,086,082	22,086,082	22,086,082	64.7%	25,136,584
6/30/2038	0	17,981,894	17,981,894	17,981,894	69.5%	24,710,076
6/30/2039	0	17,981,894	17,981,894	17,981,894	75.1%	24,215,333
6/30/2040	0	17,981,894	17,981,894	17,981,894	81.9%	23,652,657
6/30/2041	0	17,981,894	17,981,894	17,981,894	90.1%	23,021,250
6/30/2042	0	17,981,894	17,981,894	17,981,894	100.0%	22,321,898
6/30/2043	0	0	0	0	100.0%	21,557,477
6/30/2044	0	0	0	0	100.0%	20,729,777

* Normal cost was trended according to projected salary.