

The City of Cranston Fire and Police Department Pension Plans

Actuarial Valuation Report
as of July 1, 2015

December 2015





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December 10, 2015

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, 2015 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, 2015 and financial data supplied by the City as of June 30, 2015. Buck did not audit the data, although they were reviewed for reasonableness and 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. Certain changes were recommended by the Plans' actuary as noted in the experience study report ("Experience Study") dated August 25, 2015 and were adopted by the plan sponsor. The assumption changes are summarized below:

- For post-retirement mortality, the tables were changed as follows: 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.
- Increase the overall interest rate from 7.50% to 7.90%

Actuarial Certification

The plan sponsor selected the assumptions used for the funding policy calculations in the report with our advice. Based on the individually reasonable assumptions used in the preparation of this report, and on the data furnished us, we certify that projection of the costs under this plan has been made using generally accepted actuarial principles and practices, and that our recommended contributions make adequate provision for the funding of future benefits.

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 David Driscoll, 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



David L. Driscoll, FSA, EA, MAAA
Principal, Consulting Actuary

CK/AZ:aa

Cranston 2015 Valuation final final

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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, 2015 | Fire | Police | Total |
|--|---------------|---------------|---------------|
| Active plan members | 26 | 6 | 32 |
| Average active age | 54.53 | 51.21 | 53.91 |
| Average active service | 29.53 | 24.58 | 28.60 |
| Annual regular pay with holiday/longevity load | \$ 2,429,954 | \$ 510,780 | \$ 2,940,734 |
| Number of service retirees, disability retirees and beneficiaries* | 219 | 207 | 426 |
| Average inactive age | 68.79 | 66.68 | 67.77 |
| Annual retirement allowances | \$ 13,389,207 | \$ 10,733,798 | \$ 24,123,005 |
| Number of former members entitled to deferred benefits | 0 | 0 | 0 |
| Valuation assets without receivable | \$ 42,888,773 | \$ 24,979,184 | \$ 67,867,957 |
| Valuation assets with receivable** | \$ 54,566,210 | \$ 34,187,472 | \$ 88,753,682 |
| Unfunded actuarial accrued liability without receivable | \$133,128,030 | \$106,504,044 | \$239,632,074 |
| Total normal contribution rate | 26.99% | 34.24% | 28.54% |
| Recommended City FYE 2017 contribution assumed payable January 1, 2017 | \$ 12,088,619 | \$ 9,650,609 | \$ 21,739,228 |

* 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 2016 budgeted amount of \$21,316,456 and the expected State contribution of \$382,573 assumed to be made in March 2016, adjusted for timing. The \$382,573 was split equally between Fire and Police, consistent with the allocation of the State contribution made during the past two fiscal years.

Comments on the valuation results as of July 1, 2015 are given in Section 4 and the appropriation payable by the City during the fiscal period beginning July 1, 2016 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. In addition, the effects of the demographic and economic assumption changes from the Experience Study are shown.

During the last year, the total unfunded actuarial accrued liability (UAL) was expected to decrease from \$246,347,729 to \$243,112,205. The actual UAL at the end of the year was \$239,632,074. The chart below reconciles the actual to expected UAL. As can be seen in the table below, the primary source of changes was due to the increase in the discount rate from 7.50% to 7.90%, as recommended in the 2014 Experience Study. This gain was partially offset by (i) the investment return being less than expected (4.07% vs. 7.50% assumed), (ii) the change in mortality assumption also recommended in the 2014 Experience Study, and (iii) a net loss from other sources.

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

| | Demographic (Gain)/Loss | Other (Gain)/Loss | Experience Study (Gain)/Loss | UAL |
|---|----------------------------|----------------------|---------------------------------|--------------------|
| Expected UAL | | | | \$243,112,205 |
| Salary increases | \$388,549 | | | |
| Retiree mortality | 1,280,285 | | | |
| Active retirement decrement | (1,054,389) | | | |
| Active mortality decrement | (2,256) | | | |
| Active disability decrement | (70,992) | | | |
| Other | <u>347,229</u> | | | |
| Subtotal | 888,426 | | | |
| Assumption revision to reflect additional year of mortality improvement | | 528,601 | | |
| Investment (Gain)/Loss | | <u>2,260,607</u> | | |
| Subtotal | | \$2,789,208 | | |
| Demographic experience study changes | | | 5,288,715 | |
| Economic experience study changes | | | <u>(12,446,480)</u> | |
| Subtotal | | | (\$7,157,765) | |
| Total change in UAL | | | | <u>(3,480,131)</u> |
| Actual UAL | | | | \$239,632,074 |

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, 2015.

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 2044 assuming payments are made mid-fiscal year. The appropriation for FYE 2016 will remain as budgeted, while results of this report will officially go into effect for the FYE 2017 appropriation.

Section 2 – Employee Data

Employee and inactive participant data was furnished by the City. Buck did not audit the data although they were reviewed for reasonableness and consistency with the prior year's information. 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, 2015 that are subject to the Court approved negotiated benefit changes are as follows:

| | Number | Average Age | Annual Allowances |
|----------------|--------|-------------|-------------------|
| Retired Lives | 207 | 66.96 | \$13,578,791 |
| Disabled Lives | 55 | 66.17 | \$ 3,101,771 |
| Beneficiaries | 90 | 76.59 | \$ 3,344,728 |
| Total | 352 | 69.30 | \$20,025,290 |

The number and annual retirement allowances of retired and disabled lives and beneficiaries as of July 1, 2015 that opted out of the Court approved negotiated benefit changes are as follows:

| | Number | Average Age | Annual Allowances |
|----------------|--------|-------------|-------------------|
| Retired Lives | 53 | 61.04 | \$ 2,947,771 |
| Disabled Lives | 21 | 59.07 | \$ 1,149,943 |
| Beneficiaries | 0 | 0 | \$ 0 |
| Total | 74 | 60.48 | \$ 4,097,714 |

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, 2015 was as follows:

| Fund | Fire | Police | Total |
|--|----------------------|----------------------|----------------------|
| Cash | \$995,326 | \$435,644 | \$1,430,970 |
| PIMCO Bond Account | 3 | 3 | 6 |
| JMS Other Investments (REIT) | 425,401 | 239,288 | 664,689 |
| JMS-Non-Performing Annuity | 4,359,479 | 2,452,207 | 6,811,686 |
| JMS Account | 2,873,143 | 1,111,772 | 3,984,915 |
| Janney-Equities Stock/Options | 22,832,132 | 14,090,724 | 36,922,856 |
| Janney-Fx Inc Mut Fnd/ETF/UIT | 11,403,290 | 6,649,546 | 18,052,836 |
| Due From State of RI | 0 | 0 | 0 |
| Total Market Value of Assets | \$ 42,888,773 | \$ 24,979,184 | \$ 67,867,957 |
| Contribution Receivable | <u>11,677,437</u> | <u>9,208,288</u> | <u>20,885,725</u> |
| Valuation Value of Assets with Receivable | \$ 54,566,210 | \$ 34,187,472 | \$ 88,753,682 |

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, 2015. Total aggregate actuarial liabilities equal (a) \$284,818,131, which equals the present value of obligations to retired members and their beneficiaries, plus (b) \$25,868,552, which equals the value of prospective benefits of active members, for a total of \$310,686,683. Against these prospective liabilities, the Plans have present assets of \$67,867,957. This leaves \$242,818,726 to be met by future contributions.

The unadjusted unfunded accrued liability amounts to \$239,632,074, leaving \$3,186,652 to be met by future normal contributions. We recommend normal contribution rates of 26.99% for Fire and 34.24% for Police. Applying these rates to the compensation of active members and assuming payment in FYE 2017 would produce a total normal contribution of \$888,759. Estimated employee contributions are \$327,632, leaving \$561,127 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 2017. After adjusting for interest, an asset receivable of \$20,885,725 and mid-year payments, the new adjusted unfunded accrued liability amounts to \$245,756,063. The asset receivable is comprised of the FYE 2016 budgeted contribution payment of \$21,316,456 and a \$382,573 state allocation expected in March 2016, discounted to July 1, 2015.

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 \$3,929,447, commencing in FYE 2017.

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 \$17,248,654, commencing in FYE 2017.

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, 2014, i.e. the July 1, 2014 – June 30, 2015 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 were presented in a separate report dated November 13, 2015. 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, 2015

| | Fire | Police | Total |
|---|----------------|----------------|----------------|
| 1. Actuarial Liabilities | | | |
| (a) Present Value of Benefits to be Paid on Account of Active Members | \$ 21,586,512 | \$ 4,282,040 | \$ 25,868,552 |
| (b) Present Value of Benefits Payable to Retired Member and Beneficiaries | 156,795,630 | 128,022,501 | 284,818,131 |
| (c) Total Actuarial Liabilities | \$ 178,382,142 | \$ 132,304,541 | \$ 310,686,683 |
| 2. Market Value of Assets* | \$ 42,888,773 | \$ 24,979,184 | \$ 67,867,957 |
| 3. Total Prospective Contributions by the City (1(c) - 2.) | \$ 135,493,369 | \$ 107,325,357 | \$ 242,818,726 |
| 4. Unfunded Accrued Liability | \$ 133,128,030 | \$ 106,504,044 | \$ 239,632,074 |
| 5. Present Value of Future Normal Contributions | \$ 2,365,339 | \$ 821,313 | \$ 3,186,652 |
| 6. Present Value of Future Salaries of Present Active Members | \$ 8,765,000 | \$ 2,399,000 | \$ 11,164,000 |
| 7. Normal Contribution Rate (5. / 6.) | 26.99% | 34.24% | 28.54% |
| 8. Valuation Payroll Used for Contribution Purposes | \$ 2,429,954 | \$ 510,780 | \$ 2,940,734 |
| 9. Normal Cost Including Interest | | | |
| (a) Employees | \$ 272,983 | \$ 54,649 | \$ 327,632 |
| (b) City | \$ 428,713 | \$ 132,414 | \$ 561,127 |
| (c) Total (7. x 8., plus interest) | \$ 701,696 | \$ 187,063 | \$ 888,759 |
| 10. Asset Receivable as of July 1, 2015 | \$ 11,677,437 | \$ 9,208,288 | \$ 20,885,725 |
| 11. Adjusted UAL for FYE 2017 payment | \$ 136,568,418 | \$ 109,187,645 | \$ 245,756,063 |
| 12. City Contribution to Amortize UAL | | | |
| (a) Court Approved Members through FYE 2042 | \$ 10,941,035 | \$ 6,307,619 | \$ 17,248,654 |
| (b) Opt Outs through FYE 2037 | \$ 718,871 | \$ 3,210,576 | \$ 3,929,447 |
| (c) Total | \$ 11,659,906 | \$ 9,518,195 | \$ 21,178,101 |
| 13. Total Contribution (Employees plus City) (9(c) + 12(c)) | \$ 12,361,602 | \$ 9,705,258 | \$ 22,066,860 |
| 14. Recommended City Contribution for FYE 2017 payment (13. – 9(a)) | \$ 12,088,619 | \$ 9,650,609 | \$ 21,739,228 |

* 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 2025 with Scale AA. The prior valuation assumed the same table but mortality improvements were projected to 2024.

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. The prior valuation assumed the same mortality assumption as pre-retirement mortality.

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 20.04% holiday/longevity load (8.14% 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 | Service | | | | | | Total Regular Pay |
|--------------------|--------------------------|----------------------|----------------------|----------------------|----------------------|-------------------------|-------------------|
| | Less than 10 Regular Pay | 10 to 14 Regular Pay | 15 to 19 Regular Pay | 20 to 24 Regular Pay | 25 to 29 Regular Pay | 30 and Over 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 | 1 | 10 | 4 | 15 |
| 55 to 59 | 0 | 0 | 0 | 0 | 4 | 8 | 12 |
| 60 to 64 | 0 | 0 | 0 | 0 | 1 | 1 | 2 |
| 65 and Over | 0 | 0 | 0 | 0 | 0 | 0 | 0 |
| Total | 0 | 0 | 0 | 3 | 16 | 13 | 32 2,449,795 |

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, 2015

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 |
|--------------------|----------------------|------------------|-----------|-----------------------|--------------|------------------|
| 6/30/2016 | \$0 | \$3,856,406 | 3,856,406 | 3,856,406 | 21.8% | 4,130,757 |
| 6/30/2017 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 22.3% | 4,108,938 |
| 6/30/2018 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 23.8% | 4,105,746 |
| 6/30/2019 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 25.5% | 4,080,444 |
| 6/30/2020 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 27.3% | 4,048,667 |
| 6/30/2021 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 29.3% | 4,018,745 |
| 6/30/2022 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 31.6% | 3,980,928 |
| 6/30/2023 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 34.1% | 3,943,552 |
| 6/30/2024 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 36.7% | 4,016,760 |
| 6/30/2025 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 39.4% | 4,087,521 |
| 6/30/2026 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 42.3% | 4,155,378 |
| 6/30/2027 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 45.4% | 4,219,749 |
| 6/30/2028 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 48.7% | 4,279,971 |
| 6/30/2029 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 52.3% | 4,335,199 |
| 6/30/2030 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 56.2% | 4,384,581 |
| 6/30/2031 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 60.5% | 4,427,507 |
| 6/30/2032 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 65.3% | 4,463,338 |
| 6/30/2033 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 70.6% | 4,491,451 |
| 6/30/2034 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 76.6% | 4,511,459 |
| 6/30/2035 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 83.4% | 4,522,886 |
| 6/30/2036 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 91.2% | 4,524,978 |
| 6/30/2037 | 0 | 3,929,447 | 3,929,447 | 3,929,447 | 100.0% | 4,517,164 |
| 6/30/2038 | 0 | 0 | 0 | 0 | 100.0% | 4,498,576 |
| 6/30/2039 | 0 | 0 | 0 | 0 | 100.0% | 4,468,320 |
| 6/30/2040 | 0 | 0 | 0 | 0 | 100.0% | 4,425,355 |
| 6/30/2041 | 0 | 0 | 0 | 0 | 100.0% | 4,368,162 |
| 6/30/2042 | 0 | 0 | 0 | 0 | 100.0% | 4,295,793 |
| 6/30/2043 | 0 | 0 | 0 | 0 | 100.0% | 4,207,539 |

Section E – Development of NPO for Fiscal Year Ending June 30, 2015

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 |
|--------------------|----------------------|------------------|------------|-----------------------|--------------|------------------|
| 6/30/2016 | 618,145 | 16,841,905 | 17,460,050 | 17,460,050 | 23.6% | 20,130,438 |
| 6/30/2017 | 561,127 | 17,248,654 | 17,809,781 | 17,809,781 | 24.3% | 20,711,707 |
| 6/30/2018 | 457,929 | 17,248,654 | 17,706,583 | 17,706,583 | 25.2% | 20,797,231 |
| 6/30/2019 | 367,318 | 17,248,654 | 17,615,972 | 17,615,972 | 25.9% | 21,313,586 |
| 6/30/2020 | 290,612 | 17,248,654 | 17,539,266 | 17,539,266 | 26.7% | 21,281,419 |
| 6/30/2021 | 215,220 | 17,248,654 | 17,463,874 | 17,463,874 | 27.3% | 21,643,492 |
| 6/30/2022 | 169,158 | 17,248,654 | 17,417,812 | 17,417,812 | 28.1% | 21,416,095 |
| 6/30/2023 | 139,095 | 17,248,654 | 17,387,749 | 17,387,749 | 28.9% | 21,652,436 |
| 6/30/2024 | 112,343 | 17,248,654 | 17,360,997 | 17,360,997 | 29.8% | 21,610,649 |
| 6/30/2025 | 87,235 | 17,248,654 | 17,335,889 | 17,335,889 | 30.7% | 21,564,486 |
| 6/30/2026 | 55,277 | 17,248,654 | 17,303,931 | 17,303,931 | 31.8% | 21,707,747 |
| 6/30/2027 | 34,686 | 17,248,654 | 17,283,340 | 17,283,340 | 32.8% | 21,810,993 |
| 6/30/2028 | 20,293 | 17,248,654 | 17,268,947 | 17,268,947 | 34.0% | 21,845,388 |
| 6/30/2029 | 16,340 | 17,248,654 | 17,264,994 | 17,264,994 | 35.4% | 21,861,866 |
| 6/30/2030 | 9,489 | 17,248,654 | 17,258,143 | 17,258,143 | 36.9% | 21,838,633 |
| 6/30/2031 | 5,065 | 17,248,654 | 17,253,719 | 17,253,719 | 38.6% | 21,770,182 |
| 6/30/2032 | 3,383 | 17,248,654 | 17,252,037 | 17,252,037 | 40.7% | 21,659,260 |
| 6/30/2033 | 2,718 | 17,248,654 | 17,251,372 | 17,251,372 | 43.0% | 21,513,059 |
| 6/30/2034 | 399 | 17,248,654 | 17,249,053 | 17,249,053 | 45.8% | 21,315,080 |
| 6/30/2035 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 49.1% | 21,066,349 |
| 6/30/2036 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 53.0% | 20,765,947 |
| 6/30/2037 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 57.7% | 20,412,689 |
| 6/30/2038 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 63.3% | 20,003,866 |
| 6/30/2039 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 70.1% | 19,539,510 |
| 6/30/2040 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 78.3% | 19,021,071 |
| 6/30/2041 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 88.1% | 18,449,492 |
| 6/30/2042 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 100.0% | 17,826,564 |
| 6/30/2043 | 0 | 0 | 0 | 0 | 100.0% | 17,155,916 |

Section E – Development of NPO for Fiscal Year Ending June 30, 2015

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 |
|--------------------|------------------------|------------------|------------|-----------------------|--------------|------------------|
| 6/30/2016* | 618,145 | 20,698,311 | 21,316,456 | 21,316,456 | 23.3% | 24,261,195 |
| 6/30/2017 | 561,127 | 21,178,101 | 21,739,228 | 21,739,228 | 24.0% | 24,820,646 |
| 6/30/2018 | 457,929 | 21,178,101 | 21,636,030 | 21,636,030 | 25.0% | 24,902,978 |
| 6/30/2019 | 367,318 | 21,178,101 | 21,545,419 | 21,545,419 | 25.8% | 25,394,030 |
| 6/30/2020 | 290,612 | 21,178,101 | 21,468,713 | 21,468,713 | 26.8% | 25,330,086 |
| 6/30/2021 | 215,220 | 21,178,101 | 21,393,321 | 21,393,321 | 27.7% | 25,662,237 |
| 6/30/2022 | 169,158 | 21,178,101 | 21,347,259 | 21,347,259 | 28.7% | 25,397,023 |
| 6/30/2023 | 139,095 | 21,178,101 | 21,317,196 | 21,317,196 | 29.8% | 25,595,987 |
| 6/30/2024 | 112,343 | 21,178,101 | 21,290,444 | 21,290,444 | 31.0% | 25,627,409 |
| 6/30/2025 | 87,235 | 21,178,101 | 21,265,336 | 21,265,336 | 32.3% | 25,652,006 |
| 6/30/2026 | 55,277 | 21,178,101 | 21,233,378 | 21,233,378 | 33.6% | 25,863,125 |
| 6/30/2027 | 34,686 | 21,178,101 | 21,212,787 | 21,212,787 | 35.1% | 26,030,742 |
| 6/30/2028 | 20,293 | 21,178,101 | 21,198,394 | 21,198,394 | 36.7% | 26,125,359 |
| 6/30/2029 | 16,340 | 21,178,101 | 21,194,441 | 21,194,441 | 38.5% | 26,197,064 |
| 6/30/2030 | 9,489 | 21,178,101 | 21,187,590 | 21,187,590 | 40.5% | 26,223,214 |
| 6/30/2031 | 5,065 | 21,178,101 | 21,183,166 | 21,183,166 | 42.7% | 26,197,689 |
| 6/30/2032 | 3,383 | 21,178,101 | 21,181,484 | 21,181,484 | 45.3% | 26,122,598 |
| 6/30/2033 | 2,718 | 21,178,101 | 21,180,819 | 21,180,819 | 48.3% | 26,004,510 |
| 6/30/2034 | 399 | 21,178,101 | 21,178,500 | 21,178,500 | 51.7% | 25,826,540 |
| 6/30/2035 | 0 | 21,178,101 | 21,178,101 | 21,178,101 | 55.7% | 25,589,234 |
| 6/30/2036 | 0 | 21,178,101 | 21,178,101 | 21,178,101 | 60.4% | 25,290,925 |
| 6/30/2037 | 0 | 21,178,101 | 21,178,101 | 21,178,101 | 66.0% | 24,929,852 |
| 6/30/2038 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 70.6% | 24,502,443 |
| 6/30/2039 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 76.1% | 24,007,830 |
| 6/30/2040 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 82.6% | 23,446,425 |
| 6/30/2041 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 90.5% | 22,817,653 |
| 6/30/2042 | 0 | 17,248,654 | 17,248,654 | 17,248,654 | 100.0% | 22,122,357 |
| 6/30/2043 | 0 | 0 | 0 | 0 | 100.0% | 21,363,454 |

* The appropriation for FYE 2016 remains as previously budgeted and includes \$382,573 in expected State incentive aid.

** Normal cost was trended according to projected salary.