REPORT ON THE VALUATION OF CITY OF CRANSTON FIRE AND POLICE DEPARTMENT PENSION PLANS AS OF JULY 1, 2010

October 2010

buck consultants⁻

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This report presents the results of the actuarial valuation of the City of Cranston Fire Department and Police Department Pension Plans, prepared as of July 1, 2010. The purpose of this valuation was to determine the current funded position of the Pension Plans and the FYE contributions needed to fund these pension obligations. A 22-year amortization schedule for the unfunded accrued liability has been utilized.

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

Respectfully submitted,

Jouril w

Daniel W. Sherman, ASA, MAAA, EA Director and Consulting Actuary

14/28/10

Date

Marcus Cleary, ASA, MAAA Consultant

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10/28/2010

Date

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REPORT ON THE VALUATION OF THE CITY OF CRANSTON FIRE AND POLICE DEPARTMENT PENSION PLANS AS OF JULY 1, 2010

SECTION I - SUMMARY OF PRINCIPAL RESULTS

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

Valuation Date: July 1, 2010	Fire	Police	Total
Number of active members Vested Nonvested Total	45 <u>0</u> 45	16 <u>0</u> 16	61 <u>0</u> 61
Annual salaries	\$ 3,058,394	\$ 1,040,873	\$ 4,099,268
Number of service retirees, disability retirees, and beneficiaries	220	208	428
Annual retirement allowances	\$ 11,154,761	\$ 9,639,762	\$ 20,794,523
Number of former members entitled to deferred benefits	0	0	0
Valuation value of assets without receivable	\$ 29,778,055	\$ 16,121,991	\$ 45,900,046
Valuation value of assets with receivable	\$ 40,625,996	\$ 24,468,760	\$ 65,094,756
Unfunded actuarial accrued liability without receivable	\$129,476,157	\$ 115,357,146	\$ 244,833,303
Total normal contribution rate	30.47%	32.97%	N/A
Recommended City FYE 2012 contribution assumed payable January 1, 2012	\$ 12,950,250	\$ 11,203,870	\$ 24,154,120

Comments on the valuation results as of July 1, 2010 are given in Section IV and the appropriation payable by the City during the fiscal period beginning July 1, 2011 is set out in Section V.

SECTION I - 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 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 decreased by \$195,104 (0.08%) to \$244,833,303 from an expected accrued liability of \$245,028,408. The decrease is the result of a \$238,102 net liability gain and a \$42,998 investment loss. The actual investment return was 7.9% during 2009, which is less than our assumed return of 8%.

The sources of the (gain)/loss are as follows:

Investment	\$ 42,998
Salary Increases	(291,173)
Retiree Mortality	(731,174)
Active Retirement Decrement	(190,966)
Active Termination Decrement	3
Active Mortality Decrement	(24,104)
Active Disability Decrement	275,940
Retiree Data Corrections with new spouse information	723,373
Total (gain)/loss	\$ (195,103)

SECTION I - 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, 2010.

Schedule B of this report outlines the actuarial assumptions used in the valuation.

Schedule C of this report presents a summary of the main provisions of the Pension Plans used in the valuations. Please note that cost of living increases granted to fire retirees in receipt prior to January 1, 1995 and their beneficiaries as well as police retirees in receipt before November 25, 1996 and their beneficiaries have been included.

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

Schedule E shows a projection of expected pension payments over the next 40 years assuming no new participants are added to the plan.

Schedule F provides a forecast of the appropriation payments over the next 30 years assuming no new participants are added to the plan and that payments are made mid-fiscal year. The appropriation for FYE 2011 will remain as budgeted, while results of this report will officially go into effect for the FYE 2012 appropriation.

Schedule G illustrates the development of the Net Pension Obligation as of June 30, 2010.

SECTION II - EMPLOYEE DATA

Employee data was furnished by the City. Buck did not edit the data although they were reviewed for reasonableness and consistency with the prior year's information. 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, 2010 are as follows:

	<u>Number</u>	Annual Allowances
Retired Lives	260	\$ 14,204,679
Disabled Lives	81	\$ 4,000,760
Beneficiaries	87	\$ 2,589,084
Total	428	\$ 20,794,523

SECTION III - ASSETS

The amount of the assets taken into account in the valuation was obtained from information submitted by the City.

The value of the assets of the system as of July 1, 2010 was as follows:

Fund	Fire	Police	Total
Cash	\$ 25,611	\$ 8,657	\$ 34,268
PIMCO Bond Account	3	3	6
JMS Other Investments (REIT)	19,774	11,614	31,388
JMS Account	464,246	272,652	736,898
Janney-Equities Stocks/Options	21,033,594	10,992,738	32,026,332
Janney-Fx Inc Mut Fnd/ETF/UIT	8,234,827	4,836,327	13,071,154
Total Market Value of Assets	\$ 29,778,055	\$ 16,121,991	\$ 45,900,046
Contribution Receivable	<u>10,847,941</u>	<u>8,346,769</u>	<u>19,194,710</u>
Valuation Value of Assets with Receivable	\$ 40,625,996	\$ 24,468,760	\$ 65,094,756

SECTION IV - 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, 2010. Total aggregate actuarial liabilities equal (a) \$260,907,741, which equals the present value of obligations to retired members and their beneficiaries, plus (b) \$38,251,068, which equals the value of prospective benefits of active members, for a total of \$299,158,809. Against these prospective liabilities, the Plans have present assets of \$45,900,046. This leaves \$253,258,763 to be met by future contributions.

The unadjusted unfunded accrued liability amounts to \$244,833,303, leaving \$8,425,460 to be met by future normal contributions. We recommend normal contribution rates of 31.47% for Fire and 32.97% for Police. Applying these rates to the compensation of active members and assuming payment in FYE 2012 would produce a total normal contribution of \$1,606,735. Estimated employee contributions are \$537,279, leaving \$1,069,456 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 2012. Adjusting for interest and an asset receivable of \$20,730,287 (which is the FYE 2011 budgeted contribution payment of \$19,947,728 accumulated to July 1, 2011) and mid-year payments, the new adjusted unfunded accrued liability amounts to \$254,319,200. Amortizing this adjusted unfunded accrued liability over a period of 22 years results in a past service contribution of \$23,084,664, commencing in FYE 2012.

SECTION V - ACCOUNTING INFORMATION

Information required under Statement No.25 of Governmental Accounting Standard Board (GASB) is shown below:

Actuarial	Actuarial Value of	Actuarial Accrued	Unfunded	Funded	Covered	UAAL as % of
Valuation Date	Assets	Liability (AAL)	AAL (UAAL)	Ratio	Payroll	Covered Payroll
	(a)	(b)	(b)-(a)	(a)/(b)	(c)	[(b)-(a)]/(c)
July 1, 1996	\$ 11,760	\$ 158,974	\$ 147,214	7.4%	\$ 14,078	1046%
July 1, 1998	17,461	174,057	156,596	10.0%	10,553	1484%
July 1, 1999	17,953	187,737	169,784	9.6%	9,855	1723%
July 1, 2001	20,805	211,799	190,994	9.8%	11,148	1713%
July 1, 2002	19,237	256,292	237,055	7.5%	10,654	2225%
July 1, 2003	17,960	218,407	200,447	8.2%	9,596	2089%
July 1, 2004	27,622	242,850	215,228	11.4%	9,446	2279%
July 1, 2005	31,641	252,222	220,581	12.5%	7,879	2800%
July 1, 2006	39,606	257,475	217,869	15.4%	7,013	3107%
July 1, 2007	51,372	259,643	208,271	19.8%	6,678	3119%
July 1, 2008	50,961	278,857	227,896	18.3%	6,093	3740%
July 1, 2009	43,404	287,655	244,251	15.1%	5,416	4510%
July 1, 2010	45,900	290,733	244,833	15.8%	4,797	5104%

SCHEDULE OF FUNDING PROGRESS \$000

SCHEDULE A - RESULTS OF THE VALUATION AS OF JULY 1, 2010

	Fire	Police	Total
1. Actuarial Liabilities			
(a) Present value of benefits to be paid on account of active members	\$ 29,737,770	\$ 8,513,298	\$ 38,251,068
(b) Present value of benefits payable to retired members and beneficiaries	135,609,024	125,298,717	260,907,741
(c) Total actuarial liabilities	\$ 165,346,794	\$ 133,812,015	\$ 299,158,809
2. Market Value of Assets	\$ 29,778,055	\$ 16,121,991	\$ 45,900,046
3. Total Prospective Contributions by the City (1(c) minus 2)	\$ 135,568,739	\$ 117,690,024	\$ 253,258,763
4. Unfunded Accrued Liability	\$ 129,476,157	\$ 115,357,146	\$ 244,833,303
5. Present Value of Future Normal Contributions	\$ 6,0920,582	\$ 2,332,878	\$ 8,425,460
6. Present Value of Future Salaries of Present Active Members	\$ 19,996,000	\$ 7,076,000	\$ 27,072,000
7. Normal Contribution Rate (5 divided by 6)	30.47%	32.97%	31.12%
8. Valuation Payroll used for Contribution Purposes	\$ 3,671,295	\$ 1,125,600	\$ 4,796,895
9. Normal Cost Including Interest			
(a) Employees	\$ 416,794	\$ 120,485	\$ 537,279
(b) City	792,701	276,755	1,069,456
(c) Total ((a) plus (b))	\$ 1,209,495	\$ 397,240	\$ 1,606,735
10. Asset Receivable as of July 1, 2010	\$ 10,847,941	\$ 8,346,769	\$ 19,194,710
11. Adjusted Unfunded Accrued Liability for FYE 2012 payment	\$ 133,937,324	\$ 120,381,876	\$ 254,319,200
12. City Contribution to Amortize Unfunded Accrued Liability over 22 Years	\$ 12,157,549	\$ 10,927,115	\$ 23,084,664
13. Total Contribution (Employees plus City) (9(c) plus 12)	\$ 13,367,044	\$ 11,324,355	\$ 24,691,399
14. Recommended City Contribution for FYE 2012 payment (13 minus 9(a))	\$ 12,950,250	\$ 11,203,870	\$ 24,154,120

SCHEDULE B - SUMMARY OF ASSUMPTIONS

Investment Return	8%		
Postretirement mortality	RP-2000 healthy mathree years for disable	le and female tables. Set forward led lives.	
Preretirement mortality	RP-2000 healthy male and female tables. A special table is used for disability. (7.5% of deaths assumed to be service related)		
Disability		Rate 0.12% 0.17% 0.22% 0.29% 0.44% 0.72% 1.21% 1.21% e ordinary disabilities accidental disabilities	
Withdrawals before service retirement	None except death a	nd disability	
Future salary increases	3.0% annually		
Assumed retirement age	Completion of 20 yea age 65 <u>Age</u> 45 50 55 60 65	ars of service but not later than Rate 10% 20% 50% 50% 100%	
Cost-of-living increases after retirement	3.0% annually		
Valuation method	Attained Age Norma	l method	
Expenses	Paid by the City		

SCHEDULE C - SUMMARY OF MAIN PROVISIONS OF PENSION SYSTEMS

FIRE AND POLICE

Final compensation is the member's base compensation rate, including longevity and holiday pay for Fire and holiday pay for Police, 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 2 ¹ / ₂ % 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.

SCHEDULE C - SUMMARY OF MAIN PROVISIONS OF PENSION SYSTEMS (Continued)

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 $66-^{2}/_{3}$ % 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 $33^{1/3}$ % of the member's final compensation is paid to his widow until she dies or remarries. The benefit increases to $67^{1/2}$ % 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 $67^{1/2}$ % 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 ¹ / ₂ % of his pension is paid to his widow. No benefits are payable upon the death of unmarried members.
Cost of Living Adjustment	Pensions are increased each year by the percentage increase in pay granted to active members. This provision does not apply to deferred pensions payable to the member or survivor.
Contributions by Members	
Firefighters	10.5% of final compensation
Police	10% of final compensation

SCHEDULE D - EMPLOYEE DATA- ACTIVE PARTICIPANT COUNT AND SALARY SCATTER

Age	Less 10 Salary	10 to 14 Salary	15 to 19 Salary	Service 20 to 24 Salary	25 to 29 Salary	30 and Over Salary	<total> Salary</total>
35 to 39							
40 to 44			2	1			3
45 to 49			1	17	9		27 1,844,655
50 to 54			1	10	17		28 1,859,971
55 to 59				1		1	2
60 to 64						1	1
65 and Over	r						
<total></total>			4	29 1,863,806	2	2	61 4,099,268

* Salary not shown with fewer than 20 participants

SCHEDULE E - PROJECTION OF PENSION PAYMENTS OVER 40 YEARS

CITY OF CRANSTON FIRE AND POLICE PENSION PLANS

YEAR ENDING	PENSION PAYMENTS
6/30/2011	21,350,470
6/30/2012	21,994,765
6/30/2013	22,609,337
6/30/2014	23,306,207
6/30/2015	23,925,452
6/30/2016	24,475,297
6/30/2017	25,031,130
6/30/2018	25,508,636
6/30/2019	25,986,008
6/30/2020	26,369,751
6/30/2021	26,655,676
6/30/2022	26,910,692
6/30/2023	27,113,933
6/30/2024	27,266,978
6/30/2025	27,324,884
6/30/2026	27,325,553
6/30/2027	27,257,517
6/30/2028	27,132,235
6/30/2029	26,940,765
6/30/2030	26,675,651
6/30/2031	26,338,211
6/30/2032 6/30/2033	25,936,829
6/30/2034	25,462,777 24,914,012
6/30/2035	24,292,693
6/30/2036	23,599,148
6/30/2037	22,834,742
6/30/2038	22,002,194
6/30/2039	21,105,561
6/30/2040	20,150,045
6/30/2041	19,141,804
6/30/2042	18,087,837
6/30/2043	16,995,947
6/30/2044	15,874,892
6/30/2045	14,734,045
6/30/2046	13,583,217
6/30/2047	12,433,012
6/30/2048	11,294,471
6/30/2049	10,178,734
6/30/2050	9,096,955

SCHEDULE F - APPROPRIATION FORECAST OVER 30 YEARS

CITY OF CRANSTON FIRE AND POLICE PENSION PLANS

Fiscal Year Ending	Normal Cost**	Past Service Amortization	Total	
Ending 06/30/2011* 06/30/2012 06/30/2013 06/30/2014 06/30/2015 06/30/2015 06/30/2017 06/30/2018 06/30/2019	 \$ 1,033,417 1,069,456 981,015 872,615 743,306 671,115 577,298 496,408 407,677 	Amortization \$ 18,914,311 23,084,664 23,084,664 23,084,664 23,084,664 23,084,664 23,084,664 23,084,664 23,084,664	\$ 19,947,728 24,154,120 24,065,679 23,957,279 23,827,970 23,755,779 23,661,962 23,581,072 23,492,341	
06/30/2020	315,218	23,084,664	23,399,882	
06/30/2021	265,644	23,084,664	23,350,308	
06/30/2022	212,255	23,084,664	23,296,919	
06/30/2023	163,608	23,084,664	23,248,272	
06/30/2024	115,615	23,084,664	23,200,279	
06/30/2025	78,423	23,084,664	23,163,087	
06/30/2026	57,094	23,084,664	23,141,758	
06/30/2027	38,960	23,084,664	23,123,624	
06/30/2028	24,436	23,084,664	23,109,100	
06/30/2029	14,655	23,084,664	23,099,319	
06/30/2030	6,549	23,084,664	23,091,213	
06/30/2031	3,374	23,084,664	23,088,038	
06/30/2032	2,933	23,084,664	23,087,597	
06/30/2033 06/30/2034 06/30/2035 06/30/2036 06/30/2037 06/30/2038	917 0 0 0 0 0 0	23,084,664 0 0 0 0 0 0	23,085,581 0 0 0 0 0 0	
06/30/2039	0	0	0	
06/30/2040	0	0	0	

* The appropriation for FYE 2011 will remain as budgeted.

** Normal cost was trended according to projected salary, assuming no new participants are added to the plan.

SCHEDULE G - DEVELOPMENT OF NPO FOR FISCAL YEAR ENDING JUNE 30, 2010

(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)
Fiscal Year	Val. Int. Rate	Amortization Years	Amortization Factor	ARC City Cont.	Actual City Cont.	Beginning of year NPO	Annual Pension Cost [(5)+(7)*(2)-(7)/(4)]	Increase in NPO [(8)-(6)]	End of Year NPO [(7)+(9)]
1989-1990	8.00%	40	11.9246	6,791,992	3,703,000	-	6,791,992	3,088,992	3,088,992
1990-1991	8.00%	40	11.9246	6,791,992	4,267,434	3,088,992	6,780,068	2,512,634	5,601,626
1991-1992	8.00%	40	11.9246	10,940,483	3,950,320	5,601,626	10,918,859	6,968,539	12,570,165
1992-1993	8.00%	40	11.9246	10,940,483	5,041,249	12,570,165	10,891,959	5,850,710	18,420,875
1993-1994	8.00%	40	11.9246	10,940,483	5,671,320	18,420,875	10,869,374	5,198,054	23,618,929
1994-1995	8.00%	40	11.9246	13,733,262	6,133,800	23,618,929	13,642,087	7,508,287	31,127,216
1995-1996	8.00%	40	11.9246	13,733,262	7,343,643	31,127,216	13,613,103	6,269,460	37,396,676
1996-1997	8.00%	40	11.9246	16,940,010	7,182,962	37,396,676	16,795,649	9,612,687	47,009,363
1997-1998	8.00%	40	11.9246	16,940,010	8,124,186	47,009,363	16,758,542	8,634,356	55,643,719
1998-1999	8.00%	40	11.9246	16,029,156	8,241,549	55,643,719	15,814,357	7,572,808	63,216,527
1999-2000	8.00%	39	11.8786	16,012,994	10,149,365	63,216,527	15,748,433	5,599,068	68,815,595
2000-2001	8.00%	38	11.8288	16,012,994	12,610,513	68,815,595	15,700,610	3,090,097	71,905,692
2001-2002	8.00%	37	11.7752	18,996,537	9,482,990	71,905,692	18,642,456	9,159,466	81,065,158
2002-2003	8.00%	36	11.7172	24,945,408	14,949,999	81,065,158	24,512,145	9,562,146	90,627,304
2003-2004	8.00%	30	11.2578	21,877,449	23,876,569	90,627,304	21,077,454	(2,799,115)	87,828,189
2004-2005	8.00%	29	11.1584	22,147,958	20,024,158	87,828,189	21,303,175	1,279,017	89,107,206
2005-2006	8.00%	28	11.0511	21,723,021	21,339,876	89,107,206	20,788,384	(551,492)	88,555,714
2006-2007	8.00%	27	10.9352	21,723,021	21,723,021	88,555,714	20,709,227	(1,013,794)	87,541,920
2007-2008	8.00%	26	11.6748	20,785,343	19,889,000	87,541,920	20,290,331	401,331	87,943,251
2008-2009	8.00%	25	11.5288	20,062,219	19,087,000	87,943,251	19,469,516	382,516	88,325,767
2009-2010	8.00%	24	11.3711	22,209,224	19,396,892	88,325,767	21,507,692	2,110,800	90,436,567

Actual city contributions through fiscal year 1996-1997 provided from audit worksheet received from City. Report provided for fiscal 1989-1990, 1991-1992, 1994-1995 and fiscals 1998-1999 and later, excluding fiscal 2000-2001.