

CITY OF AURORA
RETIREE HEALTH INSURANCE PLAN

ACTUARIAL VALUATION
AS OF DECEMBER 31, 2013

June 4, 2014

Ms. Linda B. Read
Assistant Director of Finance
City of Aurora
44 E. Downers Place
Aurora, Illinois 60505

**Re: Actuarial Valuation of the City of Aurora Retiree Health Insurance Plan
As of December 31, 2013 for GASB Statement No. 45**

Dear Ms. Read:

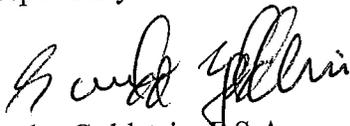
We are pleased to submit our actuarial report on the actuarial valuation of the City of Aurora Retiree Health Insurance Plan as of December 31, 2013 for purposes of GASB Statement No. 45.

The report consists of nine Sections and one Appendix as follows:

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We would be pleased to discuss any aspects of this report with you at your convenience.

Respectfully submitted,


Sandor Goldstein, F.S.A.
Consulting Actuary

A. PURPOSE AND SUMMARY

Under GASB Statement No. 45, actuarial liabilities and the annual required contribution need to be determined for the City of Aurora Retiree Health Insurance Plan. We have therefore performed an actuarial valuation as of December 31, 2013 of the City of Aurora Retiree Health Insurance Plan. The purpose of the valuation was to determine the total actuarial liability and annual required contribution for the retiree health insurance benefits provided under the plan for financial reporting purposes pursuant to GASB Statement No. 45.

This report is intended to present the results of the valuation. The results of the valuation are summarized below:

1. Total Actuarial Liability	\$ 206,806,028
2. Actuarial Value of Assets	30,403,650
3. Unfunded Actuarial Liability	176,402,378
4. Annual Required Contribution For Year Beginning January 1, 2014	12,800,581

B. DATA USED FOR THE VALUATION

Participant Data. The participant data required to carry out the valuation was supplied by the staff of the City of Aurora. The membership of the plan as of December 31, 2013, on which the valuation was based, is summarized in Exhibit 1. It can be seen that there were 817 active employees and 475 retirees currently receiving benefits included in the valuation.

EXHIBIT 1

Summary of Membership Data

1. Number of Retirees Currently Receiving Benefits	475
2. Number of Active Employees	<u>817</u>
3. Total Number of Members	<u>1,292</u>
4. Average Age of Active Employees	45.4
5. Average Years of Participation of Active Employees	15.4
6. Average Age of Retired Employees	66.2

Assets. The City and the retirees make contributions to a fund under which assets are being accumulated in advance for the payment of retiree health insurance benefits. As of December 31, 2013, the net assets of the plan amounted to \$30,403,650.

C. PLAN PROVISIONS

Our valuation was based on the provisions of the Plan in effect as of December 31, 2013. The provisions of the plan are summarized below:

The City provides postemployment health care benefits to its retirees. To be eligible for benefits, an employee must qualify for retirement under one of the City's retirement plans. All health care benefits are provided through the City's insured health plan. The benefits provided are the same as those provided for active employees.

The amount of retiree contributions is determined through collective bargaining or city policy depending on the retiree's group at the time of retirement. Retirees generally contribute 22% to 35% of the actuarially determined premium to the plan and the City contributes the remainder of the cost of providing benefits to retirees through the self-insured plan.

PPO Health Plan Costs

All retirees are covered under the Blue Cross Blue Shield PPO plan. For 2014, the annual cost of the PPO plan was estimated to be as follows:

<u>COVERAGE</u>	<u>Annual Cost</u>
Retiree	\$ 8,326.00
Retiree +1	\$20,816.64
Retiree + Family	\$29,143.20

D. ACTUARIAL ASSUMPTIONS AND COST METHOD

In performing the actuarial valuation of the retiree health insurance program for purposes of GASB Statement No. 45, we used such parameters and assumptions as are prescribed in GASB Statement No. 45 for actuarial valuations of retiree health insurance benefits. These parameters and assumptions are described below:

Interest Rate Assumption

Some assets have been accumulated under a retiree health insurance fund and the plan is partially funded. Therefore, based on the provisions of GASB Statement No. 45, we have used an interest rate assumption of 5.5% in performing the actuarial valuation as of December 31, 2013.

Medical Trend Rate Assumption

One of the most important assumptions is the medical trend rate assumption used to increase per member medical costs in future years. The medical trend rate assumption that we have used starts at 7.5% in 2015 and gradually declines to 5.0% by the year 2020 as follows:

<u>Year</u>	<u>Medical Trend</u>
2015	7.5%
2016	7.0%
2017	6.5%
2018	6.0%
2019	5.5%
2020 and later	5.0%

Per Retiree Monthly Costs

The annual costs of the PPO plan represent the average annual cost per plan participant of the health insurance benefits provided under the plan.

GASB Statement No. 45 provides that projection of future retiree health care benefits should be based on actuarial standards issued by the Actuarial Standards Board. Actuarial Standards of Practice No. 6 provides that actuaries should consider the variation of health care costs by age and should use appropriate age bands if the costs vary significantly.

We have therefore developed age-adjusted costs per retiree that are equivalent to the above average annual costs per participant by using the Aging Curve for Health Care Costs that is included in Table 4 of the study Aging Curves for Health Care Costs in Retirement, by Jeffrey P. Petertil, published in the July 2005 issue of the *North American Actuarial Journal*.

The percent increases in health care costs by age that are shown in Table 4 of the above paper are as follows:

<u>Age Band</u>	<u>Representative One Year Aging Factor</u>
50-54	3.3%
55-59	3.6%
60-64	4.2%
65-69	3.0%
70-74	2.5%
75-79	2.0%
80-84	1.0%
85-89	0.5%
90 and over	0.0%

Applying the above rates of increases in health care costs by age, we developed costs per retiree by five-year age groups that were equivalent to the above average costs per participant. The costs per retiree by five-year age groups were developed so the total of the age-adjusted costs was equal to the total of the average costs.

Using the above approach and taking into account the number of participants in each plan, we developed the following age adjusted total monthly total costs per retiree under the plan, including the cost of dependent coverage:

<u>Age Band</u>	<u>Age – Adjusted Total Monthly Cost</u>
50-54	\$1,504.03
55-59	\$1,781.99
60-64	\$2,157.62
65-69	\$ 727.87
70-74	\$ 833.59
75-79	\$ 931.67
80-84	\$1,003.62
85 and over	\$1,041.80

Participation Rate

We have assumed that 100% of current active employees will participate in the retiree health insurance plan.

Demographic Assumptions

Mortality Rates. The RP-2000 Combined Mortality Table projected to 2013, was used for IMRF active employees and pensioners. The RP-2000 Mortality Table with Blue Collar Adjustment, projected to 2013, was used for active and retired police officers and firefighters. The RP-2000 Disabled Mortality Table, projected to 2013, was used for disabled police officers and firefighters.

Termination Rates. For IMRF employees higher rates of termination are used during the first 8 years of employment. The following is a sample of the termination rates that were used:

Rate of Termination

<u>Years of Service</u>	<u>IMRF Employees</u>
0	.1790
4	.1158
7	.0684

<u>Age</u>	<u>IMRF Employees</u>	<u>Police</u>	<u>Firefighters</u>
25	.0530	.0750	.0500
30	.0410	.0500	.0250
35	.0330	.0300	.0200
40	.0270	.0200	.0100
45	.0230	.0200	.0100
50	.0200	.0350	.0100

Retirement Rates. For police, rates of retirement for each age from 50 to 70 were used. For firefighters, rates of retirement for each age from 50 to 70 were used. For general employees, rates of retirement for each age from 55 to 70 were used. Higher rates are used for general employees with 35 or more years of service aged 55-59. The following is a sample of the retirement rates that were used:

Rate of Retirement

<u>Age</u>	<u>IMRF Employees</u>	<u>Police</u>	<u>Firefighters</u>
50		.2000	.1400
55	.0725	.2500	.2000
60	.1200	.3300	.2500
65	.2500	.5000	.5000
70	1.0000	1.0000	1.0000

Disability Rates. For police and firefighters, rates of disability were used to estimate the probability of becoming disabled. The following is a sample of the disability rates that were used:

Rate of Disability

<u>Age</u>	<u>Police</u>	<u>Firefighters</u>
25	.0005	.0010
30	.0022	.0014
35	.0026	.0035
40	.0040	.0050
45	.0065	.0065
50	.0095	.0100
55	.0130	.0150

Actuarial Cost Method. The entry age normal actuarial cost method was used for the valuation. Under this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit age.

E. ACTUARIAL LIABILITY

The actuarial liability as determined under the valuation for the various classes of members is summarized in Exhibit 2. The total actuarial liability is then compared with the actuarial value of assets in order to arrive at the unfunded actuarial liability.

As of December 31, 2013, the total actuarial liability for retiree health insurance benefits provided under the plan is \$206,806,028, the actuarial value of assets is \$30,403,650, and the unfunded actuarial liability is \$176,402,378.

EXHIBIT 2

Actuarial Liability as of December 31, 2013

1. Actuarial Liability for Active Members	\$ 118,476,469
2. Actuarial Liability for Members Receiving Benefits	<u>88,329,559</u>
3. Total Actuarial Liability	<u>\$ 206,806,028</u>
4. Actuarial Value of Assets	<u>30,403,650</u>
5. Unfunded Actuarial Liability	<u>\$ 176,402,378</u>
6. Funded Ratio	14.7%

F. NORMAL COST

The normal cost for the year beginning January 1, 2014 is shown below in Exhibit 3. The total normal cost is \$5,441,299.

EXHIBIT 3

Normal Cost For Year Beginning January 1, 2014

	<u>Dollar Amount</u>
Total Normal Cost	\$ 5,441,299

G. ANNUAL REQUIRED CONTRIBUTION FOR GASB STATEMENT NO. 45

Pursuant to GASB Statement No. 45, we have calculated the annual required contribution for the year beginning January 1, 2014 as the normal cost plus a 30-year amortization of the unfunded actuarial liability as a level percent of payroll. Therefore, the annual required contribution (ARC) for the year beginning January 1, 2014 for purposes of GASB Statement No. 45 is as follows:

1. Total normal cost	\$ 5,441,299
2. Annual amount to amortize the unfunded liability over 30 years as a level percent of payroll	<u>7,359,282</u>
3. Annual required contribution (1 + 2)	<u>\$ 12,800,581</u>

A breakdown of the Annual Required Contribution by Fund is provided on the following pages.

City of Aurora
Retiree Health Insurance Plan

Annual Required Contribution as of January 1, 2014

Breakdown of Annual Required Contribution by Fund

Fund Number	(1) Actuarial Liability	(2) Normal Cost	(3) Amortization Amount	(4) Annual Required Contribution (2) + (3)
1002	\$483,695	\$28,271	\$17,212	\$45,483
1004	2,050,198	68,248	72,957	141,205
1010	152,186	0	5,416	5,416
1102	708,176	17,719	25,201	42,920
1103	130,897	3,527	4,658	8,185
1202	130,778	5,943	4,654	10,597
1210	679,916	21,226	24,195	45,421
1215	147,923	5,458	5,264	10,722
1216	210,507	9,134	7,491	16,625
1220	1,032,072	29,904	36,727	66,631
1221	171,607	4,863	6,107	10,970
1230	426,228	8,788	15,168	23,956
1231	208,753	19,699	7,429	27,128
1232	1,172,530	48,343	41,725	90,068
1233	285,880	17,426	10,173	27,599
1302	411,334	8,286	14,637	22,923
1314	656,884	20,800	23,376	44,176
1320	155,233	6,943	5,524	12,467
1330	585,115	12,079	20,822	32,901
1340	269,055	15,247	9,574	24,821
1360	173,176	6,251	6,163	12,414
1370	295,177	8,185	10,504	18,689
1802	384,224	6,513	13,673	20,186
1810	266,463	0	9,482	9,482
1820	2,563,010	60,901	91,206	152,107
1830	801,434	5,187	28,519	33,706
1840	570,396	28,102	20,298	48,400
1841	101,732	0	3,620	3,620
1850	3,903,191	95,956	138,897	234,853
1851	5,454,448	135,251	194,099	329,350

City of Aurora
Retiree Health Insurance Plan

Annual Required Contribution as of January 1, 2014

Breakdown of Annual Required Contribution by Fund

Fund Number	(1) Actuarial Liability	(2) Normal Cost	(3) Amortization Amount	(4) Annual Required Contribution (2) + (3)
2502	415,187	16,692	14,775	31,467
2521	1,575,491	54,951	56,065	111,016
2522	225,483	6,217	8,024	14,241
2523	1,038,749	25,521	36,964	62,485
2526	793,474	9,864	28,236	38,100
2533	262,811	14,555	9,352	23,907
2560	1,403,789	47,308	49,954	97,262
3033	61,309,231	1,503,851	2,181,715	3,685,566
3536	82,619,323	2,266,640	2,940,043	5,206,683
3537	3,034,251	94,899	107,975	202,874
3538	143,103	1,645	5,092	6,737
4402	708,665	16,827	25,218	42,045
4410	676,252	26,515	24,065	50,580
4420	1,323,897	23,398	47,111	70,509
4430	929,677	34,474	33,083	67,557
4431	3,057,229	94,456	108,793	203,249
4432	888,662	3,909	31,623	35,532
4433	670,270	16,871	23,852	40,723
4434	339,317	6,828	12,075	18,903
4440	2,199,196	44,545	78,259	122,804
4441	440,400	17,945	15,672	33,617
4442	524,472	11,329	18,664	29,993
4443	619,070	9,894	22,030	31,924
4450	3,132,667	79,084	111,477	190,561
4451	109,400	4,756	3,893	8,649
4460	6,808,425	168,885	242,281	411,166
4470	6,072,527	141,190	216,094	357,284
<u>4471</u>	<u>902,792</u>	<u>0</u>	<u>32,126</u>	<u>32,126</u>
Total	\$206,806,028	\$5,441,299	\$7,359,282	\$12,800,581

H. GASB DISCLOSURE INFORMATION

Governmental Accounting Standards Board (GASB) Statement No. 45 established financial reporting standards for post-employment benefits other than pensions (OPEB) of governmental employers. The statement requires a presentation of “actuarially determined information, from a long-term perspective, about the funded status of the plan and the progress being made in accumulating sufficient assets to pay benefits when due”. The information, covering a minimum of three years, is to be provided in two schedules of historical trend information, as follows:

1. The Schedule of Funding Progress provides information about the actuarially determined funded status from a long-term ongoing plan perspective and the progress made toward accumulating sufficient assets, and
2. The Schedule of Employer Contributions provides information about the annual required contribution (ARC) and percent of the ARC actually contributed by the employer.

Based on the results of the December 31, 2013 actuarial valuation, we have prepared a Schedule of Funding Progress and a Schedule of Employer Contributions, which are included in Exhibits 4 and 5 below.

We have also made calculations to determine the Net OPEB Obligation (NOO) as of December 31, 2013. Our calculations have been based on the parameters prescribed in GASB Statement No. 45 for

calculating the NOO. According to GASB Statement No. 45, an employer's Net OPEB obligation is equal to the cumulative difference since the effective date of GASB Statement No. 45 between the annual OPEB cost and the employer's contribution. The Net OPEB Obligation as of December 31, 2013 is determined in Exhibit 6 below.

The following information is applicable to the calculations of the information shown in Exhibits 4, 5, 6:

<u>Valuation Date:</u>	- December 31, 2013
<u>Actuarial Cost Method:</u>	- Entry Age Normal
<u>Amortization Method:</u>	- Level Percent of Payroll
<u>Remaining Amortization Period:</u>	- 30 years
<u>Actuarial Assumptions:</u>	
Investment return rate:	- 5.5% per year
Inflation rate:	- 3.0% per year
Increases in Postretirement health care costs:	

2015	7.5%
2016	7.0%
2017	6.5%
2018	6.0%
2019	5.5%
2020 and later	5.0%

EXHIBIT 4

SCHEDULE OF FUNDING PROGRESS

Fiscal Year	Total Actuarial Liability	Actuarial Value of Assets	Assets as a % of Actuarial Liability		Unfunded Liability	Active Member Payroll	UAL as a % of Active Member Payroll
			as a % of Actuarial Liability	Unfunded Liability			
2010	172,968,000	24,193,191	14.0%	148,774,809	64,712,359	229.9%	
2011	165,542,261	24,199,774	14.6%	141,342,487	65,237,549	216.7%	
2012	197,518,139	26,735,905	13.5%	170,782,234	72,083,003	236.9%	
2013	206,806,028	30,403,650	14.7%	176,402,378	67,057,641	263.1%	

EXHIBIT 5

SCHEDULE OF TOTAL CONTRIBUTIONS

Fiscal Year	Total Contributions		
	Annual OPEB Cost (AOC)	Employer Contribution	Total Contribution as a Percent of AOC
2010	13,674,943	4,548,786	33.26%
2011	13,331,086	4,580,046	34.36%
2012	12,974,168	5,380,735	41.47%
2013	14,714,208	6,116,378	41.57%

EXHIBIT 6

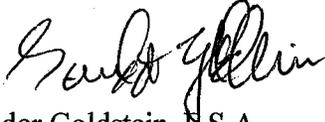
NET OPEB OBLIGATION AS OF DECEMBER, 2013

1. Net OPEB Obligation (NOO) as of 12-31-2012	\$74,551,271
2. Annual Required Contribution (ARC)	13,251,599
3. Interest on NOO	5,218,589
4. Adjustment to ARC	<u>(3,755,980)</u>
5. Annual OPEB Cost (AOC) for 2013 (2 + 3 + 4)	14,714,208
6. Employer Contribution for 2013	<u>6,116,378</u>
7. Net OPEB Obligation (NOO) as of 12-31-2013 (1 + 5 - 6)	<u><u>\$83,149,101</u></u>

I. CERTIFICATION

This actuarial report has been prepared in compliance with financial reporting requirements applicable to post-retirement benefit plans of governmental employers as provided in GASB Statement No. 45, including the Actuarial Standards of Practice relating to postretirement benefits other than pensions.

Respectfully submitted,

A handwritten signature in cursive script, appearing to read "Sandor Goldstein".

Sandor Goldstein, F.S.A.
Consulting Actuary

Appendix 1

Glossary of Terms used in Report

1. Actuarial Present Value. The value of an amount or series of amounts payable at various times, determined as of a given date by the application of a particular set of actuarial assumptions.
2. Actuarial Cost Method or Funding Method. A procedure for determining the actuarial present value of pension plan benefits and for determining an actuarially equivalent allocation of such value to time periods, usually in the form of a normal cost and an actuarial accrued liability.
3. Normal Cost. That portion of the present value of pension plan benefits, which is allocated to a valuation year by the actuarial cost method.
4. Actuarial Accrued Liability or Accrued Liability. That portion, as determined by a particular actuarial cost method, of the actuarial present value of pension benefits which is not provided for by future normal costs.
5. Actuarial Value of Assets. The value assigned by the actuary to the assets of the pension plan for purposes of an actuarial valuation.
6. Unfunded Actuarial Liability. The excess of the actuarial liability over the actuarial value of assets.
7. Projected Unit Credit Actuarial Cost Method. A cost method under which the present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit age.
8. Actuarial Assumptions. Assumptions as to future events affecting pension costs.
9. Actuarial Valuation. The determination, as of the valuation date, of the normal cost, actuarial liability, actuarial value of assets, and related actuarial present values for a retirement benefit plan.