CITY OF STOCKTON
RETIREE HEALTHCARE PLAN

Audit of the 6/30/2009 Valuation Results

Submitted by
The Segal Company
April 2011

SEGAL

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April 13, 2011

Mr. Bob Deis
City Manager
City of Stockton
22 East Weber Avenue, Suite 150
Stockton, CA 95202

Re: Audit of City of Stockton Other Postemployment Benefits Program Actuarial Valuation as of 6/30/2009 Prepared by Bartel Associates, LLC

Dear Bob:

We are pleased to present the results of this audit of the June 30, 2009 valuation for the City of Stockton Retiree Healthcare Plan. The purpose of this audit was to verify the calculations completed by Bartel Associates, LLC and to offer comments on the methodology and the results.

This review was conducted by Dave Bergerson, an Associate of the Society of Actuaries, Member of the American Academy of Actuaries, and an Enrolled Actuary under ERISA and Patrick Twomey, an Associate of the Society of Actuaries, a Member of the American Academy of Actuaries and an Enrolled Actuary under ERISA. This review was conducted in accordance with the standards of practice prescribed by the Actuarial Standards Board.

The assistance of Bartel Associates, LLC and City of Stockton is gratefully acknowledged.

We appreciate the opportunity to be of service to City of Stockton and we are available to answer any questions you may have on this report.

Sincerely,

Thomas M. Morrison, Jr.

TXB/gg

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PURPOSE OF THE ACTUARIAL REVIEW

This report has been prepared by Segal to review the validity of the data, review and comment on the assumptions (demographic and health specific), and review and validate the methodologies and calculation of plan liabilities and application of the GASB 45 standards used in the June 30, 2009 actuarial valuation performed by Bartel Associates, LLC for the City of Stockton Retiree Healthcare Plan.

This audit report includes an independent reproduction of the detailed valuation results that appear in the June 30, 2009 valuation report prepared by Bartel Associates, LLC. This audit was based on actuarial reports, employee data and supplemental information provided by both Bartel Associates, LLC and City of Stockton.

RESULTS OF THE AUDIT

Our overall findings of this Actuarial Review of the June 30, 2009 valuation are:

- Based on the methods and assumptions used by Bartel Associates, LLC, we were able to match within 1%, the total actuarial present value of plan benefits.
- We were not able to match the split of total present value into its past (actuarial accrued liability) and the future (normal cost) components.
- Our claim cost estimating formulas indicate a substantially higher over age 65 claim cost than what Bartel Associates, LLC is using.
- We subsequently noted the liability included coverage for surviving spouses of retirees which is a liability that the City may not have committed to in negotiations.
- We note that the use of the current 30-year rolling amortization schedule produces an Annual Required Contribution that will not sufficiently fund even the interest on the unfunded liability and should be noted in the disclosure. We recommend adopting a declining amortization to at least meet the interest obligation and pay the liability over a scheduled period.

Medical/Drug Per Capita Costs (Bartel Associates)

We reviewed Bartel Associates, LLC's development of the per capita costs for each retiree healthcare plan. Based on the data provided, we observed for both the "Original" and "Modified" plans the valuation used an estimated per capita cost based on claim information provided. These rates were adjusted for age. Our model produces similar cost for members under 65 but would produce results that are significantly higher for ages 65 and older.

Medical/Drug Per Capita Costs (City Healthcare Actuary)

In a separate report, Segal reviewed the per capita costs for both actives and retirees developed by the City's healthcare actuary, Tracey Aumiller, not associated with Bartel and Associates. For the Modified Plan (which covers 94% of current and all future retirees), Segal's rates were calculated to be 8% higher than Mr. Aumiller's. Because it is our understanding that the healthcare actuary's rates formed the basis of Bartel's per capita costs, the GASB 45 liability would increase by the same percentage as the increase in retiree premium rates shown by Segal.

Survivors Benefit

The City has reported that the surviving spouse of the retiree is eligible for the retiree medical benefit after the retiree death. That survivor benefit is included as a liability in the City's valuation of liabilities. However, this benefit is not included in the City's labor agreements or resolutions and there does not appear to be any documentation that the City Council ever approved this benefit for survivors. If the City determines this benefit was not legally approved and wishes to eliminate it, the actuarial liability would decrease by 11% - 13%.

CALPERS Service

It is our understanding that this service should be excluded for the service calculation for funding and for eligibility service. Based on a conversation with Bartel Associates, LLC, we understand that they exclude this service for funding purposes but include it for eligibility purposes.

Health Care Trend

We reviewed Bartel Associates, LLC's healthcare trend assumptions. We believe the *trend rates proposed* are within the acceptable range for trend rates.

Discount Rate Selection

We reviewed Bartel Associates, LLC's discount rate assumption of 4.5% used for the valuation under the "unfunded" scenario. This scenario assumes benefits will not be provided by a trust as defined by GASB 45. In this case, the discount rate must be based on the long-term expected rate of return on general employer assets. Used in combination with an inflation assumption of 3.0%, we believe that 4.5% is within the acceptable range of discount rates.

Other Observations

Our audit confirms that the actuarial calculations as of June 30, 2009 are generally reasonable and based on generally accepted actuarial principles and practices, with the exceptions noted above.

Based on the results under the entry age normal funding method (level percent of pay), a discount rate of 4.5% and using Bartel Associates, LLC's Health Care Trend and Medical/Drug per capita cost assumptions, our findings and recommendations are summarized as follows:

- Segal's *total present values of future benefits* as of June 30, 2009 are within 1% of Bartel Associates, LLC's present values.

- Segal's *total Entry Age Normal Actuarial Accrued Liability (EAN AAL)* as of June 30, 2009 is within 3% of Bartel Associates, LLC's liabilities.

- Segal's *total* Entry Age Normal Normal Cost (EAN NC) as of June 30, 2009 is over 10% less than Bartel Associates, LLC's normal cost.

- We found the demographic and economic actuarial assumptions and the methods used by Bartel Associates, LLC to be reasonable and in accordance with generally accepted actuarial standards and principles.

The staff at Bartel Associates, LLC and City of Stockton were very knowledgeable, cooperative and helpful in our review.

Scope of the Audit

The scope of the audit, as described in Segal's proposal titled "Audit of City of Stockton GASB 45 Actuarial Valuation Prepared by Bartel Associates, LLC", includes the following:

- A review of the June 30, 2009 participant and claim data provided by Bartel Associates, LLC.
- A review of the eligibility criteria.
- A review of the reasonableness of the actuarial assumptions and methodologies. This includes a review of health specific assumptions and other demographic assumptions.
- The completion of a parallel valuation as of June 30, 2009 using the assumptions, methodologies and funding method used by Bartel Associates, LLC in their performance of the June 30, 2009 Retiree Healthcare Plan valuation.
- The evaluation of the parallel valuation results and a reconciliation with Bartel Associates, LLC of any major discrepancies between the results, assumptions and methodology.

RESULTS OF THE AUDIT

Several steps are involved in conducting an Actuarial Review of a retiree health system. Outlined below are the primary steps we took to comply with the scope of the audit services. Following each step is a description of our results and observations.

Step 1: ***Review the demographics of the 2009 data provided by Bartel Associates, LLC for the June 30, 2009 actuarial valuation.***

Results

EXHIBIT A provides a comparison of the number of participants, average age and service (active members) and average age (pensioners). We found a close match to the values calculated by Bartel Associates, LLC.

Step 2(a): ***Review the actuarial assumptions. The actuarial assumptions can be divided into three basic types: 1) demographic assumptions, 2) economic assumptions and 3) healthcare assumptions.***

Observations

Demographic assumptions are those relating to how employees leave employment such as turnover (who terminates without a benefit), disability (those leaving due to becoming disabled), retirement, mortality (number leaving due to death and those having benefits end due to death). The Plan members are covered by CALPERS and the valuation uses the demographic assumptions developed by CALPERS. We concur with the use of these demographic assumptions.

Economic assumptions are those relating to salary scale, inflation and discount rate. We reviewed Bartel Associates, LLC's discount rate assumption of 4.5% used for the valuation under the "unfunded" scenario. This scenario assumes benefits will not be provided by a trust as defined by GASB 45. In this case, the discount rate must be based on the long-term expected rate of return on general employer assets. Used in combination with an inflation assumption of 3.0%, we believe that 4.5% is within the acceptable discount rates.

Healthcare assumptions are those specific to a retiree health valuation. We compare the trends recommended by Bartel Associates, LLC versus the trends that Segal would recommend. We believe the *trend rates proposed* are within the acceptable range for trend rates. The other significant healthcare assumptions include enrollment assumption and development of starting costs.

Step 2(b): Review of the actuarial methods.

Observations

City of Stockton selected from the six funding methods allowed under GASB 43/45. In addition, City of Stockton selected the type (level dollar or level percent of pay) and period (up to 30 years) for the amortization of the unfunded actuarial liability. City of Stockton also needed to decide if the plan would be funded or remain a pay as you go plan. In order to show the impact of these decisions, the valuation results were shown under two scenarios. Bartel Associates, LLC showed results under the Entry Age Normal funding methods and either funded or not funded (using a discount rate of 7.75% or 4.50%), all using a rolling 30-year level percent of pay amortization policy as permitted by GASB. Since the plan is not currently funded through a qualified trust (as described by GASB 43) that could receive contributions beyond the current pay as you go funding, the valuation results are shown with no initial accumulated assets. We note that under the remaining funding methods or other funding policy alternatives (such as a shorter amortization period or level dollar amortization), the resulting ARC would have been significantly higher. Also we recommend that the use of a "rolling 30" amortization schedule for unfunded liability as a level percent of pay should be accompanied by a comment that the amortization payment will not cover the interest on the unfunded liability. Under this amortization policy, the unfunded liability will grow over time even if all assumptions are met.

Step 3: ***Review plan summary.***

Observations

We have reviewed the Summary of Plan Provisions shown in the Bartel Associates, LLC Report. We note the following exception – it appears that benefit eligibility credit should exclude CALPERS service.

Step 4: ***Develop per capita costs based on the claim data provided.***

We reviewed Bartel Associates, LLC's development of the per capita costs for both retiree healthcare plans. Based on the data provided, we observed that for both the Original and Modified plans, the current per capita cost is developed using recent claim experience. The resulting starting costs are adjusted for age and Medicare coordination. The valuation currently assumes 100% will enroll. See Exhibit B for an illustration of difference in how we view the cost impact of Medicare coordination.

Step 5: ***Develop a valuation program based on the relevant provisions of the City of Stockton Other Postemployment Benefits Program as summarized in the Plan Summary, using the actuarial methods and assumptions outlined in the most recent valuation report, and further defined by Bartel Associates, LLC (including Bartel Associates, LLC's per capita costs and trend rates).***

Step 6: ***Run the valuation program with all participant data, compile results, and compare to Bartel Associates, LLC's results.***

Results

EXHIBIT C provides a comparison, by employer group, of Segal's results and Bartel Associates, LLC's results for:

i. Present value of benefits (PVB),

ii. Entry age normal actuarial accrued liability,

iii. Entry age normal cost,

Below is a summary of the results shown in Exhibit C.

- The ratios of Segal's results to Bartel Associates, LLC's results, on a total present value of future benefits basis, is **99%**.

- The ratio of the AAL calculated by Segal to the AAL calculated by Bartel Associates, LLC is **103%**.

- The ratio of the normal cost calculated by Segal to the normal cost calculated by Bartel Associates, LLC is **88%**.

Step 8: Evaluate the development of the annual required contribution as presented in the Bartel Associates, LLC actuarial valuation report.

Results

EXHIBIT D provides a comparison, by employer group, of Segal's results and Bartel Associates, LLC's results of the analysis of the annual required contribution (ARC) as of June 30, 2009.

- The ratios of Segal's ARC results to Bartel Associates, LLC's ARC results by employer group is **97%**. The reason for the difference is that our allocation of total present value into its past and future components differs from Bartel's.

Step 9: Evaluate the cashflow as presented in the Bartel Associates, LLC actuarial valuation report.

Results

EXHIBIT E provides a comparison of Segal's Cashflow results and Bartel Associates, LLC's Cashflow results for the period ending from June 30, 2010 – June 30, 2019.

- The ratios of Segal's projected cashflow results to Bartel Associates, LLC's cashflow results range from **95%** to **109%**.

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EXHIBIT A
CITY OF STOCKTON OTHER POSTEMPLOYMENT BENEFITS PROGRAM
JUNE 30, 2009 VALUATION
Analysis of Participant Data

EXHIBIT A

Summary of Participant Data

	Bartel Associates, LLC	Segal	Ratio
Retirees			
Number of retirees	971	967	99.6%
Average age of retirees	62.4	62.4	
Active Participants			
Number	1,372	1,373	100.1%
Average age	43.9	43.9	
Average years of service	11.8	11.8	
Average expected retirement age	N/A	58.8	

We have confirmed the computation of the basic statistical data used in the valuation.

EXHIBIT B
CITY OF STOCKTON OTHER POSTEMPLOYMENT BENEFITS PROGRAM
JUNE 30, 2009 VALUATION
Analysis of Health Specific Assumptions

We have reviewed the City's eligibility criteria and have confirmed the plan summary.

We have reviewed the claims data and independently developed the starting cost we would use based on the historical claim data. The following chart shows the comparison to the starting costs developed by Bartel Associates, LLC.

Modified Plan

	Bartel Male	Segal Male	Ratio	Bartel Female	Segal Female	Ratio
50-54	696	726	104%	825	796	96%
55-59	902	863	96%	850	857	101%
60-64	1134	1025	90%	928	923	99%
65-69	464	785	169%	412	648	157%
70-74	593	884	149%	515	698	136%
75-79	696	952	137%	593	752	127%

Original Plan

	Bartel Male	Segal Male	Ratio	Bartel Female	Segal Female	Ratio
50-54	589	598	102%	699	656	94%
55-59	764	711	93%	721	706	98%
60-64	960	844	88%	786	761	97%
65-69	393	591	150%	349	488	140%
70-74	502	666	133%	437	526	120%
75-79	590	717	122%	502	566	113%

As can be seen, Segal's starting costs tend to be about the same for the Modified Plan under age 65 but Segal's starting costs would be much higher for ages 65 and beyond. For the Original Plan, Segal's starting under age 65 tends to be lower while for ages 65 and beyond, our starting costs are significantly higher.

We believe the *trend rates proposed* are within the acceptable range for trend rates.

EXHIBIT C
CITY OF STOCKTON OTHER POSTEMPLOYMENT BENEFITS PROGRAM
JUNE 30, 2009 VALUATION
Analysis of Valuation Liabilities

Analysis of Valuation Liabilities (In Millions)			
Liability Measure	**Bartel Associates, LLC**	**Segal**	**Ratio (2) / (1)**
Present Value of Benefits	731.3	722.8	99%
Present Value of Future Normal Cost	187.6	162.3	87%
Actuarial Accrued Liability; Unfunded Accrued Liability	543.7	560.4	103%
Unfunded Accrued Liability Payment	23.8	24.5	103%
Normal Cost	17.1	15.1	88%

The chart shows a close match to the total projected benefit liability. Since the Actuarial Accrued liability is higher while the normal cost is lower, Segal and Bartel seem to have some differences in the allocation between present value of future normal cost and actuarial accrued liability. The discrepancy in the normal cost should be studied further, there is a question as to the extent that service with CALPERS is used for funding and for eligibility for benefits.

EXHIBIT D
CITY OF STOCKTON OTHER POSTEMPLOYMENT BENEFITS PROGRAM
JUNE 30, 2009 VALUATION
Analysis of Annual Required Contribution (ARC)

Analysis of Annual Required Contribution (ARC) (In Millions)			
	Bartel Associates, LLC	**Segal**	**Ratio (2) / (1)**
ARC	40.8	39.5	97%

The chart shows the calculated ARC is within 4%.

EXHIBIT E
CITY OF STOCKTON OTHER POSTEMPLOYMENT BENEFITS PROGRAM
JUNE 30, 2009 VALUATION
Analysis of Cashflow

PROJECTED CITY PAID BENEFITS (In Millions)			
Fiscal Year Ending	**Bartel Associates, LLC**	**Segal**	**Ratio (2) / (1)**
06/30/2010	13.8	15.1	109%
06/30/2011	16.9	16.0	95%
06/30/2012	18.5	17.6	95%
06/30/2013	20.0	19.2	96%
06/30/2014	21.6	20.8	97%
06/30/2015	23.1	22.4	97%
06/30/2016	24.6	24.0	97%
06/30/2017	26.1	25.6	98%
06/30/2018	27.4	27.1	99%
06/30/2019	28.9	28.6	99%

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