J-02c

CITY COUNCIL REPORT

October 13, 2009

TO: The Honorable Mayor and City Council Members

FROM: John Szerlag, City Manager
John M. Lamerato, Assistant City Manager/Finance & Administration

SUBJECT: Actuarial Valuation – Other Postemployment Benefits (OPEB)

The City of Troy has received the second actuarial valuation using the methods and requirements to determine our accrued liability for other postemployment benefits contained in Statements No. 43 and No. 45 of the Governmental Accounting Standards Board (GASB).

The City has pre-funded retiree healthcare for several years and has accumulated $38.1 million in assets to apply towards the actuarial accrued liability (attributable to service accrued by plan members as of December 31, 2008) of $92 million.

The annual required contribution (as a percentage of projected payrolls for all employee groups) is 13.97%. This rate compares to those contained in the December 31, 2006 valuation of 11.42%.

Our funded ratio went from 55.7% to 41.4% after applying the new rules and cost methods of GASB Statements No. 43 and 45 and investment performance.

We implemented the contribution rate contained in the actuarial study for the current fiscal year and will budget accordingly for next fiscal year. The new contribution rate will cause departments to review their budgets to account for increase in cost for retirement benefits. By making the required contribution, we will be in compliance with GASB Statements No. 43 and 45.

Gabriel Roeder Smith & Company
Consultants & Actuaries

CITY OF TROY OTHER POSTEMPLOYMENT BENEFITS
ACTUARIAL VALUATION REPORT
DECEMBER 31, 2008

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September 28, 2009

Mr. John M. Lamerato
Assistant City Manager - Finance
City of Troy
500 West Big Beaver Road
Troy, Michigan 48084

Dear Mr. Lamerato:

Submitted in this report are the results of an Actuarial Valuation of the benefit values associated with the employer financed Other Postemployment Benefits provided by the City of Troy. The date of the valuation was December 31, 2008, effective for the fiscal year beginning July 1, 2009. This report was prepared at the request of the City of Troy.

The actuarial calculations were prepared for purposes of complying with the requirements of Statements No. 43 and No. 45 of the Governmental Accounting Standards Board (GASB). The calculations reported herein have been made on a basis consistent with our understanding of these accounting standards. Determinations of the liability associated with the benefits described in this report for purposes other than satisfying the System's financial reporting requirements may produce significantly different results. This report may be provided to parties other than the City of Troy only in its entirety and only with the permission of the City of Troy.

The valuation was based upon information, furnished by the City, concerning retiree health care benefits, individual members, and financial data. Data was checked for internal consistency, but was not otherwise audited.

To the best of our knowledge, this report is complete and accurate and was made in accordance with generally recognized actuarial methods.

Both of the undersigned are Members of the American Academy of Actuaries (MAAA) and together meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Respectfully submitted,

Brad Lee Armstrong, ASA, MAAA   Randall J. Dziubek, ASA, MAAA

BLA/RJD:bd

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EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Annual Required Contribution

This report presents the annual expense required to be recognized by the plan sponsor for purposes of complying with the accounting requirements of the Governmental Accounting Standards Board (GASB) Statement No. 43.

The Annual Required Contribution (ARC) for the fiscal year beginning July 1, 2009 is estimated to be $4,618,751 provided that the City intends to fully fund the OPEB. Under GASB Statement No. 45, the annual OPEB cost required to be disclosed on the employer's financial statements is equal to the ARC. Actual claims and premiums including the effect of the implicit rate subsidy paid on behalf of retirees may be treated as employer contributions in relation to the ARC and also act to reduce the Net OPEB Obligation (NOO) described below under Additional OPEB Reporting Requirements. The expected retiree health care claims and premium amounts paid during the fiscal year beginning July 1, 2009 are estimated to be $3,030,464. These amounts reflect the employer portion of the retiree only premium rates and the implicit subsidy for retirees and covered spouses. Therefore, the expected employer pre-funding contribution net of employee contributions that would result in a zero NOO for June 30, 2010 is $1,588,287 ($4,618,751-$3,030,464).

For additional details, please see Section B of the report.

Additional OPEB Reporting Requirements

In addition to the ARC described above, employers will have to disclose a NOO. The current NOO is the cumulative difference between annual OPEB cost (ARC plus amortization of the prior NOO) and annual employer contributions in relation to the ARC, accumulated with interest from the implementation of GASB Statement No. 43. The NOO is zero as of the beginning of the fiscal year that GASB Statement No. 43 is implemented, unless the employer chooses to recognize a beginning balance. Since we believe that the ARC has been met since implementation, the NOO remains zero as of the valuation date. The ARC and the NOO are strongly influenced by the employers' commitment to pre-funding future cash flows, i.e., the degree to which the City contributes amounts to the Retiree Health Care Program to meet the ARC.

The requirements for determining the employer's contributions in relation to the ARC are described in paragraph 13 g. of GASB Statement No. 45. Additional information required to be disclosed in the employer's financial statements is detailed in paragraphs 24 through 27 of GASB Statement No. 45.

Liabilities and Assets

Once again assuming full pre-funding, the present value of all benefits expected to be paid to current plan members as of December 31, 2008 is $107,054,458. The actuarial accrued liability, which is the portion of the $107,054,458 attributable to service accrued by plan members as of December 31, 2008, is $91,965,894. The assets currently set aside for GASB OPEB purposes as of December 31, 2008 are $38,093,710. The OPEB liabilities are currently 41% funded.

SECTION A

VALUATION RESULTS

DEVELOPMENT OF THE ANNUAL REQUIRED CONTRIBUTION FOR THE OTHER POSTEMPLOYMENT BENEFITS

Contributions for	Annual Required Contribution
Normal Cost	
Normal Retirement	$ 1,791,714
Early Retirement	0
Termination Benefits	46,844
Death-in-Service	44,767
Disability	92,252
Total Normal Cost	$ 1,975,577
Amortization of Unfunded Actuarial Accrued Liabilities (Amortized over 30 years)	$ 2,643,174
Annual Required Contribution (ARC) for the Fiscal Year beginning July 1, 2009	**$ 4,618,751**
Projected Payroll for the Fiscal Year Beginning July 1, 2009	$33,056,968
Annual Required Contribution (ARC) as a Percentage of Projected Payroll	**13.97%**
ARC Per Active Participant	$ 10,379

Projected Payroll for the Fiscal Year Beginning July 1, 2010	$34,213,962
Annual Required Contribution (ARC) for the Fiscal Year beginning July 1, 2010	**$ 4,780,407**
ARC Per Active Participant	$ 10,742

The results on this page are calculated under the assumption that a funding arrangement with contributions at least equal to the Annual Required Contribution (ARC) will be followed. The unfunded actuarial accrued liabilities were amortized as a percent of payroll. A 30-year amortization period for unfunded actuarial accrued liabilities was used. Thirty years is the maximum period that complies with GASB requirements.

DETERMINATION OF UNFUNDED ACTUARIAL ACCRUED LIABILITY AS OF DECEMBER 31, 2008

A. Present Value of Future Benefits	
1. Retirees and Beneficiaries	$ 51,203,225
2. Vested Terminated Members	0
3. Active Members	55,851,233
Total Present Value of Future Benefits	$107,054,458
B. Present Value of Future Employer Normal Costs	15,088,564
C. Actuarial Accrued Liability (A.-B.)	91,965,894
D. Actuarial Value of Assets	38,093,710
E. Unfunded Actuarial Accrued Liability (C.-D.)	$ 53,872,184
F. Funded Ratio (D./C.)	41.4%

The Unfunded Actuarial Accrued Liability (UAAL) is not booked as an expense all in one year and does not appear in the Employer's Statement of Net Assets. Nevertheless, it is reported in the Notes to the Financial Statements and in the Required Supplementary Information. These are information sections within the employer's financial statements.

COMMENTS

COMMENT A: One of the key assumptions used in any valuation of the cost of postemployment benefits is the long-term rate of investment return on plan assets. Higher assumed investment returns will result in a lower Annual Required Contribution (ARC). Lower returns will result in a higher ARC. We have calculated the liability and the resulting ARC using an assumed investment return of 6.5%. If the City chooses to pre-fund with contributions less than the ARC, the Governmental Accounting Standards Board (GASB) requires lowering the assumed investment return on assets to match expected return on the City's general assets. Lowering the assumed investment return would considerably increase the Net OPEB Obligation (NOO) that is disclosed on the employers' financial statement.

COMMENT B: Based on the number of plan members as of this valuation, the plan sponsor is required by GASB to perform actuarial valuations at least biennially. An annual actuarial valuation will re-compute the required contribution rate each year. This will permit fluctuations and trends in experience to be reflected in the contribution rate on a regular basis. If an annual actuarial valuation is only completed every two years, then the ARC as a percent of payroll would apply to each intermediate fiscal year. Payroll is assumed to grow at 3.5%.

COMMENT C: The contribution rates shown include amortization of the unfunded actuarial accrued liability over 30 years. A shorter amortization period would result in a higher ARC. The maximum time period permitted by the GASB Statement No. 45 is 30 years.

COMMENT D: Actual claims and/or premiums paid on behalf of retirees may be treated as employer contributions in relation to the ARC and act to reduce the NOO. For the fiscal year ending June 30, 2010, the amount of estimated claims and/or premiums paid by the employer on behalf of retirees including the effect of the implicit rate subsidy under GASB is $3,030,464.

COMMENT E: The primary reason for the increase in the ARC as a percentage of payroll since the previous valuation is the investment shortfalls experienced in the two years since the last valuation as of December 30, 2006.

RECOMMENDATIONS

We recommend that consideration be given to the following:

- Continue the pre-funding program you have already begun for retiree health benefits. If the City wishes to maintain the level of benefits currently in place, the likelihood improves considerably if the ARC is contributed each year.

- Monitor funding progress by means of regular valuations. Considering the volatility of health care costs, **annual** updates are suggested. History suggests that there is a close correlation between regular reviews and financial stability in all kinds of post retirement benefit programs.

SECTION B

RETIREE PREMIUM RATE DEVELOPMENT

RETIREE PREMIUM RATE DEVELOPMENT

Premium rates for the City of Troy were developed separately for the self-insured and the fully-insured portions and then blended to create one premium rate.

The Initial self-insured premium rates were developed separately for each class (pre-65 and post-65). The rates were calculated by using actual paid claims and exposure data for the period of January 2006 to December 2008, adjusted for catastrophic claims, plus the load for administration, network access fees, and stop loss premiums. The self-insured medical and prescription drug data was provided by the City. The medical data was analyzed for the pre-65 and post-65 participants separately since Medicare is available for the post-65 participants and has a significant impact on the claim experience. Furthermore, since the prescription drug claims and the medical claims exhibit different trends and claim payment patterns, we analyzed these claims separately as well.

The initial fully-insured premium rates were developed for the two classes of retirees (pre-65 and post-65). The fully-insured rates provided by the City were utilized to determine the appropriate premium rates. The pre-65 fully-insured premiums are blended rates based on the combined experience of active and pre-65 retired members; therefore, there is an implicit employer subsidy for the non-Medicare eligible retirees since the average costs of providing health care benefits to retirees under age 65 is higher than the average cost of providing health care benefits to active employees. The true per capita cost for the pre-65 retirees is developed by adjusting the demographic differences between the active employees and retirees to reflect this implicit rate subsidy for the retirees. For the post-65 retirees, the fully-insured premium rate is used as the basis of the initial per capita cost without adjustments since the rate reflects the demographics of the post-65 retiree group.

Since different groups have benefits which differ significantly, group specific rates were developed for current retirees, future AFSCME employees hired before 1/1/1994 and all other future retirees.

RETIREE PREMIUM RATE DEVELOPMENT

Age graded and sex distinct premiums are utilized in this valuation. The premiums developed by the preceding process are appropriate for the unique age and sex distribution currently existing. Over the future years covered by this valuation, the age and sex distribution will most likely change. Therefore, our process “distributes” the average premium over all age/sex combinations and assigns a unique premium for each specific age/sex combination. The age/sex specific premiums more accurately reflect the health care utilization and cost at that age.

We have not “age graded” the dental or vision premium rates for this valuation, since dental and vision claims do not vary significantly by age. For the retirees that are eligible, the dental premium used for this valuation is $43.96 for the first person and $50.69 for the second person. The vision premium used in this valuation is $5.05 per person.

The tables below show the combined self-insured and fully-insured medical and prescription drug one-person monthly premiums at select ages. The premium (or per capita costs) rates shown below reflect the use of age grading.

All Current Retirees

For Those Not Eligible for Medicare

Age	Male	Female
45	$ 338.68	$ 443.40
50	458.21	519.18
55	598.87	615.58
60	752.35	723.17

For Those Eligible for Medicare

Age	Male	Female
65	$ 601.59	$ 553.98
70	693.92	623.98
75	770.37	683.69

RETIREE PREMIUM RATE DEVELOPMENT

Current Active AFSCME hired before 1/1/2004

For Those Not Eligible for Medicare

Age	Male	Female
45	$ 344.73	$ 451.31
50	466.38	528.44
55	609.55	626.56
60	765.77	736.08

For Those Eligible for Medicare

Age	Male	Female
65	$ 636.23	$ 585.89
70	733.89	659.91
75	814.74	723.07

Current Active AFSCME hired after 1/1/2004, Cl/Ex, MAP, and TCOA

For Those Not Eligible for Medicare

Age	Male	Female
45	$ 321.81	$ 421.31
50	435.38	493.31
55	569.03	584.91
60	714.87	687.15

For Those Eligible for Medicare

Age	Male	Female
65	$ 574.97	$ 529.47
70	663.22	596.37
75	736.29	653.44

Current Active TFSOA

For Those Not Eligible for Medicare

Age	Male	Female
45	$ 323.91	$ 424.05
50	438.22	496.53
55	572.74	588.73
60	719.53	691.63

For Those Eligible for Medicare

Age	Male	Female
65	$ 574.97	$ 529.47
70	663.22	596.37
75	736.29	653.44

RETIREE PREMIUM RATE DEVELOPMENT

All Current Active TPOA

For Those Not Eligible for Medicare

Age	Male	Female
45	$ 323.23	$ 423.17
50	437.31	495.49
55	571.55	587.50
60	718.03	690.19

For Those Eligible for Medicare

Age	Male	Female
65	$ 574.97	$ 529.47
70	663.22	596.37
75	736.29	653.44

Based on the guidance provided by GASB on issues related to Medicare Part D payments to State and Local Governments effective as of June 30, 2006, an employer should apply the measurement requirements of GASB Statement No. 45 to determine the actuarial accrued liabilities, the annual required contribution of the employer, and the annual OPEB cost without reduction for Retiree Drug Subsidy (RDS) payments. Therefore the impact of the RDS that is part of the Medicare Prescription Drug Improvement and Modernization Act of 2003 is not reflected in this report.

Brian T. Morris

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

City of Troy Retiree Health Care Plan
Summary of Benefits as of December 31, 2008

Plan Participants

Employees, retirees, and spouses of the City of Troy who satisfy the following requirements are eligible to receive retiree health care coverage.

Health Insurance Premium Subsidy

Post-retirement health insurance premiums are subsidized by the City as follows:

T.C.O.A. – 4% per completed year, retired after July 1, 1994.
T.P.O.A – 4% per complete year, retired after February 20, 1996.
T.F.S.O.A – 4% per complete year, retired after January 1, 1999.
AFSCME, Classified/Exempt, Clerical – $400/month or 4% per complete year, whichever is greater.
Retirees from prior provisions – $400/month or 3% per complete year, whichever is greater.

Regular Retirement Eligibility

T.P.O.A., T.F.S.O.A., and T.C.O.A. members – 25 years of service; or age 60 with 10 years of service.

AFSCME, Classified/Exempt, Clerical – Age 50 with 27 years of service; or age 55 with 25 years of service; or age 60 with 10 years of service.

There is no mandatory retirement age.

The City does not provide health insurance for the following employees when they retire. Instead they are eligible to participate in a Retiree Health Savings Account.

Classified/Exempt members hired after January 2, 2006
TFSOA members hired after July 1, 2006
AFSCME members hired after July 1, 2006
TPOA and TCOA members hired after July 1, 2011
Clerical members hired after February 18, 2008

Early Retirement Eligibility

Age 55 with 10 years of service. Benefit commences immediately.

Deferred Retirement

Members retiring under deferred retirement conditions are not eligible for retiree health care through the City.

City of Troy Retiree Health Care Plan
Summary of Benefits as of December 31, 2008

Duty Disability Retirement Eligibility

No age or service requirement. Benefit commences immediately. Worker's compensation must be payable.

Non-Duty Disability Retirement Eligibility

5 years of service (10 years for Classified/Exempt employees hired after February 1996, and MAP employees hired after February 2005). Benefit commences immediately.

Duty Death Before Retirement Eligibility

No age or service requirement. Benefit commences immediately.

Non-Duty Death Before Retirement Eligibility

10-years service. Benefit commences immediately.

Benefits for Spouses of Retired Employees

Spouses of living retirees are eligible for retiree health care coverage through the City. Only the spouse named at time of retirement is eligible. For retirees receiving a percentage (i.e. 3% or 4%) of their premium paid, the spouse receives an equal percentage of their premium paid. For retirees receiving a $400 benefit, the spouse may use any amount that is above and beyond the cost of the retiree's premium, but is not eligible for an additional $400.

Surviving spouses of deceased retirees are eligible for retiree health care coverage through the City if the surviving spouse is receiving a survivor's DB pension or is the spouse of a DC member. The surviving spouse's benefit amount is equal to a retiree's one person coverage.

Non-Medicare and Medicare–Eligible Provisions

Member and spouse are required to enroll in Medicare Parts A & B. Premium for Medicare Part B is the responsibility of the retiree or spouse.

Vision Coverage

Retirees/spouses enrolled in a medical plan that provides vision coverage are eligible for retiree vision coverage.

For retirees/spouses receiving a percentage (i.e. 3% or 4%) of their premium paid, or $400 dollars whichever is greater, the vision coverage is included as part of the medical premium.

City of Troy Retiree Health Care Plan
Summary of Benefits as of December 31, 2008

Dental Coverage

Certain T.C.O.A. members and their spouses are eligible for retiree dental coverage.

Retiree dental coverage is paid by the City for these certain T.C.O.A retirees and their spouses at the rate of 4% per completed year of service.

Life Insurance Coverage

City paid life insurance coverage is not offered to retirees of the City of Troy.

Retiree Opt-Out

Retirees who opt not to participate in the City's plan are not eligible for any payment in lieu of coverage. Retirees that opt out of coverage are eligible to elect coverage at a later time.

Retiree Health Savings Account

Participating employees in the Retiree Health Savings Account contribute 2% of salary while working to their RHS account, the City contributes 4% of the employee's salary to the account which is used for health insurance premiums, reimbursement, etc. when they retire. Participating retirees are eligible to purchase retiree health insurance coverage through the City of Troy.

This is a brief summary of the City of Troy Retiree Health Care Plan provisions. In the event that any description contained herein differs from the actual eligibility or benefit, the appropriate employee contract or governing document will prevail.

City of Troy
General Employees
Active Member Demographic Data as of December 31, 2008

Attained Age	Years of Service to Valuation Date 0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Total No.	Valuation Payroll
20-24	3							3	$ 78,245
25-29	3	3						6	316,972
30-34	14	13	2					29	1,539,987
35-39	10	15	6	2				33	1,874,551
40-44	13	11	6	3	2			35	2,205,786
45-49	7	16	13	10	4	2	1	53	3,462,698
50-54	6	16	11	15	11	9	8	76	5,194,368
55-59	4	11	13	3	7	4	5	47	3,420,193
60-64	1	7	3	2	3	1	3	20	1,339,481
65 & Over		2	2		2		1	7	380,096
Totals	**61**	**94**	**56**	**35**	**29**	**16**	**18**	**309**	**$ 19,812,377**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	47.7	years
Service:	12.6	years
Annual Pay:	$64,118	

CITY OF TROY
PUBLIC SAFETY EMPLOYEES
ACTIVE MEMBER DEMOGRAPHIC DATA AS OF DECEMBER 31, 2008

Attained Age	Years of Service to Valuation Date								
	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	Total No.	Valuation Payroll
25-29	9	1						10	$ 704,245
30-34	12	9	4					25	1,781,227
35-39	2	8	13					23	1,870,990
40-44	2	2	11	5	2			22	1,834,150
45-49				7	10	2		19	1,732,048
50-54		2	1	4	6	7	2	22	2,040,343
55-59	1		1	1	2	3	5	13	1,165,745
60-64				1			1	2	227,167
Totals	**26**	**22**	**30**	**18**	**20**	**12**	**8**	**136**	**$ 11,355,915**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age:	42.3	years
Service:	15.0	years
Annual Pay:	$83,499	

CITY OF TROY
RETIRED MEMBER DEMOGRAPHIC DATA AS OF DECEMBER 31, 2008

General Retirees

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	7	1	8
55-59	21	11	32
60-64	20	16	36
65 & Over	44	45	89
Totals	**92**	**73**	**165**

Public Safety Retirees

Attained Age	Number of Retirees		
	Male	Female	Total
Under 55	13	2	15
55-59	21	0	21
60-64	17	0	17
65 & Over	12	1	13
Totals	**63**	**3**	**66**

Only retirees indicated as receiving health care are valued in this report and shown in the exhibits above.

SECTION D

ACTUARIAL COST METHOD
AND ACTUARIAL ASSUMPTIONS

VALUATION METHODS

Actuarial Cost Method. Normal cost and the allocation of benefit values between service rendered before and after the valuation date was determined using an **Individual Entry-Age Normal Actuarial Cost Method** having the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement;

(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains (losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing of Unfunded Actuarial Accrued Liabilities. Unfunded Actuarial Accrued Liabilities (UAAL) were amortized by a level percent of pay. The UAAL were determined using the funding value of assets and actuarial accrued liability calculated as of the valuation date. The UAAL amortization payment is the amount required to fully amortize the UAAL over a 30-year period beginning on the valuation date. This UAAL payment does not reflect any payments expected to be made between the valuation date and the fiscal year for which the contributions in this report have been calculated.

The salary increase assumption used in this actuarial valuation projects annual salary increases of 3.5% plus a percentage based on an age-related scale to reflect merit, longevity and promotional salary increases.

Rates of Investment Return under a fully funded arrangement. **6.5% per year,** compounded annually, net of expenses. This rate consists of a real rate of return of 3.0% a year plus a long-term rate of wage growth of 3.5% a year. This assumption is used to equate the value of payments due at different points in time.

The number of active members is assumed to remain constant in the future.

The growth rate for amortizing the Unfunded Actuarial Accrued Liabilities was assumed to be 3.5%.

Rates of Salary Increase. Employee salaries are estimated to increase between the date of hire and date of retirement. Salary increases occur in recognition of (i) individual merit and seniority, (ii) inflation-related depreciation of the purchasing power of salaries, and (iii) competition from other employers for personnel. A schedule of long-term rates of increase in individual salaries used for the valuation follows for sample ages:

	% Increase in Salary at Sample Ages		
Sample Ages	**Merit & Seniority**	**Base (Economic)**	**Increase Next Year**
20	4.0%	3.5%	7.5%
25	3.2%	3.5%	6.7%
30	2.8%	3.5%	6.3%
35	2.5%	3.5%	6.0%
40	2.2%	3.5%	5.7%
45	1.7%	3.5%	5.2%
50	1.2%	3.5%	4.7%
55	0.7%	3.5%	4.2%
60	0.2%	3.5%	3.7%
65	0.0%	3.5%	3.5%
Ref	30		

Pay Projections. Active member covered payroll was projected to increase 3.5% a year, for the purpose of determining the level percent of payroll contributions. The rate of increase is consistent with the base rate of increase in salaries used to calculate actuarial present values.

The mortality table used to project the mortality experience is the RP-2000 Combined Healthy Mortality Table, for males and females. 80% of active member deaths are assumed to be non-duty deaths.

Sample Attained Ages	Probability of Dying Next Year		Future Life Expectancy (years)	
	Men	**Women**	**Men**	**Women**
50	0.21 %	0.17 %	30.80	33.59
55	0.36	0.27	26.18	28.91
60	0.67	0.51	21.74	24.38
65	1.27	0.97	17.61	20.12
70	2.22	1.67	13.88	16.23
75	3.78	2.81	10.57	12.74
80	6.44	4.59	7.75	9.68
Ref	#506x1sb0yrs0Unisex		#507x1sb0yrs0Unisex	

The table used to project disabled mortality experience is the RP-2000 Combined Disabled Mortality Table, for males and females.

The rates of retirement used to measure the probability of eligible members retiring during the next year, were as follows:

	Percent of Eligible Active Members Retiring within Next Year			
Retirement Ages	**Non-Exempt General**	**T.F.S.O.A. & Exempt**	**T.C.O.A.**	**T.P.O.A.**
43			35 %	40 %
44			25	40
45			20	40
46			15	40
47			15	40
48			15	40
49			15	35
50	15 %	35 %	15	20
51	10	25	25	15
52	5	20	30	15
53	5	15	100	15
54	5	15		15
55	5	15		15
56	5	15		15
57	5	15		25
58	5	25		100
59	5	30		
60	5	100		
61	5			
62	30			
63	10			
64	10			
65	100			
Ref	39	23	23	46

Rates of separation from active membership are used to estimate the number of employees at each age that are expected to terminate employment before qualifying for retirement benefits. The withdrawal rates do not apply to members eligible to retire, and do not include separation on account of death or disability.

Sample rates of separation from active employment are shown below:

Sample Ages	Years of Service	% of Active Members Separating Within Next Year: General	% of Active Members Separating Within Next Year: Public Safety
ALL	0	30.00 %	15.00 %
	1	20.00	10.00
	2	15.00	8.00
	3	10.00	7.00
	4	7.00	6.00
25	5 & Over	6.00	5.00
30		6.00	4.50
35		6.00	3.55
40		6.00	1.45
45		3.50	0.75
50		1.50	0.75
55		1.50	0.75
60		1.50	0.75
Ref	11	18	55

ACTUARIAL ASSUMPTIONS (CONCLUDED)

Rates of disability among active members are used to estimate the incidence of member disability in future years. 80% of disabilities were assumed to be non-duty related.

Sample	Percent Becoming Disabled Within Next Year	
Ages	Male	Female
20	0.08 %	0.10 %
25	0.08	0.10
30	0.08	0.10
35	0.08	0.10
40	0.20	0.36
45	0.26	0.41
50	0.49	0.57
55	0.89	0.77
60	1.41	1.02
65	1.66	1.23
Ref	#9x1	#10x1

Health care trend rates used in the valuation were as shown below.

Year	Medical and Prescription Drugs	Dental and Vision
2009	9.00 %	4.00 %
2010	8.25	4.00
2011	7.50	4.00
2012	7.00	4.00
2013	6.50	4.00
2014	6.00	4.00
2015	5.50	4.00
2016	5.00	4.00
2017	4.50	4.00
2018	4.00	4.00
2019 & Later	4.00	4.00

GASB STATEMENTS NO. 43 AND NO. 45
REQUIRED SUPPLEMENTARY INFORMATION

Valuation Date	December 31, 2008
Actuarial Cost Method	Individual Entry Age Normal Cost
Amortization Method	Level Percent of Payroll Open
Remaining Amortization Periods	30 Years
Asset Valuation Method	Market Value
Actuarial Assumptions:	
Discount Rate	6.5% Per Year
Projected Salary Increases	3.5% - 7.5%
Valuation Health Care Cost Trend Rate	
Medical and Prescription Drug	9% in 2009, grading to 4.0% in 2018
Dental and Vision	4.0% for all years

This information is presented in draft form for review by the City's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the City's financial statements.

SCHEDULE OF FUNDING PROGRESS

Rounded to the Nearest $1,000

Actuarial Valuation Date December 31	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (b)-(a)	Funded Ratio (a)/(b)	Active Member Covered Payroll (c)	Unfunded AAL as a Percentage of Active Member Covered Payroll ((b-a)/c)
2001	$ 23,645	$ 27,804	$ 4,159	85.0 %	$26,847	15.5 %
2002	31,003	31,263	260	99.2	28,480	0.9
2003	32,815	37,000	4,186	88.7	31,790	13.2
2004	36,484	40,419	3,935	90.3	30,046	13.1
2005	37,190	43,554	6,364	85.4	29,937	21.3
2006*	43,983	78,901	34,918	55.7	31,038	112.5
2008	**38,094**	**91,966**	**53,872**	**41.4**	**31,168**	**172.8**

* *After adoption of OPEB compliant methods and assumptions.*

This information is presented in draft form for review by the City's auditor. Please let us know if there are any items that the auditor changes so that we may maintain consistency with the City's financial statements.

MISCELLANEOUS AND TECHNICAL ASSUMPTIONS

Decrement Operation:	Disability and mortality decrements do not operate during the first five years of service. Disability also does not operate during retirement eligibility.
Decrement Timing:	Decrements of all types are assumed to occur mid-year.
Eligibility Testing:	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Marriage Assumption:	90% of males and 90% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses for active member valuation purposes.
Medicare Coverage:	Assumed to be available for all covered employees on attainment of age 65.
Children:	Children of active employees were assumed to not receive coverage upon retirement of the employee.
Election Percentage:	(General) It was assumed that 72% of retirees would choose to receive retiree health care benefits through the City. Of those assumed to elect coverage, 58% of retirees assumed to elect two-person coverage, if eligible. For those that elect two-person coverage, it was assumed that coverage would continue to the spouse upon death of the retiree 50% of the time, if eligible. (Public Safety) It was assumed that 85% of retirees would choose to receive retiree health care benefits through the City. Of those assumed to elect coverage, 90% of retirees assumed to elect two-person coverage, if eligible. For those that elect two-person coverage, it was assumed that coverage would continue to the spouse upon death of the retiree 50% of the time, if eligible.
Retiree Opt-Outs:	Retirees and spouses who have opted out of coverage are assumed to not re-enroll.

APPENDIX A

OVERVIEW

GASB BACKGROUND

The purpose of this valuation is to provide information on the cost associated with providing postemployment benefits other than pensions, or OPEB, to current and former employees. OPEB benefits are most often associated with postemployment health care, but cover almost any benefit not provided through a pension plan, including life insurance, dental and vision benefits. It is important to note that OPEB benefits, by definition, do not include benefits *currently* being provided to active employees – however, this report includes the liabilities for benefits expected to be paid to current active employees when they terminate employment at a future date.

The rising cost of health care has been a cause of concern to both individuals and employers who sponsor health care plans. The accounting community became concerned that many sponsors of public plans were accounting for the cost of their OPEB plans solely on the basis of benefits paid and that this method did not accurately reflect the ultimate cost of benefits promised to current and former employees. In 1988, the Governmental Accounting Standards Board (GASB) began working on a project to develop comprehensive standards for financial reporting of OPEB plans.

The GASB determined that an OPEB plan was similar to a pension plan in that benefits are earned during an active employee's working lifetime but paid out at a future date. In the GASB's view, accounting for OPEB should follow the same basic principle as accounting for public plan pension costs. These benefits are compensation for employees' services and should be accounted for during the period of time that services are performed.

The GASB worked on comprehensive standards for OPEB accounting for more than a decade, culminating with the release of GASB Statements No. 43 and No. 45 in the spring of 2004. GASB Statement No. 43 covers the accounting rules for OPEB *plans* while GASB Statement No. 45 describes the rules for *employers* sponsoring OPEB plans. The effective dates of the Statements are based on the implementation of GASB Statement No. 34, based on the sponsor's annual revenue for the first fiscal year ending on or after June 15, 1999, and follow the schedule below:

Total Annual Revenue in the First Fiscal Year Ending After June 15, 1999	**GASB No. 43 OPEB Standards for the Plan's Financial Statements will be Effective for Periods Beginning After**	**GASB No. 45 OPEB Standards for the Employer's Financial Statements will be Effective for Periods Beginning After**
Phase 1 Govts. - $100 million or more	December 15, 2005	December 15, 2006
Phase 2 Govts. - $10 million or more, but less than $100 million	December 15, 2006	December 15, 2007
Phase 3 Govts. – Less than $10 million	December 15, 2007	December 15, 2008

GASB STANDARDS

Unlike pension plans, OPEB plans often do not have a formal document detailing the specific terms of the plan. Under GASB Statements No. 43 and No. 45 the benefits to be accounted for are those provided by the *substantive plan* – loosely defined as the benefits covered by the plan as understood by the employer and plan members at the time of each actuarial valuation. The substantive plan provisions used in this valuation are summarized in Section D.

GASB also requires that the calculations assume the terms of the substantive plan continue indefinitely. It has been argued that there is a likelihood future OPEB plan provisions would be different than the current substantive plan (due to rising health care costs or social changes) and therefore, liabilities based on the current substantive plan may overstate what will actually occur. However, the GASB Statement is designed to measure liabilities for the plan as it currently exists. While it may be reasonable to assume future changes in the OPEB plan for other purposes, recognition of anticipated changes is not allowed for purposes of accounting for OPEB.

The specific items required to be disclosed on an OPEB sponsor's financial statements are described in detail in GASB Statements No. 43 and No. 45. In general terms, though, the plan sponsor is required to disclose an annual OPEB cost, the funded status of the plan and the funding progress on the valuation date.

Although GASB does not require OPEB contributions, it has chosen to call the base component of the annual OPEB cost the Annual Required Contribution, or ARC. The ARC consists of the cost of benefits accruing in a year plus an amount calculated to amortize any unfunded actuarial accrued liability over a period of not more than 30 years.

The funded status of the plan is a ratio of the plan's assets to the actuarial accrued liability on the valuation date. The plan is also required to disclose the cumulative difference between the ARC and the employer's actual contribution to the plan. This amount is known as the Net OPEB Obligation (NOO). Each year, the NOO accumulates with interest, plus the difference between the ARC and actual contributions for the year, plus some technical adjustments. **For most plans the NOO is set to zero as of the effective date of the GASB OPEB standard. It is the NOO, and not the actuarial accrued liability, that will be disclosed on the employers' Statement of Net Assets.**

OPEB SPECIFIC ASSUMPTIONS

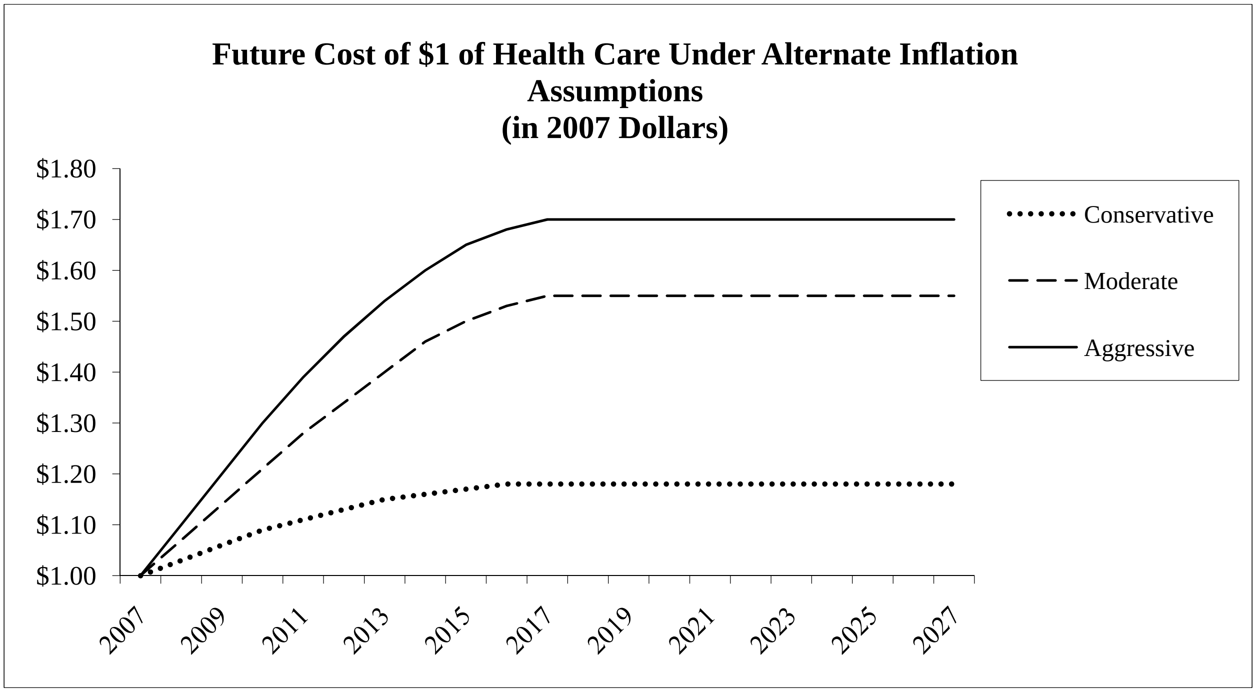
In any long-term actuarial valuation (such as for pensions and OPEB), certain demographic, economic and behavioral assumptions must be made concerning the population, investment discount rates, and the benefits provided. These actuarial assumptions form the basis for the actuarial model which is used to project the future population, benefits to be provided, and contributions to be collected. The investment return rate assumption is used to discount the future benefits to a present value on the valuation date. While assumptions such as future rates of retirement and mortality are similar for both OPEB and pension plans, there are some additional assumptions required when projecting benefits for a health care plan.

The cost of providing medical services has been increasing more rapidly than prices in general for many years. During the period from 1960 to 2007, general inflation averaged about 4.5%, while health expenditures per person increased by an average of close to 9% per year. If this trend is projected to continue for years to come, it implies that years from now virtually all our expenditures will be for health care. The seemingly more reasonable alternative is that in the not too distant future medical expense inflation will stabilize at a level at or near general inflation. It is on this basis that we project that retiree health care costs will continue to exceed general inflation in the near term, but by less each year until leveling off at an ultimate rate that is similar to general price increases.

Health care increase rates used in this valuation lie within a range of reasonable assumptions and are described on page D-6 of this report. The health care increase rate assumption has a major effect on the calculation of plan liabilities. To illustrate the effect of differing future medical inflation rates, the chart on the next page projects the growth of $1 of health care benefits under three sets of assumptions.

In this illustration, each set of assumptions trends smoothly to an assumed long term rate of inflation over the next ten years: The assumption set labeled “Conservative” begins at a rate of 10% in excess of general inflation, the “Moderate” assumption begins at a rate of 7% in excess of general inflation, while the “Aggressive” assumption begins at a rate of 3% in excess of general inflation.

OPEB SPECIFIC ASSUMPTIONS (CONCLUDED)



The chart above shows that the cost of providing health care is expected to increase over 50% in inflation-adjusted dollars over the next 20 years, using the "Moderate" health care increase assumption set. To put this in perspective, assuming health care increases are brought under control almost immediately, as in the "Aggressive" assumption set, implies future per capita health care costs will be expected to increase less than 20% over current levels. In addition to the per capita health care inflation, costs are expected to rise as the retiree population increases.

The selection of an investment return rate also has a major impact on the calculation of the reported GASB OPEB expense.

It is important to note that GASB Statements No. 43 and No. 45 require the selection of an interest rate assumption to be based on the expected long-term rate of return on the assets expected to pay the OPEB when due. GASB states that the return should be based on expected returns of:

- Plan assets – if the sponsor has been contributing the ARC on a regular basis;
- The employer's general assets – where no OPEB assets have been accumulated;
- A blend of plan and employer assets – in cases where OPEB assets exist but the plan is contributing amounts less than the ARC.

ACTUARIAL COST METHOD

GASB Statement No. 45 provides some flexibility to governmental employers (and their actuaries) in the use of various actuarial cost methods. It should be noted that an actuarial cost method determines a contribution or expense by assigning portions of the present value of projected benefits to various years with the general goal of accruing the cost of benefits over the working lifetime of the employees. The choice of a particular method does not change the ultimate cost of the promised benefits.

The Entry Age Normal actuarial cost method has been used to calculate the GASB ARC for this valuation. Using the plan benefits, the present health premiums and a set of actuarial assumptions, the anticipated future payments are projected. The entry age method then provides for a systematic funding for these anticipated payments. The yearly ARC is computed to cover the cost of benefits being earned by covered members as well as to amortize a portion of the unfunded accrued liability. The amortization of the unfunded accrued liability was calculated as a level percent of payroll. This is both an acceptable and reasonable cost method. The use of another actuarial cost method would produce different results.

OPEB PRE-FUNDING

Many employers fund retiree health care benefits using the pay-as-you-go (or cash disbursement) method. The employer's annual contribution for these benefits is equal to the actual disbursements during the year for health care benefits for retired employees. This method of funding will result in increasing contributions over time. Per capita cash disbursements will tend to increase from year to year as the cost of health care services, or the utilization of these services increase.

A retiree health care plan is similar to a defined benefit pension plan, in that promises are made to employees to provide them with a benefit payable at some future date. For defined benefit pension plan sponsors a common funding objective is to contribute annual amounts to a fund which will i) remain level as a percentage of active member payroll, and ii) when combined with present assets and future investment return will be sufficient to meet the financial obligations of the Plan to current and future retirees.

The ultimate determination as to the level of pre-funding will be the result of decisions made in an attempt to reconcile the often conflicting needs of benefit security for members and fiscal responsibility for the City. The GASB accounting standards noted in the previous section of the report can factor into decisions concerning the level of pre-funding.

APPENDIX B

GLOSSARY

GLOSSARY

Accrued Service - The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Accrued Liability - The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability."

Actuarial Assumptions - Estimates of future plan experience with respect to rates of mortality, disability, turnover, retirement, rate or rates of investment income and salary increases. Decrement assumptions (rates of mortality, disability, turnover and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method - A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the actuarial present value of future normal cost and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent - A single amount or series of amounts of equal value to another single amount or series of amounts, computed on the basis of the rate(s) of interest and mortality tables used by the plan.

Actuarial Present Value - The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization - Paying off an interest-bearing liability by means of periodic payments of interest and principal, as opposed to paying it off with a lump sum payment.

GLOSSARY (CONCLUDED)

Annual Required Contribution (ARC) - The ARC is the normal cost plus the portion of the unfunded actuarial accrued liability to be amortized in the current period. The ARC is an amount that is actuarially determined in accordance with the requirements so that, if paid on an ongoing basis, it would be expected to provide sufficient resources to fund both the normal cost for each year and the amortized unfunded liability.

Governmental Accounting Standards Board (GASB) - GASB is the private, nonpartisan, nonprofit organization that works to create and improve the rules U.S. state and local governments follow when accounting for their finances and reporting them to the public.

Medical Trend Rate (Health Care Inflation) - The increase in the cost of providing health care benefits over time. Trend includes such elements as pure price inflation, changes in utilization, advances in medical technology, and cost shifting.

Normal Cost - The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." Any payment toward the unfunded actuarial accrued liability is not part of the normal cost.

Other Postemployment Employee Benefits (OPEB) - OPEB are postemployment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other health care benefits.

Reserve Account - An account used to indicate that funds have been set aside for a specific purpose and is not generally available for other uses.

Unfunded Actuarial Accrued Liability - The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets - The value of current plan assets recognized for valuation purposes.

September 28, 2009

Mr. John M. Lamerato
Assistant City Manager - Finance
City of Troy
500 West Big Beaver Road
Troy, Michigan 48084

Re: City of Troy Other Postemployment Benefits Valuation

Dear Mr. Lamerato:

Enclosed are 25 copies of our report of the actuarial valuation as of December 31, 2008 of the City of Troy Other Postemployment Benefits.

Respectfully submitted,

Brad Lee Armstrong

Brad Armstrong

BA:bd
Enclosures