



***Pittsfield Charter Township
Post-Retirement Health Insurance
Program***

Actuarial Valuation as of December 31, 2009



May 4, 2010

Pittsfield Charter Township
6201 W. Michigan Avenue
Ann Arbor, MI 48108

Attention: Virginia Kingsley
Administrative Services Director

This report contains the results of an actuarial valuation of a Post-Retirement Health Insurance Program covering Pittsfield Township employees.

The date of the valuation was December 31, 2009.

The purpose of the actuarial valuation is to:

- Compute the liabilities associated with post-retirement health insurance benefits likely to be paid on behalf of current participants covered by the Program, and
- Compute a pre-funding contribution rate for the Township to finance Program benefits as they accrue.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. Data concerning employees was provided by Pittsfield Township. This data has been reviewed for reasonableness, but no attempt has been made to audit such information. The valuation was based on the provisions of the Program as submitted by the Township. This valuation has been prepared under the supervision of a Member of the American Academy of Actuaries qualified to render the actuarial opinions contained herein.

Respectfully submitted,

A handwritten signature in black ink that reads 'Denise M. Jones'.

Denise M. Jones
Senior Consultant

A handwritten signature in black ink that reads 'Sandra W. Rodwan'.

Sandra W. Rodwan
Member, American Academy of Actuaries

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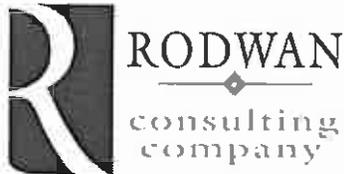
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Section One:
Valuation Summary



Purpose of Valuation

The purpose of this actuarial valuation of the Pittsfield Township Post-Retirement Health Insurance Program as of December 31, 2009 is to:

- ❖ Compute the liabilities associated with benefits likely to be paid on behalf of current active and retired participants,
- ❖ Compute a pre-funding contribution rate to finance the benefits promised by the Program as they accrue.

Benefit Groups

The active employees are divided into the following benefit groups:

	<u>Description</u>
Group 1	AFSCME (Division 1) Dispatch (Division 11) Adm. Non-Union (Division 14)
Group 2	Fire (Division 5) Patrol (Division 2)
Group 3	Police Command (Division 20)
Group 4	Elected Officials (Division 10)

Participants

	Group 1	Group 2	Group 3	Group 4	Total
Active Employees	61	52	8	3	124
Retired Employees					8

Assumptions Used in the Valuation

The liabilities and pre-funding contribution rate are very sensitive to the long-term assumptions used in making the valuation. The assumptions used in making this valuation, summarized in Section Four, are only one reasonable set out of a large number of possibilities. The assumptions are consistent with those used for the Township’s participation in the Michigan Municipal Employees’ Retirement System. To the extent that actual experience differs from the long-term assumptions, the liabilities and contribution rates will be greater or less than those indicated in this report. The assumptions having the greatest impact are the rate of medical care inflation and the discount rate. We have assumed a 5% annual rate for medical care inflation. The assumed discount rate for liabilities was 8%. Sensitivity testing to determine the impact of an assumed annual medical inflation of 8% in the first year, and graded down to 4.5% in 0.5% increments over the next 7 years was also performed. The sensitivity results are summarized in Section 6.

Actuarial Accrued Liabilities

Accrued liabilities of the Program as of December 31, 2009, were computed to be \$8,033,569. Of this total, \$6,122,795 was attributable to current active employees and \$1,910,774 to retired employees.

Funding Value of Assets

The market value of assets reported were \$1,545,277 as of December 31, 2009.

Computed Township Contribution Rate

The total aggregate annual contribution rate computed to pre-fund the Program was computed to be 10.52% of active employee payroll. There are two components of this rate, the normal cost and an amortization payment for unfunded actuarial accrued liability. The normal cost contribution rate was computed to be 5.56% of payroll. The amortization payment was computed to be 4.96% of payroll. The amortization period used was 30 years. Contribution rates by Benefit Groups are shown in Section 2 of this report.

Premium Amounts

The Township submitted data concerning health insurance premium amounts, summarized as follows:

	Plan 40888/010	Plan 40888/013
Pre-65		
One Person Regular	\$ 924.56	\$ 693.13
Two Person Regular	2,218.91	1,663.52
Post-65		
One Person Regular	\$1,165.37	\$ 665.32
Two Person Regular	2,330.74	1,330.64

Section Two:
***Actuarial Calculations –
Funding***



Actuarial Accrued Liabilities

The actuarial accrued liabilities and unfunded amount as of December 31, 2009 were computed to be as follows:

	Group 1	Group 2	Group 3	Group 4	Total
Active participants	\$3,456,504	\$1,943,695	\$712,081	\$10,515	\$6,122,795
Retirees and beneficiaries					<u>1,910,774</u>
Total Accrued Liability					\$8,033,569
Assets					\$1,545,277
Unf'd Accrued Liability					\$6,488,292

Computed Annual Required Contribution

The computed contribution rate consists of two components: normal cost and amortization of unfunded actuarial accrued liability. Normal cost was computed to be a level percent of payroll from date of hire to date of termination. The normal cost can be considered to be the ongoing cost of the Program.

The portion of the total present value of future benefits allocated to service already rendered is the actuarial accrued liability. We have amortized the unfunded actuarial accrued liability (UAAL) over 30 years. The 30 year period is the maximum permitted for reporting purposes under Statements 43 and 45 of the Governmental Accounting Standards Board. The amortization payments were computed to remain level as percents of payroll.

The contribution rates shown below are expressed as level percents of active member payroll. The annual dollar amounts of contributions are assumed to increase 4.5% per year.

	Group 1	Group 2	Group 3	Group 4	Total
Normal Cost	8.08%	3.35%	5.16%	3.37%	5.56%
UAAL*					
Active participants	6.06	3.34	6.54	0.22	4.68
Retired participants					<u>0.28</u>
Total UAAL					4.96
Total Computed Contribution Rate	14.14%	6.69%	11.70%	3.59%	10.52%
Valuation Payroll	\$2,817,661	\$2,875,283	\$537,698	\$234,513	\$6,465,155
Dollars Based on Valuation Payroll	\$398,417	\$192,356	\$62,911	\$8,419	\$680,134

*Unfunded actuarial accrued liability.

Comments

Comment 1: The Governmental Accounting Standards Board (GASB) has issued Statements 43 and 45 concerning financial reporting for “other post employment benefits” (OPEB), which are non-pension benefits including retiree health benefits. The standards apply to the plan (Statement 43) and the plan sponsor (Statement 45). Among the required disclosures are the annual OPEB expense, liabilities, funded status and funding progress. Actuarial valuations to determine these disclosures are required at least every 3 years for plans with fewer than 200 participants and at least every 2 years for Plans with 200 participants or more.

The implementation date varies, with the earliest implementation effective for the largest municipalities based on annual revenue.

Annual Revenues of Employer First FY Ending after June 15, 1999	GASB 45 Employer’s Financial Statements Periods Beginning After:	GASB 43 Plan’s Financial Statements Periods Beginning After:
\$100 million or more	December 15, 2006	December 15, 2005
Between \$10 and \$100 million	December 15, 2007	December 15, 2006
Less than \$10 million	December 15, 2008	December 15, 2007

Comment 2: The GASB statements do not mandate that the plan sponsor pre-fund OPEB liabilities. However, if the plan sponsor’s funding policy is to contribute less than the Annual Required Contribution (ARC), the GASB standards require that a lower assumed rate of investment return, reflecting the assumed rate of return on the City’s General Fund, be used to compute the liabilities and Annual Required Contribution. This will increase the liabilities, ARC, and the OPEB obligation that must be reported in the financial statements. The OPEB obligation represents the cumulative difference between the annual OPEB cost and the employer’s actual contribution.

For purposes of this valuation we have assumed a rate of investment return (8.0%) based upon the assumption that the employer will contribute the actuarially determined annual required contribution. If a lower rate of investment return is assumed, the liabilities and ARC would be greater. If a higher rate of investment return is assumed the liabilities and ARC would be lower.

Comment 3: The contributions indicated in this report are based on 30 year amortization of the unfunded actuarial accrued liability. The 30 year period is the maximum for reporting purposes pursuant to Statements 43 and 45 of the Governmental Accounting Standards Board.

Section Three:
Benefit Provisions



Benefit Provision Summary

GENERAL

Eligibility: Age 60 (55 for Dispatch) and 10 years of service.

Benefit: If hired before 12/31/2006, Township pays 90% of premium (100% if employee had 10 years of service as of 12/31/2009).

Retiree and spouse are included. Benefit continues to spouse (who was married to retiree at time of retirement and death).

If hired after 12/31/2006, the benefit is for the retiree only, and is limited to \$600/yr. (no escalation).

POAM

Eligibility: Age 55 and 25 years of service.

Benefit: If hired before 12/31/2006, Township pays 100% of premium for retiree and spouse. Benefit continues to spouse (who was married to retiree at time of retirement and death).

If hired after 12/31/2006, Township pays 50% of premium, and only retiree is covered.

FIREFIGHTERS

Eligibility: Age 55 and 25 years of service.

Benefit: If hired before 12/31/2006, Township pays 90% of premium (100% if employee had 10 years of service as of 12/31/2009).

Retiree and spouse are included. Benefit continues to spouse (who was married to retiree at time of retirement and death).

If hired after 12/31/2006, the benefit is for the retiree only, and is limited to \$600/yr. (no escalation).

POLICE COMMAND

Eligibility: If hired before 1/1/2007, age 50 and 25 years of service.

If hired after 1/1/2007, age 55 and 25 years of service.

Benefit: If hired before 1/1/2007, 100% of premium for retiree and spouse.

If hired after 1/1/2007, 50% of premium for retiree and spouse.



Section Four:
***Actuarial Assumptions
And Methods***



Actuarial Assumptions

Economic Assumptions

(i) Interest Rate	8.0% (net of expenses)
(ii) Inflation Rate	
Medical	5.0%*
Salary	4.5%

*Sensitivity tests were also performed based on a graded medical inflation rate of 8% in the first year, grading down to 4.5% over the next 7 years. Please refer to page 16.

Demographic Assumptions

(i) Mortality

1994 Group Annuity Mortality Table

(ii) Termination of Employment

Service related rates for first 5 years of employment. Age related rates for after first 5 years of employment

Sample Ages	Years of Service	Members Separating Within the Year
ALL	0	18.0%
	1	18.0
	2	16.0
	3	12.0
	4	10.0
20	5 & Over	9.0
25		9.0
30		9.0
35		7.0
40		5.0
45		4.0
50		4.0
55		3.0
60		3.0
65		2.0

(iii) Retirement Rates

Age-related rates

Active Members Retiring within Year

Age Retiring	Percent Retiring		
	General	Fire	Police
50			22
51			22
52			22
53			22
54			24
55		18	18
56		15	14
57		10	16
58		15	18
59		20	18
60	20	20	20
61	24	24	24
62	24	24	24
63	24	24	24
64	27	27	27
65	30	30	30
66	30	30	30
67	30	30	30
68	30	30	30
69	30	30	30
70	100	100	100

(iv) Disability Rates

Age-related rates

<u>Sample Ages</u>	<u>Percent Becoming Disabled</u>
20	.02%
25	.02
30	.02
35	.02
40	.05
45	.12
50	.25
55	.40
60	.45

Actuarial Method Used for the Valuation

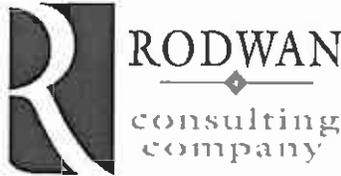
Normal Cost. Normal cost and the allocation of actuarial present values between service rendered before and after the valuation date were determined using an individual entry age actuarial cost method having the following characteristics:

- ❖ The annual normal costs for each individual active participant, payable from date of hire to date of retirement, are sufficient to accumulate the value of the participant's benefit at the time of retirement;
- ❖ Each annual normal cost is a constant percentage of the participant's year-by-year projected covered pay.

Financing of Unfunded Actuarial Accrued Liability. Unfunded actuarial accrued liability attributable to the retired life was amortized as a level percent of payroll over 30 years.



Section Five:
Valuation Data



Participant Summary

Retirees and Beneficiaries

As of December 31, 2009, there were 8 retirees with monthly Township-financed premiums totaling \$11,355.17 (\$136,262.04 annually).

<u>Attained Age</u>	<u>No.</u>	<u>Monthly Premiums</u>
45	1	\$693.13
47	1	1663.52
52	1	2,010.10
58	2	3,327.04
71	1	1,330.64
80	1	1,165.37
91	1	1,165.37
Totals	8	\$11,355.17

Active Employees

As of December 31, 2009, there were 124 active employees.

Age and Service Distribution

Attained Age	Service						Totals
	0-4	5-9	10-14	15-19	20-24	25-29	
20-24	4	1			1		6
25-29	8	8	1				17
30-34	9	10	5				24
35-39	4	3	7	3			17
40-44	5	3	4	2	1		16
45-49	2	3	5	2	3		15
50-54	3	3	1	2	2	1	12
55-59	4	2	1	1	1		10
60-64	1	2	2	1			6
65-69		1					1
Totals	40	36	26	11	8	1	124

Group Averages

Average Age: 41.0 years
 Average Service: 9.2 years
 Average Salary: \$52,138

**Group 1 Active Employees - December 31, 2009
Age and Service Distribution**

Attained Age	Service						Totals
	0-4	5-9	10-14	15-19	20-24	25-29	
20-24	1	1					2
25-29	5	1	1				7
30-34	4	2	3				9
35-39	2	1	1	1			5
40-44	4		1	0	1		6
45-49	2	1	2	2			7
50-54	3	2	1	2	2		10
55-59	3	2	1	1	1		9
60-64		2	2	1			5
65-69		1					1
Totals	24	13	12	7	4		61

Group Averages

Average Age: 45.0 years
Average Service: 8.8 years
Average Salary: \$46,191

**Group 2 Active Employees - December 31, 2009
Age and Service Distribution**

Attained Age	Service						Totals
	0-4	5-9	10-14	15-19	20-24	25-29	
20-24	3				1		4
25-29	3	7					10
30-34	5	7	2				14
35-39	2	2	3	2			9
40-44		3	2	2			8
45-49		1	2		2		5
50-54		1				1	2
Totals	13	21	9	4	3	1	52

Group Averages

Average Age: 35.4 years
Average Service: 9.5 years
Average Salary: \$55,294

Group 3 Active Employees - December 31, 2009
Age and Service Distribution

Attained Age	Service					Totals
	0-4	5-9	10-14	15-19	20-24	
30-34		1				1
35-39			3			3
40-44			1			1
45-49		1	1		1	3
Totals		2	5		1	8

Group Averages

Average Age: 41.5 years
Average Service: 13.5 years
Average Salary: \$67,212

Group 4 Active Employees – December 31, 2009
Age and Service Distribution

Attained Age	Service	Totals
	0-4	
40-44	1	1
55-59	1	1
60-64	1	1
Totals	3	3

Group Averages

Average Age: 55.5 years
Average Service: 1.2 years
Average Salary: \$78,171

Inactive Vested Employees

As of December 31, 2009, there were no vested inactive employees.



Section Six:
Sensitivity Test



Sensitivity Test

An additional valuation was performed to determine the liabilities and contributions based upon a graded annual rate of medical inflation of 8% in the first year, grading down to 4.5% over the next 7 years in 0.5% increments.

The total results are summarized as follows:

The actuarial accrued liabilities as of December 31, 2009 were computed to be the following:

	<u>Group 1</u>	<u>Group 2</u>	<u>Group 3</u>	<u>Group 4</u>	<u>Total</u>
Active participants	\$3,742,443	\$2,137,292	\$783,720	\$11,593	\$6,675,048
Retirees and beneficiaries					<u>2,015,262</u>
Total					\$8,690,310

	Annual Contribution As Level % of Payroll and First Year Dollars				
	Group 1	Group 2	Group 3	Group 4	Total
Normal Cost	8.75%	3.68%	5.67%	3.72%	6.05%
UAAL*					
Active participants	6.56	3.67	7.20	0.24	5.10
Retired participants					<u>0.36</u>
Total UAAL					5.46
Total Computed Contribution Rate	15.31%	7.35%	12.87%	3.96%	11.51%
Valuation Payroll	\$2,817,661	\$2,875,283	\$537,698	\$234,513	\$6,465,155
Dollars Based on Valuation Payroll	\$431,384	\$211,333	69,202	\$9,287	\$744,139

*The dollar amounts are assumed to increase 4.5% annually.

Pittsfield Township
Post-Retirement Health Insurance Program
Contribution Projection Based on Actuarial Valuation as of December 31, 2009

Year	Annual Payroll	Contribution Rate	Dollar Contribution
2010	\$6,465,155	10.52%	680,134
2011	6,723,761	10.52%	707,340
2012	6,992,712	10.52%	735,633
2013	7,272,420	10.52%	765,059
2014	7,563,317	10.52%	795,661
2015	7,865,850	10.52%	827,487
2016	8,180,484	10.52%	860,587
2017	8,507,703	10.52%	895,010
2018	8,848,011	10.52%	930,811
2019	9,201,931	10.52%	968,043
2020	9,570,009	10.52%	1,006,765
2021	9,952,809	10.52%	1,047,036
2022	10,350,921	10.52%	1,088,917
2023	10,764,958	10.52%	1,132,474
2024	11,195,557	10.52%	1,177,773
2025	11,643,379	10.52%	1,224,883
2026	12,109,114	10.52%	1,273,879
2027	12,593,479	10.52%	1,324,834
2028	13,097,218	10.52%	1,377,827
2029	13,621,106	10.52%	1,432,940
2030	14,165,951	10.52%	1,490,258