



ConradSiegel.com

Fairview Township Police Pension Plan
Actuarial Valuation
as of January 1, 2013

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Table of Contents

Comments

Actuarial Certification

Summary of Principal Plan Benefit Provisions (SPPB)

Actuarial Assumptions and Methods

Section 1 - Summary of Plan Assets and Summary of Plan Membership

Section 2 - Act 205 Funding Calculations

Section 3 - Supplemental Information for GASB Reporting

Section 4 - Participant Information

Demographic Data for Active Members

Demographic Data for Retired Members and Members Terminated with Vesting

Active Members

Vested Former Members

Retired Members and Beneficiaries

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Comments

The purpose of the valuation report is to determine the actuarial status of the Plan and to serve as the basis for satisfying the reporting requirements under Act 205.

The Summary of Principal Plan Benefit Provisions page provides a summary of the basic plan benefit provisions in effect as of January 1, 2013. Effective January 1, 2013, members contribute 3.0% of compensation to the Plan to asset in the funding of the plan benefits.

The Actuarial Assumptions and Methods page is a summary of actuarial assumptions and methods used in determining the actuarial status of the Plan. Effective with this actuarial valuation, the method for determining the actuarial value of assets has been changed from a 5-year smoothed method to market value.

Section 1 of the report provides a summary of plan assets and summary of plan membership.

The market value of the fund as of December 31, 2012, is \$7,387,669. The net dollar-weighted rates of investment return during 2011 and 2012 on a market value basis were 0.92% and 13.94%, respectively.

As of January 1, 2013, there are 14 active members with total annual payroll of \$1,050,246. There are also 9 retired members currently receiving benefits under the Plan totaling \$288,516 annually, 1 spouse beneficiary of a deceased member currently receiving benefits under the Plan totaling \$14,577 annually and 2 vested former members entitled to deferred benefits under the Plan totaling \$44,118 annually.

Section 2 of the report provides the Act 205 funding calculations.

As of January 1, 2013, there is an unfunded actuarial accrued liability under the Plan of \$56,609. The normal cost of the Plan, which is the cost of benefits being accrued during the current year, is \$239,963, which is 22.8% of annual payroll.

Page 2 of Section 2 shows the analysis of the change in the unfunded actuarial accrued liability from January 1, 2011, to January 1, 2013. There was an actuarial loss during the period of \$263,296. The unfunded actuarial accrued liability also decreased by \$406,695 due to the change in the method for determining the actuarial value of assets.

Page 4 of Section 2 illustrates the minimum municipal obligation for the Plan. The financial requirement of the Plan is \$288,231. This includes the normal cost, \$239,963, assumed annual administrative expenses, \$41,173, and amortization of the unfunded actuarial accrued liability, \$7,095. The financial requirement is reduced by expected member contributions to the Plan during 2013, \$31,507. This results in a minimum municipal obligation of \$256,724. If the Township allocates \$107,283 of general municipal pension system State aid received during 2013 to the Plan, there is a net minimum municipal obligation of \$149,441. This calculation of the minimum municipal obligation is for illustrative purposes only since the calculation of the minimum municipal obligation for purposes of determining the Township's required contribution to the Plan is prepared through the budgeting process by September 30 each year for the upcoming calendar year.

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Comments

Section 3 of the report provides supplemental information for reporting under Governmental Accounting Standards Board Statement Nos. 67 and 68.

Section 4 of the report provides information on the plan participants.

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Actuarial Certification

In preparing this report, we have relied upon the data furnished to us. The data with respect to receipts and disbursements and assets of the Plan was furnished by BNY Mellon, N.A. The data with respect to participants and beneficiaries was furnished by Fairview Township. The data has been reviewed and has been determined to be reasonable and consistent.

The information as contained in this report is a projection of liabilities based upon stated assumptions and is not an exact statement of the Plan's ultimate benefits and liabilities. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as at the end of an amortization period or additional cost or contribution requirements based on the Plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of the assignment, an analysis of the potential range of such future measurements was not performed.

I certify that all costs, liabilities, rates of interest, and other factors under the Plan in Section 2 of the report have been determined on the basis of actuarial assumptions and methods, each of which is reasonable (taking into account the experience of the Plan and reasonable expectations) or which, in the aggregate, result in a total contribution equivalent to that which would be determined if each such assumption and method were reasonable, and which, in combination, offer my best estimate of anticipated experience under the Plan.

I am a member of the American Academy of Actuaries, a Fellow of the Society of Actuaries, and an Enrolled Actuary under ERISA, and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained in this report.

5/8/2013

Date

David H. Killick

David H. Killick, F.S.A.

Consulting Actuary

Enrolled Actuary No. 11-03880

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Summary of Principal Plan Benefit Provisions

Eligibility

All full-time members of the police force join the Plan upon employment.

Normal Retirement

A member is eligible for normal retirement after attainment of age 50 and completion of 25 years of vesting service.

The normal retirement pension is payable monthly during the member's lifetime, with payments continuing after the member's death to the surviving spouse, or eligible child, equal to 50% of the amount payable to the member at the time of the member's death.

The amount of monthly pension is equal to 50% of average monthly compensation, plus a service increment of \$100 per month for each completed year of benefit service in excess of 25 years, up to a maximum of \$300 additional per month.

Average monthly compensation is based upon the last 36 months of employment.

Late Retirement

If a member continues working after his normal retirement date, his pension does not start until he actually retires. The monthly late retirement pension is equal to the benefit accrued to the late retirement date.

Early Retirement

A member is eligible for early retirement after completion of 20 years of vesting service. The monthly early retirement pension is equal to the actuarial equivalent of the benefit accrued at the early retirement date.

Disability Retirement

If an active member is disabled in the line of duty, he is eligible for a disability pension. The monthly disability pension is equal to 75% of the member's monthly salary at the time the disability was incurred.

Deferred Retirement Option Program

An active member who has met the eligibility requirements for normal retirement may elect to participate in the deferred retirement option program for a period of not less than three months nor more than 24 months. His monthly pension shall be calculated as of his date of participation in the deferred retirement option program and shall be accumulated with interest earned on the DROP account and distributed in a lump sum at retirement.

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Summary of Principal Plan Benefit Provisions

Postretirement Cost-of-Living Increase

An annual cost-of-living increase equal to the percentage increase in the "Wage Earner Index" in the Consumer Price Index during the preceding calendar year is made to retirees, with a maximum total cost-of-living increase of 30%, and a maximum pension benefit of 75% of the compensation used for computing retirement benefits.

Death Benefits

If a member is eligible for retirement at the time of death, a monthly death benefit is payable to his surviving spouse, or eligible child, equal to 50% of the monthly benefit the member would have been receiving had he been retired at the time of death.

Vesting

A member's benefits vest upon completion of 12 years of vesting service. The vested benefit is a deferred monthly pension beginning at normal retirement equal to the benefit accrued to the date of termination.

Accrued Pension

The benefit accrued at any date other than the normal retirement date is equal to the projected normal retirement benefit multiplied by the ratio of the number of years of benefit service to date to the total number of years of benefit service projected at normal retirement.

Contributions

Effective January 1, 2013, members contribute 3.0% of compensation.

Member contributions are credited with 4.0% annual interest.

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Actuarial Assumptions and Methods

Interest

7.00%

Salary

5.00% Annual Increase

Withdrawal

Table D-1: Rates of withdrawal at selected ages:

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	5.5000%	35	2.5000%	50	0.0000%
25	5.0000%	40	1.0000%	55	0.0000%
30	4.0000%	45	0.5000%	60	0.0000%

Mortality

RP2000 Table

(This table does not include projected mortality improvements.)

Disability

SOA 1987 Group LTD Table - Males, 3-month elimination. Sample rates are shown below.

<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	0.1444%	35	0.2123%	50	0.7536%
25	0.1534%	40	0.2931%	55	1.2612%
30	0.1708%	45	0.4561%	60	1.8818%

100% of disabilities are assumed to be service-related.

Retirement

It is assumed that all members enter the Deferred Retirement Option Program (DROP) upon meeting the eligibility requirements for normal retirement. It is also assumed that participation in the DROP continues for 24 months.

Preretirement Death Benefit

Liabilities computed on the assumption that all participants will have spouses of the same age at the date of eligibility for the benefit.

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Actuarial Assumptions and Methods

Expenses

Provision for administrative expenses added to normal cost.

Inflation

Moderate inflation based on long term historical average rates is a component of the actuarial assumptions used herein. Provision is not made for advance funding of sharply higher rates of inflation experienced in some years. The effects of such higher rates are reflected in the funding after their occurrence.

Cost-of-Living Increase

3.00% per year

Actuarial Value of Assets

Market Value as determined by the trustee.

Actuarial Cost Method

Entry Age Normal

Changes in Actuarial Assumptions and Methods

	<u>Prior</u>	<u>Current</u>
Actuarial Value of Asssets	5-Year	See Above
	Smoothed Method	

Fairview Township Police Pension Plan
Actuarial Valuation
as of January 1, 2013

Section 1

Summary of Plan Assets and Summary of Plan Membership

Fairview Township Police Pension Plan
 Actuarial Valuation as of January 1, 2013
Receipts and Disbursements - January 1, 2011 to December 31, 2011

Market Value at 1/1/2011		\$ 6,571,652.83
Receipts		
Employer Contributions Received	\$ 117,071.08	
Employee Contributions Received	22,095.52	
State Contributions Received	167,892.92	
Investment Income		
Income Received	\$ 34.39	
Accrued Income at 1/1/2011	(15.22)	
Accrued Income at 12/31/2011	8.44	
Total Investment Income	27.61	
Change in Market Value	61,072.91	
Total Receipts		368,160.04
Disbursements		
Monthly Benefit Payments	\$ (249,152.64)	
Administrative Expenses	(40,280.22)	
Total Disbursements		(289,432.86)
Market Value at 12/31/2011		\$ 6,650,380.01
Approximate Net Dollar-Weighted Rate of Investment Return		0.92%

Fairview Township Police Pension Plan
 Actuarial Valuation as of January 1, 2013
Receipts and Disbursements - January 1, 2012 to December 31, 2012

Market Value at 1/1/2012		\$ 6,650,380.01
Receipts		
Employer Contributions Received	\$ 108,751.71	
Employee Contributions Received	22,600.78	
State Contributions Received	107,283.29	
Investment Income		
Income Received	\$ 37.00	
Accrued Income at 1/1/2012	(8.44)	
Accrued Income at 12/31/2012	1.36	
Total Investment Income	29.92	
Change in Market Value	930,695.36	
Total Receipts		1,169,361.06
Disbursements		
Monthly Benefit Payments	\$ (288,436.50)	
Lump Sum DROP Account Payments	(101,570.76)	
Administrative Expenses	(42,065.25)	
Total Disbursements		(432,072.51)
Market Value at 12/31/2012		\$ 7,387,668.56
Approximate Net Dollar-Weighted Rate of Investment Return		13.94%

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Assets and Liabilities

Assets

Cash	\$	0.00	
Money Markets		26,120.06	
Common Trust Funds		<u>7,364,398.16</u>	
Total Assets in Fund			\$ 7,390,518.22
Accrued Income			<u>1.36</u>
Total Assets			\$ 7,390,519.58

Liabilities

Benefits Payable	\$	<u>(2,851.02)</u>	
Total Liabilities			<u>(2,851.02)</u>
Net Assets			<u><u>\$ 7,387,668.56</u></u>

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Summary of Plan Membership

Active Members	Number of Members	Annual Payroll
Active Members as of 1/1/2011	15	
New Members During the Period	0	
Returned to Active	0	
Members No Longer Active:		
Retired with Disability Benefit	0	
Retired with Service Retirement Benefit	0	
Elected DROP Benefit	0	
Separated with Deferred Benefit	(1)	
Separated with Refund of Contributions	0	
Separated with Neither Deferred Benefit nor Refund of Contributions	0	
Deceased	0	
Total	(1)	
Active Members as of 1/1/2013	14	\$ 1,050,246
Vested Former Members	Number of Members	Annual Benefit
Vested Former Members as of 1/1/2011	1	
Separated with Deferred Benefit	1	
Beneficiary of Deceased Participant	0	
Returned to Active	0	
Retired with Service Retirement Benefit	0	
Deceased or Paid in Full	0	
Vested Former Members as of 1/1/2013	2	\$ 44,118
DROP Members		
DROP Members as of 1/1/2011	1	
Elected DROP Benefit	0	
Retired from DROP Benefit	(1)	
Deceased	0	
DROP Members as of 1/1/2013	0	\$ 0
Retired Members		
Retired Members as of 1/1/2011	8	
Retired with Service Retirement Benefit	0	
Retired from DROP Benefit	1	
Deceased or Paid in Full	0	
Retired Members as of 1/1/2013	9	\$ 288,516

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Summary of Plan Membership

Spouse Beneficiaries of Deceased Members	Number of Members	Annual Benefit
Spouse Beneficiaries of Deceased Members as of 1/1/2011	<u>1</u>	
Additional Spouse Beneficiaries of Deceased Members Deceased	<u>0</u>	
Spouse Beneficiaries of Deceased Members as of 1/1/2013	<u>1</u>	<u>\$ 14,577</u>

Fairview Township Police Pension Plan
Actuarial Valuation
as of January 1, 2013

Section 2

Act 205 Funding Calculations

Fairview Township Police Pension Plan
 Actuarial Valuation as of January 1, 2013
Unfunded Actuarial Accrued Liability and Normal Cost

Unfunded Actuarial Accrued Liability

Actuarial Present Value of Future Benefits

Active Members Retirement Pension Benefits	\$	5,162,521
Active Members Vested Withdrawal Benefits		83,001
Active Members Disability Benefits		576,649
Active Members Preretirement Death Benefits		12,327
Active Members Refund of Member Contributions		12,898 ¹
Vested Former Members Benefits		435,628
Retired Members Benefits		3,529,102
Surviving Spouses Benefits		<u>125,832</u>
Total	\$	9,937,958
Actuarial Present Value of Future Normal Costs		<u>(2,493,680)</u>
Actuarial Accrued Liability	\$	7,444,278
Actuarial Value of Assets		<u>(7,387,669)</u>
Unfunded Actuarial Accrued Liability	\$	<u>56,609</u>
 Normal Cost		
Normal Cost	\$	<u>239,963</u>
Normal Cost as a Percentage of Annual Payroll		<u>22.8%</u>

¹ Accumulated Member Contributions Without Interest as of 1/1/2013 = \$139,340
 Accumulated Member Contributions With Interest as of 1/1/2013 = \$165,533

Fairview Township Police Pension Plan
 Actuarial Valuation as of January 1, 2013
Analysis of the Change in the Unfunded Actuarial Accrued Liability

Unfunded Actuarial Accrued Liability at 1/1/2011	\$	216,888
Additions		
Normal Costs	\$ 517,217	
Administrative Expenses	82,345	
Interest on Unfunded Actuarial Accrued Liability, Normal Costs, and Administrative Expenses	<u>92,330</u>	
Total		691,892
Contributions		
Employer Contributions	\$ (225,823)	
Employee Contributions	(44,696)	
State Contributions	(275,176)	
Interest on Contributions	<u>(53,062)</u>	
Total		(598,757)
Adjustment for Funding Deviation		(110,015)
Modification in the Benefit Plan		0
Change in Actuarial Assumptions		(406,695)
Actuarial Loss		
Investment Loss	\$ 655,537	
Experience Gain	(502,256)	
Funding Deviation	<u>110,015</u>	
Total		<u>263,296</u>
Unfunded Actuarial Accrued Liability at 1/1/2013	\$	<u><u>56,609</u></u>

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Amortization of Unfunded Actuarial Accrued Liability

Initial Date	Initial Amount	Outstanding Balance	Amortization Amount	Remaining Amortization	Nature
January 1, 2011	\$ 95,899	\$ 88,000	\$ 9,840	13 Years	Assumption Chg.
January 1, 2011	120,989	112,008	11,970	14 Years	Actuarial Loss
January 1, 2013	(406,695)	(406,695)	(41,732)	15 Years	Assumption Chg.
January 1, 2013	263,296	263,296	27,017	15 Years	Actuarial Loss
Total	<u>\$ 73,489</u>	<u>\$ 56,609</u>	<u>\$ 7,095</u>		

Projected plan year in which the unfunded accrued liability is fully amortized is 2023.

Aggregation of Changes in Unfunded Actuarial Accrued Liability

Date of Aggregation	Aggregated Target Date	Outstanding Balance	Amortization Amount	Remaining Amortization
January 1, 2013	2023	<u>\$ 56,609</u>	<u>\$ 7,095</u>	11 Years

Fairview Township Police Pension Plan
 Actuarial Valuation as of January 1, 2013
Illustration of Minimum Municipal Obligation

Financial Requirements

Normal Cost	\$	239,963
Administrative Expenses		41,173 ¹
Amortization of Unfunded Actuarial Accrued Liability		<u>7,095</u>
Total	\$	288,231
Expected Member Contributions		<u>(31,507)</u>
Minimum Municipal Obligation	\$	256,724
Estimated Allocation of General Municipal Pension System State Aid		<u>(107,283)</u>
Net Minimum Municipal Obligation	\$	<u><u>149,441</u></u>

¹ Total Administrative Expenses for Plan Year 1/1/2011 to 12/31/2011 - \$ 40,280
 Total Administrative Expenses for Plan Year 1/1/2012 to 12/31/2012 - \$ 42,065

Fairview Township Police Pension Plan
Actuarial Valuation
as of January 1, 2013

Section 3

Supplemental Information for GASB Reporting

Fairview Township Police Pension Plan
 Actuarial Valuation as of January 1, 2013
Supplemental Information for GASB Statement Nos. 67 & 68 Reporting

Schedule of Funding Progress

Valuation Date	Market Value of Assets (a)	Entry Age Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Net Position as a % of Total Liability (b-a)/b	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
1/1/2011	\$ 6,571,653	\$ 7,034,498	\$ 462,845	6.6%	93.4%	\$ 1,129,831	41.0%
1/1/2012	6,650,380	7,407,977	757,597	10.2%	89.8%	1,140,865	66.4%
1/1/2013	7,387,669	7,444,278	56,609	0.8%	99.2%	1,050,246	5.4%

Schedule of Interest Rate Sensitivity Testing

Interest Rate ¹	Market Value of Assets (a)	Entry Age Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Net Position as a % of Total Liability (b-a)/b	Funded Ratio (a/b)
6.00%	\$ 7,387,669	\$ 8,488,456	\$ 1,100,787	13.0%	87.0%
7.00%	7,387,669	7,444,278	56,609	0.8%	99.2%
8.00%	7,387,669	6,581,605	(806,064)	-12.2%	112.2%

¹ Valuation interest rate is 7.00%

Fairview Township Police Pension Plan
 Actuarial Valuation as of January 1, 2013
 Supplemental Information for GASB Statement Nos. 67 & 68 Reporting

Schedule of Changes to Unfunded Actuarial Accrued Liability ¹

Modification in Plan	\$	0
Changes in Actuarial Assumptions		(406,695)
2011 Investment (Gain)/Loss		404,593
2012 Investment (Gain)/Loss		(437,347)
Experience (Gain)/Loss		(502,256)

Schedule of Contributions from the Employer and Other Contributing Entities

Year	Actuarially ² Determined Contribution	Contributions ³ From Employer	Contribution Deficiency/ (Surplus)
2003	\$ 0	\$ 0	\$ 0
2004	0	0	0
2005	140,081	140,081	0
2006	97,925	97,925	0
2007	104,217	104,217	0
2008	92,234	92,234	0
2009	127,822	127,822	0
2010	139,987	151,643	(11,656)
2011	218,312	284,964	(66,652)
2012	216,035	216,035	0

¹ Determined on a market value basis

² Minimum Municipal Obligation under Act 205 of 1984

³ Includes general municipal pension system State aid

Fairview Township Police Pension Plan
Actuarial Valuation as of January 1, 2013
Supplemental Information for GASB Statement Nos. 67 & 68 Reporting

Notes and Disclosures:

Discount Rate Determination for GASB Nos. 67 & 68 Purposes

This discount rate is based on the long-term expected rate of return on pension plan investments that are expected to be used to finance the payment of benefits. The plan's fiduciary net position is projected to be sufficient to make projected benefit payments and the plan assets are expected to be invested using a strategy to achieve that return. The employer has always met the funding requirements of Pennsylvania law Act 205 of 1984. Act 205 requires full funding of the entry age normal cost plus plan expenses, as well as amortization of the unfunded liability to ultimately achieve a 100% funded status.

Actuarial Determinations and Disclosures

The Actuarial Accrued Liability information provided in Section 3 was determined using the same actuarial methods and assumptions as listed at the beginning of this actuarial valuation report.