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Fairview Township Police Pension Plan  
Actuarial Valuation  
as of January 1, 2000

Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000  
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Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000  
**Comments and Certification**

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The purpose of the valuation report is to determine the actuarial status of the Plan. This report will not serve as the basis for satisfying any 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, 2000. The Actuarial Assumptions and Methods page is a summary of actuarial assumptions and methods used in determining the actuarial status of the Plan.

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, 1999, is \$5,852,232. The net dollar-weighted rate of investment return during 1999 was 6.80%.

As of January 1, 2000, there are 13 active members with total annual payroll for pension purposes of \$585,740. There is also one vested former member entitled to deferred benefits under the Plan totaling \$10,403 annually, four retired members currently receiving benefits under the Plan totaling \$83,227 annually and one spouse beneficiary of a deceased member currently receiving benefits under the Plan totaling \$14,577 annually.

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

As of January 1, 2000, plan assets exceed the actuarial accrued liability under the Plan by \$2,465,067. Plan assets exceed the total actuarial present value of future benefits under the Plan by \$1,186,212. The normal cost of the Plan, which is the cost of benefits being accrued during the current year, is \$108,096, which is 18.5% of covered payroll.

Page 2 of Section 2 shows the analysis of the change in the unfunded actuarial accrued liability from January 1, 1999, to January 1, 2000. There was an actuarial gain during the period of \$132,037.

Page 3 of Section 2 illustrates the minimum municipal obligation for the Plan. Since plan assets exceed the actuarial present value of future benefits, the minimum municipal obligation is equal to \$0 in accordance with Act 205. 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.

Page 4 of Section 2 indicates the actuarial present value of accumulated plan benefits. As of January 1, 2000, the total actuarial present value of accumulated plan benefits is \$2,704,010. This compares to net assets available for benefits of \$5,852,232.

Section 3 of the report provides supplemental information for reporting under Government Accounting Standards Board Statements No. 25 and 27.

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

Fairview Township Police Pension Plan  
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**Comments and Certification**

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**Actuarial Certification**

To the best of my knowledge this report is complete and accurate, based upon the data furnished to us. The data with respect to receipts and disbursements and assets of the Plan was furnished by Mellon Bank, N.A. The data with respect to participants and beneficiaries was furnished by Fairview Township.

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.

I certify that all costs, liabilities, rates of interest, and other factors under the Plan 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.

An approximation technique for the valuation of the disability benefit has been utilized due to the unavailability of any generally accepted disability table based upon municipal pension experience. The approximation technique for the valuation of the disability benefit is a loading factor of 2.00% added to basic pension costs. This same approximation technique has been used in prior actuarial valuations of the Plan. It is my best estimate that the use of the approximation technique will cause little or no distortion in the valuation results.

4/14/2000

Date



David H. Killick, F.S.A.

Consulting Actuary

Enrolled Actuary No. 99-3880

DHK/JDV

Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000  
**Summary of Principal Plan Benefit Provisions**

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**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 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, provided the surviving spouse is not remarried, or to dependent children under the age of 18 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 pay, plus a service increment of 1.25% of average monthly pay for each year of service in excess of 25 years up to a maximum additional benefit of \$100 per month.

Average monthly pay 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 late retirement benefit is the benefit accrued to the late retirement date.

**Early Retirement**

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

**Post-Retirement 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 salary used for computing retirement benefits.

**Disability Retirement**

If a member is disabled in the line of duty, he is eligible for a disability pension. The disability pension is equal to 50% of his final salary.

The disability benefit is reduced by Workers' Compensation.

Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000  
**Summary of Principal Plan Benefit Provisions**

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**Death Benefits**

If a member is eligible for retirement or killed in the line of duty, a death benefit is payable to his surviving spouse, provided the surviving spouse is not remarried, or to dependent children under the age of 18 equal to 50% of the benefit the member would have been receiving had he been retired at the time of his death.

**Vesting**

A member's benefits vest upon completion of 12 years of service. The vested benefit is a deferred 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 service to date to the total number of years of service projected at normal retirement.

**Contributions**

If an actuarial study shows the Plan to have sufficient assets to fund plan benefits, member contributions may be reduced below 5.0% or suspended.

Effective January 1, 2000, member contributions are suspended.

Past member contributions are credited with 4.0% interest.

Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000  
**Actuarial Assumptions and Methods**

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**Interest**

7.00%

**Salary**

6.00% 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**

UP1984 Table with 5 year post-retirement age setback for females

**Disability**

Loading of 2.0% added to basic pension costs.

**Retirement**

Normal Retirement Age, or age on valuation date, if greater.

**Pre-Retirement 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, 2000  
**Actuarial Assumptions and Methods**

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**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

Fairview Township Police Pension Plan  
Actuarial Valuation  
as of January 1, 2000

Section 1

Summary of Plan Assets and Summary of Plan Membership

Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000  
**Receipts and Disbursements**

Market Value at 1/1/1999		\$ 5,522,966.52
<b>Receipts</b>		
Employer Contributions Received	\$	0.00
Employee Contributions Received		11,970.58
State Contributions Received		40,296.00
Investment Income		
Interest Received	\$ 30,365.25	
Dividends Received	34,167.66	
Accrued Income at 1/1/1999	(11,914.27)	
Accrued Income at 12/31/1999	1,908.64	
Total Investment Income		54,527.28
Change in Market Value		
Realized Gain/Loss	\$ 368,726.28	
Unrealized Gain/Loss	(49,365.40)	
Net Change in Market Value		319,360.88
Total Receipts		426,154.74
<b>Disbursements</b>		
Monthly Benefit Payments	\$ (70,755.27)	
Refund of Employee Contributions		(1,088.32)
Administrative Expenses		(25,045.43)
Total Disbursements		(96,889.02)
Market Value at 12/31/1999		\$ 5,852,232.24
Approximate Net Dollar-Weighted Rate of Investment Return		6.80%

Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000

**Assets and Liabilities**

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**Assets**

Cash		\$	10.04
Money Markets			9,732.20
Common Trust Funds			
EB Intermediate Bond Fund	\$	1,147,548.33	
EB Active Core Bond Fund		2,287,549.00	
EB International Equity Fund		592,775.18	
EB Stock Fund		1,507,479.88	
EB Mid Cap Stock Fund		304,527.77	
Total		<u>5,839,880.16</u>	
Total Assets in Fund			\$ 5,849,622.40
Benefits Receivable			701.20
Accrued Income			<u>1,908.64</u>
Total Assets			\$ 5,852,232.24
<b>Liabilities</b>			
Total Liabilities			<u>0.00</u>
Net Assets			<u><u>\$ 5,852,232.24</u></u>

Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000  
**Summary of Plan Membership**

<b>Active Members</b>	Number of Members	Annual Payroll
Active Members as of 1/1/1999	13	
New Members During the Period	4	
Returned to Active	0	
Members No Longer Active:		
Retired with Disability Benefit	0	
Retired with Service Retirement Benefit	(3)	
Separated with Deferred Benefit	0	
Separated with Refund of Contributions	(1)	
Separated with Neither Deferred Benefit nor Refund of Contributions	0	
Deceased	0	
Total	<u>(4)</u>	
Active Members as of 1/1/2000	<u>13</u>	<u>\$ 585,740</u>
<b>Vested Former Members</b>	Number of Members	Annual Benefit
Vested Former Members as of 1/1/1999	1	
Separated with Deferred Benefit	0	
Beneficiary of Deceased Participant	0	
Returned to Active	0	
Retired with Service Retirement Benefit	0	
Deceased or Paid in Full	<u>0</u>	
Vested Former Members as of 1/1/2000	<u>1</u>	<u>\$ 10,403</u>
<b>Retired Members</b>		
Retired Members as of 1/1/1999	1	
Retired with Service Retirement Benefit	3	
Deceased or Paid in Full	<u>0</u>	
Retired Members as of 1/1/2000	<u>4</u>	<u>\$ 83,227</u>
<b>Spouse Beneficiaries of Deceased Members</b>		
Spouse Beneficiaries of Deceased Members as of 1/1/1999	1	
Additional Spouse Beneficiaries of Deceased Members Deceased	<u>0</u>	
Spouse Beneficiaries of Deceased Members as of 1/1/2000	<u>1</u>	<u>\$ 14,577</u>

Fairview Township Police Pension Plan  
Actuarial Valuation  
as of January 1, 2000

Section 2

Act 205 Funding Calculations

Fairview Township Police Pension Plan  
 Actuarial Valuation as of January 1, 2000  
**Unfunded Actuarial Accrued Liability and Normal Cost**

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**Unfunded Actuarial Accrued Liability**

Actuarial Present Value of Future Benefits

Active Members Retirement Pension Benefits	\$	2,980,392
Active Members Vested Withdrawal Benefits		67,736
Active Members Disability Benefits		59,608
Active Members Pre-Retirement Death Benefits		16,201
Active Members Refund of Member Contributions		2,519 <sup>1</sup>
Vested Former Members Benefits		144,805
Retired Members Benefits		1,234,992
Surviving Spouses Benefits		<u>159,767</u>
Total	\$	4,666,020
Actuarial Present Value of Future Normal Costs		<u>(1,278,855)</u>
Actuarial Accrued Liability	\$	3,387,165
Reserve for Benefits		<u>(5,852,232)</u>
Unfunded Actuarial Accrued Liability	\$	<u><u>(2,465,067)</u></u>
 <b>Normal Cost</b>		
Normal Cost	\$	<u>108,096</u>
Normal Cost as a Percentage of Annual Payroll		<u>18.5%</u>

<sup>1</sup> Accumulated Member Contributions Without Interest as of 1/1/2000 = \$43,104

Fairview Township Police Pension Plan  
 Actuarial Valuation as of January 1, 2000  
**Analysis of the Change in the Unfunded Actuarial Accrued Liability**

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Unfunded Actuarial Accrued Liability at 1/1/1999	\$	(2,269,897)
<b>Additions</b>		
Normal Cost	\$	115,058
Administrative Expenses		25,045
Interest on Unfunded Actuarial Accrued Liability, Normal Cost, and Administrative Expenses		<u>(149,962)</u>
Total		(9,859)
<b>Contributions</b>		
Employer Contributions	\$	0
Employee Contributions		(11,971)
State Contributions		(40,296)
Interest on Contributions		<u>(1,007)</u>
Total		(53,274)
Modification in the Benefit Plan		0
Change in Actuarial Assumptions		0
<b>Actuarial Gain</b>		
Investment Loss	\$	10,336
Experience Gain		<u>(142,373)</u>
Total		<u>(132,037)</u>
Unfunded Actuarial Accrued Liability at 1/1/2000	\$	<u><u>(2,465,067)</u></u>

Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000  
**Illustration of Minimum Municipal Obligation**

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Financial Requirements

Normal Cost	\$ 108,096	
Administrative Expenses	<u>25,045</u> <sup>1</sup>	
Total		\$ 133,141
Expected Member Contributions		0
10% of Negative Unfunded Actuarial Accrued Liability		<u>(246,507)</u>
Minimum Municipal Obligation		<u><u>\$ 0</u></u> <sup>2</sup>

<sup>1</sup> Total Administrative Expenses for Plan Year 1/1/1999 to 12/31/1999 - \$ 25,045

<sup>2</sup> Since assets exceed the actuarial present value of future benefits, the Minimum Municipal Obligation = \$0

Fairview Township Police Pension Plan  
Actuarial Valuation as of January 1, 2000  
**Actuarial Present Value of Accumulated Plan Benefits**

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Vested Benefits		
Retired Members	\$ 1,394,759	
Other Members	1,219,349	
Total Vested Benefits	<u>2,614,108</u>	\$ 2,614,108
Non-Vested Benefits		<u>89,902</u>
Total Actuarial Present Value of Accumulated Plan Benefits		<u>\$ 2,704,010</u>
Net Assets Available for Benefits as of 1/1/2000		<u>\$ 5,852,232</u>

Fairview Township Police Pension Plan  
Actuarial Valuation  
as of January 1, 2000

Section 3

Supplemental Information for GASB Reporting

Fairview Township Police Pension Plan  
 Actuarial Valuation as of January 1, 2000  
**Supplemental Information for GASB Statement Nos. 25 & 27 Reporting**

**Schedule of Funding Progress**

Valuation Date	Actuarial Value of Assets (a)	Entry Age Actuarial Liability (AAL) (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a % of Covered Payroll ((b-a)/c)
1/1/1990	\$ 1,389,243	\$			\$	
1/1/1991	1,537,530	1,531,606	(5,924)	100.4%	399,122	(1.5%)
1/1/1992	2,023,623	1,764,199	(259,424)	114.7%	461,208	(56.2%)
1/1/1993	2,189,420	2,059,932	(129,488)	106.3%	513,081	(25.2%)
1/1/1994	2,581,890	2,264,320	(317,570)	114.0%	532,338	(59.7%)
1/1/1995	2,600,002	2,470,087	(129,915)	105.3%	524,863	(24.8%)
1/1/1996	3,329,748	2,731,279	(598,469)	121.9%	555,177	(107.8%)
1/1/1997	3,921,336	3,019,539	(901,797)	129.9%	585,120	(154.1%)
1/1/1998	4,715,048	3,083,281	(1,631,767)	152.9%	567,532	(287.5%)
1/1/1999	5,522,967	3,253,070	(2,269,897)	169.8%	614,514	(369.4%)
1/1/2000	5,852,232	3,387,165	(2,465,067)	172.8%	585,740	(420.8%)

**Schedule of Contributions from the Employer and Other Contributing Entities**

Year	Annual Required Contribution	Contributions From Employer	Percentage Contributed
1990	\$ 72,592	\$ 73,193	100.0%+
1991	77,616	77,000	99.2%
1992	93,096	93,320	100.0%+
1993	99,829	104,077	100.0%+
1994	81,122	81,122	100.0%
1995	71,104	71,104	100.0%
1996	100,463	100,463	100.0%
1997	106,028	106,028	100.0%
1998	38,420	38,420	100.0%
1999	40,296	40,296	100.0%

The above information was determined as part of the actuarial valuations at the dates listed. Additional information as of the current actuarial valuation:

Amortization Method: Annual Funding Adjustment equal to 10% of Negative Unfunded AAL

Other Actuarial Assumptions and Methods stated previously in report.

<sup>1</sup> Includes general municipal pension system State aid