

CITY OF EVANSTON  
POLICE PENSION FUND

ACTUARIAL VALUATION  
AS OF JANUARY 1, 2016

CONTRIBUTIONS APPLICABLE TO THE  
PLAN/FISCAL YEAR ENDED DECEMBER 31, 2016

September 16, 2016

Board of Trustees  
City of Evanston  
Police Pension Fund  
2100 Ridge Avenue  
Evanston, IL 60201

Re: City of Evanston Police Pension Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Evanston Police Pension Fund. The valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. Please note that this valuation may not be applicable for any other purposes.

The valuation has been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflects laws and regulations issued to date pursuant to the provisions of Article 3, Illinois Pension Code, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations.

In conducting the valuation, we have relied on personnel, plan design, and asset information supplied by the Board of Trustees, financial reports prepared by the custodian bank and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

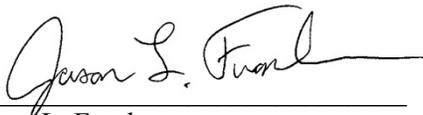
The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the City of Evanston, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the City of Evanston Police Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concerns, or comments about any of the items contained in this report, please contact me at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By:   
\_\_\_\_\_  
Jason L. Franken  
Enrolled Actuary #14-6888

JLF/lke  
Enclosures

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SUMMARY OF REPORT

The regular annual actuarial valuation of the City of Evanston Police Pension Fund, performed as of January 1, 2016, has been completed and the results are presented in this Report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended December 31, 2016.

The contribution requirements, compared with those set forth in the January 1, 2015 actuarial report, are as follows:

Valuation Date	1/1/2016	1/1/2015
Applicable Plan/Fiscal Year End	<u>12/31/2016</u>	<u>12/31/2015</u>
Total Required Contribution	\$11,660,701	\$10,837,183
% of Total Annual Payroll	81.2%	73.7%
Member Contributions (Est.)	1,423,501	1,456,243
% of Total Annual Payroll	9.91%	9.91%
City Required Contribution	10,237,200	9,380,940
% of Total Annual Payroll	71.3%	63.8%

As you can see, the Total Required Contribution, when expressed as a percentage of annual payroll, shows an increase when compared to the results determined in the January 1, 2015 actuarial valuation report.

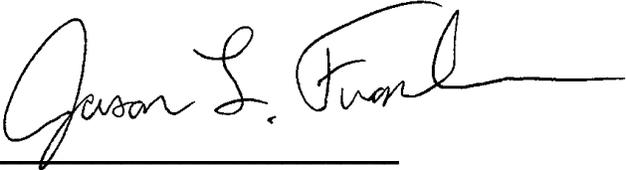
The primary reason for this increase is the assumption change to project the mortality table to the valuation date used to develop this year’s recommended contribution. The recommended contribution for the year, when developed using the prior year assumptions only slightly increased relative to last year’s recommended contribution when expressed as a percentage of payroll.

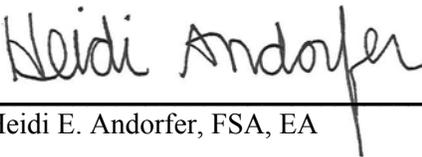
The plan experienced a mix of favorable and unfavorable experience. The favorable experience included an increase in average salary of 3.46% for members who were in both the 2015 and 2016 valuations, falling short of the assumed average increase of 4.42% for these members. This was offset by an investment return (Actuarial Asset basis) of 5.26%, which was lower than the assumed return of 6.50% and less inactive deaths than expected.

The balance of this Report presents additional details of the actuarial valuation and the general operation of the Fund. The undersigned would be pleased to meet with the Board of Trustees in order to discuss the Report and answer any pending questions concerning its contents.

Respectfully submitted,

FOSTER & FOSTER, INC.

By:   
Jason L. Franken, FSA, EA, MAAA

By:   
Heidi E. Andorfer, FSA, EA

### Plan Changes Since Prior Valuation

No plan changes have occurred since the prior valuation.

### Actuarial Assumption/Method Changes Since Prior Valuation

Since the prior valuation the following assumption has been updated:

1. Mortality Rates were updated to include a projection to the valuation date using Scale BB.

No methods were changed since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	New Assump <u>1/1/2016</u>	Old Assump <u>1/1/2016</u>	<u>1/1/2015</u>
A. Participant Data			
Number Included			
Actives	158	158	163
Service Retirees	135	135	129
Beneficiaries	28	28	28
Disability Retirees	16	16	16
Terminated Vested	<u>16</u>	<u>16</u>	<u>13</u>
Total	353	353	349
Total Annual Payroll	\$14,364,290	\$14,364,290	\$14,694,679
Payroll Under Assumed Ret. Age	14,364,290	14,364,290	14,694,679
Annual Rate of Payments to:			
Service Retirees	9,028,564	9,028,564	8,259,227
Beneficiaries	1,018,853	1,018,853	967,439
Disability Retirees	651,051	651,051	644,450
Terminated Vested	145,066	145,066	120,142
B. Assets			
Actuarial Value	99,623,717	99,623,717	94,876,292
Market Value	98,558,838	98,558,838	99,687,542
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	81,313,478	78,492,847	78,904,808
Disability Benefits	8,632,942	8,385,404	8,435,326
Death Benefits	1,617,191	1,691,295	2,112,435
Vested Benefits	8,796,133	8,525,328	8,478,994
Service Retirees	128,770,556	121,649,883	117,093,574
Beneficiaries	8,741,455	8,296,308	8,155,760
Disability Retirees	9,321,126	8,878,248	10,157,627
Terminated Vested	<u>1,441,067</u>	<u>1,387,880</u>	<u>1,164,305</u>
Total	248,633,948	237,307,193	234,502,829

C. Liabilities - (Continued)	New Assump <u>1/1/2016</u>	Old Assump <u>1/1/2016</u>	<u>1/1/2015</u>
Present Value of Future Salaries	144,408,246	144,329,954	147,626,875
Present Value of Future Member Contributions	14,310,857	14,303,098	14,629,823
Normal Cost (Retirement)	2,620,691	2,533,276	2,507,558
Normal Cost (Disability)	562,546	549,565	562,656
Normal Cost (Death)	75,404	78,610	96,388
Normal Cost (Vesting)	<u>481,902</u>	<u>467,788</u>	<u>471,344</u>
Total Normal Cost	3,740,543	3,629,239	3,637,946
Present Value of Future Normal Costs	34,923,456	33,881,234	34,223,136
Accrued Liability (Retirement)	56,150,342	54,164,268	54,903,312
Accrued Liability (Disability)	3,305,310	3,178,497	3,072,041
Accrued Liability (Death)	966,204	1,013,678	1,264,771
Accrued Liability (Vesting)	5,014,432	4,857,197	4,468,303
Accrued Liability (Inactives)	<u>148,274,204</u>	<u>140,212,319</u>	<u>136,571,266</u>
Total Actuarial Accrued Liability	213,710,492	203,425,959	200,279,693
Unfunded Actuarial Accrued Liability (UAAL)	114,086,775	103,802,242	105,403,401
Funded Ratio (AVA / AL)	46.62%	48.97%	47.37%
<b>D. Actuarial Present Value of Accrued Benefits</b>			
Vested Accrued Benefits			
Inactives	148,274,204	140,212,319	136,571,266
Actives	18,749,905	17,641,956	20,121,901
Member Contributions	<u>12,939,593</u>	<u>12,939,593</u>	<u>12,919,168</u>
Total	179,963,702	170,793,868	169,612,335
Non-vested Accrued Benefits	<u>3,939,593</u>	<u>3,867,960</u>	<u>3,180,268</u>
Total Present Value Accrued Benefits	183,903,295	174,661,828	172,792,603
Funded Ratio (MVA / PVAB)	53.59%	56.43%	57.69%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	9,241,467	0	
New Accrued Benefits	0	1,401,472	
Benefits Paid	0	(10,424,955)	
Interest	0	10,892,708	
Other	<u>0</u>	<u>0</u>	
Total	9,241,467	1,869,225	

	New Assump	Old Assump	
Valuation Date	1/1/2016	1/1/2016	1/1/2015
Applicable to Fiscal Year Ending	<u>12/31/2016</u>	<u>12/31/2016</u>	<u>12/31/2015</u>

#### E. Pension Cost

Normal Cost (with interest)	\$3,983,678	\$3,865,140	\$3,874,412
% of Total Annual Payroll <sup>1</sup>	27.8	26.9	26.3
Administrative Expenses (with interest)	76,051	76,051	73,418
% of Total Annual Payroll <sup>1</sup>	0.5	0.5	0.5
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 25 years (as of 1/1/2016, with interest)	7,600,972	6,842,146	6,889,353
% of Total Annual Payroll <sup>1</sup>	52.9	47.7	46.9
Total Required Contribution	11,660,701	10,783,337	10,837,183
% of Total Annual Payroll <sup>1</sup>	81.2	75.1	73.7
Expected Member Contributions	1,423,501	1,423,501	1,456,243
% of Total Annual Payroll <sup>1</sup>	9.91	9.91	9.91
Expected City Contribution	10,237,200	9,359,836	9,380,940
% of Total Annual Payroll <sup>1</sup>	71.3	65.2	63.8

#### F. Past Contributions

Plan Years Ending:	<u>12/31/2015</u>
Total Required Contribution	10,835,710
City	9,380,940
Actual Contributions Made:	
Members (excluding buyback)	1,454,770
City	<u>8,804,264</u>
Total	10,259,034

G. Net Actuarial (Gain)/Loss (1,756,669)

<sup>1</sup> Contributions developed as of 1/1/2016 are expressed as a percentage of total annual payroll at 1/1/2016 of \$14,364,290.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Amortizable Unfunded Accrued Liability</u> <sup>1</sup>
2016	92,715,726
2017	91,141,276
2018	89,464,487
2024	76,850,221
2030	58,444,211
2035	36,796,428
2041	0

<sup>1</sup> Target funded percentage is 90%, so not all of the Unfunded Actuarial Accrued Liability is amortized.

I. (i) 3 Year Comparison of Actual and Assumed Salary Increases

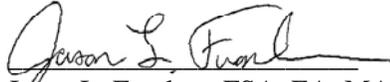
		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2015	3.46%	4.42%
Year Ended	12/31/2014	5.81%	4.50%
Year Ended	12/31/2013	N/A	N/A

(ii) 3 Year Comparison of Investment Return on Actuarial Value

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2015	5.26%	6.50%
Year Ended	12/31/2014	8.59%	6.50%
Year Ended	12/31/2013	N/A	N/A

## STATEMENT BY ENROLLED ACTUARY

This actuarial valuation was prepared and completed by me or under my direct supervision, and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, the techniques and assumptions used are reasonable and meet the requirements and intent of the Illinois Pension Code and adhere to the Actuarial Standards of Practice. There is no benefit or expense to be provided by the plan and/or paid from the plan's assets for which liabilities or current costs have not been established or otherwise taken into account in the valuation. All known events or trends which may require a material increase in plan costs or required contribution rates have been taken into account in the valuation.



Jason L. Franken, FSA, EA, MAAA  
Enrolled Actuary #14-6888

DEVELOPMENT OF JANUARY 1, 2016 AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of January 1, 2015	\$105,403,401
(2)	Sponsor Normal Cost developed as of January 1, 2015	2,181,703
(3)	Expected administrative expenses for the year ended December 31, 2015	68,938
(4)	Expected interest on (1), (2) and (3)	6,995,272
(5)	Sponsor contributions to the System during the year ended December 31, 2015	8,804,264
(6)	Expected interest on (5)	286,139
(7)	Expected Unfunded Actuarial Accrued Liability as of December 31, 2015, (1)+(2)+(3)+(4)-(5)-(6)	105,558,911
(8)	Change to UAAL due to Assumption Change	10,284,533
(9)	Change to UAAL due to Actuarial (Gain)/Loss	(1,756,669)
(10)	Unfunded Accrued Liability as of January 1, 2016	114,086,775

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>1/1/2016</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u>
1/1/2016	25	92,715,726 <sup>1</sup>	7,137,063

<sup>1</sup> Target funded percentage is 90%, so not all of the Unfunded Actuarial Accrued Liability is amortized.

## PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2016	382,979	10,646,433	11,029,412
2017	634,855	10,735,698	11,370,553
2018	965,988	10,881,643	11,847,631
2019	1,309,469	11,068,107	12,377,576
2020	1,624,045	11,193,090	12,817,135
2021	1,975,753	11,321,629	13,297,382
2022	2,320,930	11,424,489	13,745,419
2023	2,730,960	11,519,597	14,250,557
2024	3,118,019	11,553,793	14,671,812
2025	3,517,850	11,562,362	15,080,212
2026	4,069,333	11,559,352	15,628,685
2027	4,573,824	11,530,614	16,104,438
2028	5,163,798	11,456,403	16,620,201
2029	5,761,104	11,360,285	17,121,389
2030	6,457,865	11,223,712	17,681,577
2031	7,212,268	11,053,934	18,266,202
2032	7,935,649	10,850,071	18,785,720
2033	8,698,393	10,627,206	19,325,599
2034	9,491,082	10,354,277	19,845,359
2035	10,283,919	10,046,066	20,329,985
2036	11,098,169	9,731,532	20,829,701
2037	11,843,108	9,356,072	21,199,180
2038	12,566,262	8,949,781	21,516,043
2039	13,244,999	8,515,892	21,760,891
2040	13,905,526	8,058,181	21,963,707
2041	14,555,988	7,600,059	22,156,047
2042	15,135,569	7,109,365	22,244,934
2043	15,644,259	6,610,378	22,254,637
2044	16,128,046	6,109,370	22,237,416
2045	16,509,482	5,611,986	22,121,468
2046	16,867,970	5,124,010	21,991,980
2047	17,112,882	4,650,506	21,763,388
2048	17,301,663	4,195,675	21,497,338
2049	17,449,798	3,763,190	21,212,988
2050	17,556,377	3,355,475	20,911,852
2051	17,621,235	2,974,185	20,595,420
2052	17,643,924	2,620,522	20,264,446
2053	17,621,186	2,294,367	19,915,553
2054	17,551,343	1,995,049	19,546,392
2055	17,431,538	1,722,491	19,154,029

## ACTUARIAL ASSUMPTIONS AND METHODS

Mortality Rate	RP-2000 Combined Healthy Mortality with a blue collar adjustment, projected to the valuation date using Scale BB.																
Disabled Mortality Rate	RP-2000 Disabled Retiree Mortality, projected to the valuation date using Scale BB.  Based on studies of public safety pension plans, we believe this assumption sufficiently accommodates expected future mortality improvements																
Interest Rate	6.50% per year compounded annually, net of investment related expenses. This is approximately supported by the target asset allocation and expected return of the asset classes. We will continue to monitor this to ensure that the rate continues to be supported.																
Retirement Age	See table on following page. This is based on an experience study performed in 2012.																
Disability Rate	See table on following page. 70% of the disabilities are assumed to be in the line of duty. This is based on an experience study performed in 2012.																
Termination Rate	See table on following page. This is based on an experience study performed in 2012.																
Salary Increases	Graded schedule based on age.  <table border="1" style="margin-left: auto; margin-right: auto; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center; border-top: 1px solid black; border-bottom: 1px solid black;">Age</th> <th style="text-align: center; border-top: 1px solid black; border-bottom: 1px solid black;">Increase</th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">25</td> <td style="text-align: center;">7.36%</td> </tr> <tr> <td style="text-align: center;">30</td> <td style="text-align: center;">5.48%</td> </tr> <tr> <td style="text-align: center;">35</td> <td style="text-align: center;">4.53%</td> </tr> <tr> <td style="text-align: center;">40</td> <td style="text-align: center;">4.02%</td> </tr> <tr> <td style="text-align: center;">45</td> <td style="text-align: center;">3.81%</td> </tr> <tr> <td style="text-align: center;">50</td> <td style="text-align: center;">3.68%</td> </tr> <tr> <td style="text-align: center;">55+</td> <td style="text-align: center;">3.62%</td> </tr> </tbody> </table>	Age	Increase	25	7.36%	30	5.48%	35	4.53%	40	4.02%	45	3.81%	50	3.68%	55+	3.62%
Age	Increase																
25	7.36%																
30	5.48%																
35	4.53%																
40	4.02%																
45	3.81%																
50	3.68%																
55+	3.62%																
Payroll Growth	None.																
Cost-of-Living Adjustment	<u>Tier 1</u> : 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.  <u>Tier 2</u> : 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.																

Administrative Expenses

Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year.

Marital Status

80% of Members are assumed to be married.

Spouse's Age

Males are assumed to be three years older than females.

<u>% Terminating During the Year</u>		<u>% Becoming Disabled During the Year</u>		<u>% Retiring During the Year <sup>1</sup></u>	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
15 - 24	10.00%	20	0.05%	<=49	0%
25	7.50%	25	0.05%	50 - 54	20%
26 - 27	6.25%	30	0.22%	55 - 59	25%
28 - 31	5.00%	35	0.26%	60 - 62	33%
32 - 34	4.00%	40	0.40%	63 - 69	50%
35 - 37	3.00%	45	0.65%	>=70	100%
38 - 49	2.00%	50	0.95%		
>=50	3.50%	55	1.30%		
		60	1.65%		
		65	2.00%		

<sup>1</sup> 100% at 30 years of service.

Funding Method

Entry Age Normal Actuarial Cost Method.

Actuarial Asset Method

Investment gains and losses are smoothed over a 5-year period.

Amortization Method

Funding to a 90% funded ratio using the Level Dollar method over a period ending in 2040.

## VALUATION NOTES

Total Annual Payroll is the projected annual rate of pay for the fiscal year following the valuation date of all covered members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Unfunded Accrued Liability is a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service.

Total Required Contribution is equal to the Normal Cost plus an amortization payment on the Unfunded Accrued Liability. The required amount is adjusted for interest according to the timing of contributions during the year.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

- (a) The normal cost accrual rate equals:
  - (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
  - (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.
- (b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.
- (c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.
- (d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

STATEMENT OF FIDUCIARY NET POSITION  
December 31, 2015

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Money Market	2,193,723
Cash	0
Total Cash and Equivalents	2,193,723
Receivables:	
From General Trust Fund	15,565
Accrued Past Due Interest	358,580
Total Receivable	374,145
Investments:	
U.S. Gov't and Agency Obligations	32,426,344
Stocks	18,334,861
Corporate Bonds	9,033,860
Municipal Obligations	250,775
Mutual Funds	35,951,130
Total Investments	95,996,970
Total Assets	98,564,838
<u>LIABILITIES</u>	
Liabilities:	
Payable:	
Benefit Payments	6,000
Total Liabilities	6,000
Net Assets:	
Active and Retired Members' Equity	98,558,838
NET POSITION RESTRICTED FOR PENSIONS	98,558,838
TOTAL LIABILITIES AND NET ASSETS	98,564,838

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED December 31, 2015  
Market Value Basis

ADDITIONS

Contributions:		
Member	1,454,770	
City	8,804,264	
 Total Contributions		 10,259,034
Investment Income:		
Net Realized Gain (Loss)	(880,997)	
Unrealized Gain (Loss)	(71,509)	
Net Increase in Fair Value of Investments		(952,506)
Interest & Dividends		1,655,145
Less Investment Expense <sup>1</sup>		(271,933)
 Net Investment Income		 430,706
 Total Additions		 10,689,740
<u>DEDUCTIONS</u>		
Distributions to Members:		
Benefit Payments	10,403,247	
Refund of Contributions/Transfers	21,708	
 Total Distributions		 10,424,955
 Administrative Expenses		 71,409
 Total Deductions		 10,496,364
 Net Increase in Net Position		 193,376
 NET POSITION RESTRICTED FOR PENSIONS		
Beginning of the Year		99,687,542
Receivable Adjustment		(1,322,080)
 Beginning of the Year		 98,365,462
 End of the Year		 98,558,838

<sup>1</sup> Investment Related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION

December 31, 2015

Actuarial Assets for funding purposes are developed by recognizing the total actuarial investment gain or loss for each Plan Year over a five year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.

Plan Year Ending	Gain/(Loss)	Gains/(Losses) Not Yet Recognized				
		Amounts Not Yet Recognized by Valuation Year				
		2016	2017	2018	2019	2020
12/31/2012	1,803,623	360,725	0	0	0	0
12/31/2013	4,195,519	1,678,208	839,104	0	0	0
12/31/2014	2,767,428	1,660,457	1,106,971	553,486	0	0
12/31/2015	(5,955,336)	(4,764,269)	(3,573,202)	(2,382,134)	(1,191,067)	0
Total		(1,064,879)	(1,627,127)	(1,828,648)	(1,191,067)	0

Development of Investment Gain/(Loss)

Market Value of Assets, 12/31/2014	98,365,462
Contributions Less Benefit Payments & Administrative Expenses	(237,330)
Expected Investment Earnings <sup>1</sup>	6,386,042
Actual Net Investment Earnings	430,706
2016 Actuarial Investment Gain/(Loss)	<u>(5,955,336)</u>

<sup>1</sup> Expected Investment Earnings = 6.50% x (98,365,462 + 0.5 x -237,330)

Development of Actuarial Value of Assets

Market Value of Assets, 12/31/2015	98,558,838
(Gains)/Losses Not Yet Recognized	<u>1,064,879</u>
Actuarial Value of Assets, 12/31/2015	99,623,717

(A) 12/31/2014 Actuarial Assets: 94,876,292

(I) Net Investment Income:

1. Interest and Dividends	1,655,145
2. Net Increase in Fair Value of Investments	(880,997)
3. Change in Actuarial Value	4,482,540
4. Investment Expenses	<u>(271,933)</u>
Total	4,984,755

(B) 12/31/2015 Actuarial Assets: 99,623,717

Actuarial Asset Rate of Return =  $(2 \times I) / (A + B - I)$ : 5.26%

Market Value of Assets Rate of Return: 0.44%

1/1/2016 Limited Actuarial Assets: 99,623,717

Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis) (1,174,491)

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
December 31, 2015  
Actuarial Asset Basis

INCOME		
Contributions:		
Member	1,454,770	
City	8,804,264	
Total Contributions		10,259,034
Earnings from Investments		
Interest & Dividends	1,655,145	
Net Increase in Fair Value of Investments	(880,997)	
Change in Actuarial Value	4,482,540	
Total Earnings and Investment Gains		5,256,688
EXPENSES		
Administrative Expenses:		
Investment Related <sup>1</sup>	271,933	
Other	71,409	
Total Administrative Expenses		343,342
Distributions to Members:		
Benefit Payments	10,403,247	
Refund of Contributions/Transfers	21,708	
Total Distributions		10,424,955
Change in Net Assets for the Year		4,747,425
Net Assets Beginning of the Year		94,876,292
Net Assets End of the Year <sup>2</sup>		99,623,717

<sup>1</sup> Investment Related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup> Net Assets may be limited for actuarial consideration

STATISTICAL DATA <sup>1</sup>

	<u>1/1/2013</u>	<u>1/1/2014</u>	<u>1/1/2015</u>	<u>1/1/2016</u>
<u>Actives - Tier 1</u>				
Number	N/A	N/A	134	124
Average Current Age	N/A	N/A	41.7	41.9
Average Age at Employment	N/A	N/A	27.9	28.3
Average Past Service	N/A	N/A	13.8	13.6
Average Annual Salary	N/A	N/A	\$94,738	\$96,458
<u>Actives - Tier 2</u>				
Number	N/A	N/A	29	34
Average Current Age	N/A	N/A	28.6	29.4
Average Age at Employment	N/A	N/A	26.5	27.2
Average Past Service	N/A	N/A	2.1	2.2
Average Annual Salary	N/A	N/A	\$68,958	\$70,692
<u>Service Retirees</u>				
Number	N/A	128	129	135
Average Current Age	N/A	N/A	68.8	68.7
Average Annual Benefit	N/A	\$61,484	\$64,025	\$66,878
<u>Beneficiaries</u>				
Number	N/A	28	28	28
Average Current Age	N/A	N/A	76.5	76.5
Average Annual Benefit	N/A	\$31,708	\$34,551	\$36,388
<u>Disability Retirees</u>				
Number	N/A	15	16	16
Average Current Age	N/A	N/A	59.8	60.8
Average Annual Benefit	N/A	\$39,066	\$40,278	\$40,691
<u>Terminated Vested</u>				
Number	N/A	14	13	16
Average Current Age	N/A	N/A	41.2	40.9
Average Annual Benefit	N/A	\$0	\$24,028 <sup>2</sup>	\$24,178 <sup>2</sup>

<sup>1</sup> Foster & Foster does not have enough historical data to include complete data prior to 1/1/2015. We will add historical data going forward.

<sup>2</sup> The terminated vested participants shown are awaiting a refund of employee contributions. Therefore, they are not entitled to a future annual benefit from the plan.

## AGE AND SERVICE DISTRIBUTION

### PAST SERVICE

AGE	0	1	2	3	4	5-9	10-14	15-19	20-24	25-29	30+	Total
15 - 19	0	0	0	0	0	0	0	0	0	0	0	0
20 - 24	0	1	0	0	0	0	0	0	0	0	0	1
25 - 29	1	8	2	1	6	0	0	0	0	0	0	18
30 - 34	3	2	1	4	3	20	2	0	0	0	0	35
35 - 39	0	0	0	0	2	12	19	2	0	0	0	35
40 - 44	0	0	0	0	0	2	15	6	0	0	0	23
45 - 49	0	0	0	0	0	0	9	9	7	1	0	26
50 - 54	0	0	0	0	0	0	1	3	3	5	0	12
55 - 59	0	0	0	0	0	0	1	0	1	2	0	4
60 - 64	0	0	0	0	0	0	1	1	0	0	2	4
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	4	11	3	5	11	34	48	21	11	8	2	158

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 1/1/2015	163
b. Terminations	
i. Vested (partial or full) with deferred benefits	(4)
ii. Non-vested or full lump sum distribution received	(1)
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	<u>(8)</u>
f. Continuing participants	150
g. New entrants and Rehires	<u>8</u>
h. Total active life participants in valuation	158

2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	129	28	16	13	186
Retired	8	0	0	0	8
Vested Deferred	0	0	0	4	4
Death, With Survivor	(2)	2	0	0	0
Death, No Survivor	0	(2)	0	0	(2)
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	0	0
Rehires	0	0	0	(1)	(1)
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	0	0	0	0	0
b. Number current valuation	135	28	16	16	195

## SUMMARY OF CURRENT PLAN

### Article 3 Pension Fund

The Plan is established and administered as prescribed by “Article 3. Police Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.

### Credited Service

Complete years of service as a sworn police officer employed by the City.

### Normal Retirement

Date

**Tier 1:** Age 50 and 20 years of Credited Service.

**Tier 2:** Age 55 with 10 years of service

Benefit

**Tier 1:** 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,000 per month.

**Tier 2:** 2.50% per year of service times the average salary for the eight consecutive years prior to retirement times the number of years of service. The maximum benefit is 75% of average salary.

Form of Benefit

**Tier 1:** For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member’s benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.

**Tier 2:** Same as above, but with 66 2/3% of benefit continued to spouse.

### Cost-of-Living Adjustment

**Tier 1:** An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55

**Tier 2:** An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

### Disability Benefit

Eligibility

Total and permanent as determined by the Board of Trustees.

Benefit Amount

A maximum of:

- a.) 65% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.

For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.

Pre-Retirement Death Benefit

Service Incurred

100% of salary attached to rank held by Member on last day of service.

Non-Service Incurred

A maximum of:

- a.) 50% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.

For non-service deaths with less than 10 years of service, a refund of member contributions is provided.

Contributions

Employee

9.91% of Salary.

City

Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability over a period ending in 2040.

Vesting (Termination)

Less than 10 years

Refund of Member Contributions.

10 or more years

Either the termination benefit, payable upon reaching age 60, provided contributions are not withdrawn, or a refund of member contributions. The termination benefit is 2.50% of annual salary held in the year prior to termination times creditable service.

Board of Trustees

The Board consists of two members appointed by the City, two active Members of the Police Department elected by the Membership and one retired Member of the Police Department elected by the Membership.