

CITY OF EVANSTON
FIREFIGHTERS' PENSION FUND

ACTUARIAL VALUATION
AS OF JANUARY 1, 2016

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

October 3, 2016

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

Re: City of Evanston Firefighters' Pension Fund

Dear Board:

We are pleased to present to the Board this report of the annual actuarial valuation of the City of Evanston Firefighters' 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 4, 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.

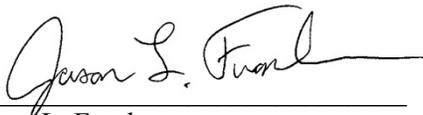
The undersigned is familiar with the immediate and long-term aspects of pension valuations and meets the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the 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 Firefighters' 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 us 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 Firefighters' 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	<u>1/1/2016</u>	<u>1/1/2015</u>
Total Required Contribution	\$9,084,864	\$8,281,368
% of Total Annual Payroll	91.8%	84.1%
Member Contributions (Est.)	936,155	930,503
% of Total Annual Payroll	9.455%	9.455%
City Required Contribution	8,148,709	7,350,865
% of Total Annual Payroll	82.3%	78.0%

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 change in assumptions used to develop this year's recommended contribution. The mortality assumption was updated to reflect mortality increases through the valuation date. 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 3.32% for members who were in both the 2015 and 2016 valuations, falling short of the assumed average increase of 4.46% for these members. This was offset by an investment return (Actuarial Asset basis) of 3.87%, 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

There have been no plan changes since the prior valuation.

Actuarial Assumption/Method Changes Since Prior Valuation

There were no method changes made since the prior valuation.

The following assumption changes were made since the prior valuation:

1. For healthy lives, the mortality rates were updated from RP-2000 Combined Healthy Mortality with a blue collar adjustment to RP-2000 Combined Healthy Mortality with a blue collar adjustment, projected to the valuation date using Scale BB.
2. For disabled lives, the mortality rates were updated from RP-2000 Disabled Retiree Mortality to RP-2000 Disabled Retiree Mortality, projected to the valuation date using Scale BB.

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	105	105	107
Service Retirees	86	86	86
Beneficiaries	34	34	33
Disability Retirees	22	22	23
Terminated Vested	<u>4</u>	<u>4</u>	<u>3</u>
Total	251	251	252
Total Annual Payroll			
	\$9,901,165	\$9,901,165	\$9,841,383
Payroll Under Assumed Ret. Age			
	9,901,165	9,901,165	9,841,383
Annual Rate of Payments to:			
Service Retirees			
	5,756,668	5,756,668	5,493,139
Beneficiaries			
	1,140,133	1,140,133	1,060,442
Disability Retirees			
	1,266,252	1,266,252	1,242,564
Terminated Vested			
	0	0	0
B. Assets			
Actuarial Value			
	69,312,907	69,312,907	67,487,404
Market Value			
	66,741,089	66,741,089	68,241,712
C. Liabilities			
Present Value of Benefits			
Actives			
Retirement Benefits	63,574,205	61,431,818	56,692,928
Disability Benefits	8,867,978	8,592,134	8,210,688
Death Benefits	1,419,087	1,490,092	1,494,570
Vested Benefits	2,500,938	2,462,193	2,243,841
Service Retirees	82,924,925	78,472,771	79,412,776
Beneficiaries	9,911,362	9,452,980	9,086,068
Disability Retirees	17,683,487	16,795,171	19,779,141
Terminated Vested	<u>71,908</u>	<u>71,908</u>	<u>108,515</u>
Total	186,953,890	178,769,067	177,028,527

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	105,652,974	105,580,767	107,188,865
Present Value of Future Member Contributions	9,989,489	9,982,662	10,134,707
Normal Cost (Retirement)	2,043,163	1,977,113	1,859,951
Normal Cost (Disability)	512,689	500,318	479,783
Normal Cost (Death)	85,910	89,732	89,525
Normal Cost (Vesting)	<u>155,636</u>	<u>154,209</u>	<u>143,587</u>
Total Normal Cost	2,797,398	2,721,372	2,572,846
Present Value of Future Normal Costs	27,832,405	27,060,948	26,509,069
Accrued Liability (Retirement)	42,991,664	41,518,151	37,286,636
Accrued Liability (Disability)	3,667,214	3,517,458	3,173,011
Accrued Liability (Death)	576,027	610,549	588,443
Accrued Liability (Vesting)	1,294,898	1,269,131	1,084,868
Accrued Liability (Inactives)	<u>110,591,682</u>	<u>104,792,830</u>	<u>108,386,500</u>
Total Actuarial Accrued Liability	159,121,485	151,708,119	150,519,458
Unfunded Actuarial Accrued Liability (UAAL)	89,808,578	82,395,212	83,032,054
Funded Ratio (AVA / AL)	43.56%	45.69%	44.84%
D. Actuarial Present Value of Accrued Benefits			
Vested Accrued Benefits			
Inactives	110,591,682	104,792,830	108,386,500
Actives	20,287,422	19,355,916	17,222,404
Member Contributions	<u>8,724,300</u>	<u>8,724,300</u>	<u>8,095,493</u>
Total	139,603,404	132,873,046	133,704,397
Non-vested Accrued Benefits	<u>1,407,817</u>	<u>1,399,044</u>	<u>1,146,698</u>
Total Present Value Accrued Benefits	141,011,221	134,272,090	134,851,095
Funded Ratio (MVA / PVAB)	47.33%	49.71%	50.61%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:			
Plan Amendments	0	0	
Assumption Changes	6,739,131	0	
New Accrued Benefits	0	(1,014,152)	
Benefits Paid	0	(8,067,965)	
Interest	0	8,503,112	
Other	<u>0</u>	<u>0</u>	
Total	6,739,131	(579,005)	

	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)	\$2,979,229	\$2,898,261	\$2,740,081
% of Total Annual Payroll ¹	30.1	29.3	27.8
Administrative Expenses (with interest)	47,496	47,496	55,645
% of Total Annual Payroll ¹	0.5	0.5	0.6
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 25 years (as of 1/1/2016, with interest)	6,058,139	5,511,156	5,485,642
% of Total Annual Payroll ¹	61.2	55.6	55.7
Total Required Contribution	9,084,864	8,456,913	8,281,368
% of Total Annual Payroll ¹	91.8	85.4	84.1
Expected Member Contributions	936,155	936,155	930,503
% of Total Annual Payroll ¹	9.5	9.5	9.5
Expected City Contribution	8,148,709	7,520,758	7,350,865
% of Total Annual Payroll ¹	82.3	75.9	74.6

F. Past Contributions

Plan Years Ending:	<u>12/31/2015</u>
Total Required Contribution	8,306,957
City	7,350,865
Actual Contributions Made:	
Members (excluding buyback)	956,092
City	<u>6,385,244</u>
Total	7,341,336

G. Net Actuarial (Gain)/Loss (1,244,203)

¹ Contributions developed as of 1/1/2016 are expressed as a percentage of total annual payroll at 1/1/2016 of \$9,901,165.

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

<u>Year</u>	<u>Projected Amortizable Unfunded Accrued Liability</u> ¹
2016	73,896,430
2017	72,641,559
2018	71,305,122
2024	61,251,277
2030	46,581,286
2035	29,327,533
2041	0

¹ 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

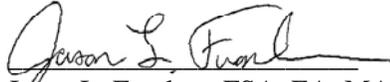
		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2015	3.32%	4.46%
Year Ended	12/31/2014	6.92%	4.39%
Year Ended	12/31/2013	N/A	N/A

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

		<u>Actual</u>	<u>Assumed</u>
Year Ended	12/31/2015	3.87%	6.50%
Year Ended	12/31/2014	6.96%	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	\$83,032,054
(2) Sponsor Normal Cost developed as of January 1, 2015	1,642,343
(3) Expected administrative expenses for the year ended December 31, 2015	52,248
(4) Expected interest on (1), (2) and (3)	5,505,534
(5) Sponsor contributions to the System during the year ended December 31, 2015	6,385,244
(6) Expected interest on (5)	207,520
(7) Expected Unfunded Actuarial Accrued Liability as of December 31, 2015, (1)+(2)+(3)+(4)-(5)-(6)	83,639,415
(8) Change to UAAL due to Assumption Change	7,413,366
(9) Change to UAAL due to Actuarial (Gain)/Loss	(1,244,203)
(10) Unfunded Accrued Liability as of January 1, 2016	89,808,578

<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	73,896,430 ¹	5,688,393

¹ 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	325,889	8,117,673	8,443,562
2017	590,251	8,142,948	8,733,199
2018	844,053	8,217,525	9,061,578
2019	1,095,945	8,290,938	9,386,883
2020	1,373,414	8,366,573	9,739,987
2021	1,641,360	8,408,801	10,050,161
2022	1,922,030	8,438,330	10,360,360
2023	2,240,084	8,468,857	10,708,941
2024	2,586,366	8,475,584	11,061,950
2025	2,956,202	8,470,993	11,427,195
2026	3,341,030	8,454,665	11,795,695
2027	3,743,544	8,425,486	12,169,030
2028	4,181,049	8,382,472	12,563,521
2029	4,600,136	8,324,113	12,924,249
2030	5,032,813	8,248,465	13,281,278
2031	5,477,524	8,153,699	13,631,223
2032	5,959,351	8,038,031	13,997,382
2033	6,475,792	7,899,690	14,375,482
2034	7,020,864	7,737,241	14,758,105
2035	7,598,448	7,573,012	15,171,460
2036	8,148,221	7,360,175	15,508,396
2037	8,684,585	7,120,389	15,804,974
2038	9,224,222	6,853,736	16,077,958
2039	9,734,747	6,560,455	16,295,202
2040	10,219,546	6,241,721	16,461,267
2041	10,651,286	5,899,510	16,550,796
2042	11,065,471	5,536,612	16,602,083
2043	11,447,127	5,156,944	16,604,071
2044	11,821,905	4,764,919	16,586,824
2045	12,124,989	4,365,719	16,490,708
2046	12,364,030	3,965,425	16,329,455
2047	12,559,551	3,569,796	16,129,347
2048	12,717,600	3,184,110	15,901,710
2049	12,840,795	2,814,193	15,654,988
2050	12,928,381	2,464,936	15,393,317
2051	12,981,243	2,139,791	15,121,034
2052	13,000,433	1,841,654	14,842,087
2053	12,985,087	1,571,706	14,556,793
2054	12,934,778	1,329,998	14,264,776
2055	12,848,513	1,116,619	13,965,132

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	<p>RP-2000 Disabled Retiree, projected to the valuation date using Scale BB.</p> <p>Based on studies of public safety pension plans, we believe this assumption sufficiently accommodates expected future mortality improvements.</p>
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. 90% 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.

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	<p><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.</p> <p><u>Tier 2</u>: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.</p>

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 ¹</u>	
<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>	<u>Age</u>	<u>Rate</u>
20	9.00%	20	0.10%	50 - 53	14.0%
25	5.00%	25	0.10%	54 - 59	20.0%
30	2.50%	30	0.20%	60 - 62	25.0%
35	2.00%	35	0.35%	63 - 64	33.0%
40	1.00%	40	0.50%	65 - 69	50.0%
45	1.00%	45	0.65%	70	100.0%
50	1.00%	50	1.00%		
55	1.00%	55	1.50%		
60	1.00%	60	3.00%		
65	1.00%	65	4.25%		

¹ 100% at 30 years of service.

Funding Method

Entry Age Normal 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	969,532
Cash	213,936
Total Cash and Equivalents	1,183,468
Receivables:	
From Police Officers' Trust Fund	2,592
From General Trust Fund	31,737
From City	0
Accrued Past Due Interest	142,583
Total Receivable	176,912
Investments:	
State, Corporate and Local Obligations	13,410,622
U.S. Gov't and Agency Obligations	4,848,724
Equity Securities	5,646,661
Mutual Funds	41,491,173
Total Investments	65,397,180
Total Assets	66,757,560
 <u>LIABILITIES</u>	
Liabilities:	
Payable:	
Vouchers Payable	16,471
Total Liabilities	16,471
Net Assets:	
Active and Retired Members' Equity	66,741,089
NET POSITION RESTRICTED FOR PENSIONS	66,741,089
TOTAL LIABILITIES AND NET ASSETS	66,757,560

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

ADDITIONS

Contributions:

Member	956,092
City	6,385,244

Total Contributions 7,341,336

Investment Income:

Net Realized Gain (Loss)	190,618
Unrealized Gain (Loss)	(295,731)
Net Increase in Fair Value of Investments	(105,113)
Interest & Dividends	523,011
Less Investment Expense ¹	(189,657)

Net Investment Income 228,241

Total Additions 7,569,577

DEDUCTIONS

Distributions to Members:

Benefit Payments	8,026,249
Refund of Contributions/Transfers	41,716

Total Distributions 8,067,965

Administrative Expenses 44,597

Total Deductions 8,112,562

Net Increase in Net Position (542,985)

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year	68,241,712
Receivable Adjustment	(957,638)

Adjusted Beginning of the Year 67,284,074

End of the Year 66,741,089

¹ 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	(97,940)	(19,588)	0	0	0	0
12/31/2013	2,859,775	1,143,910	571,955	0	0	0
12/31/2014	(666,688)	(400,013)	(266,675)	(133,338)	0	0
12/31/2015	(4,120,159)	(3,296,127)	(2,472,095)	(1,648,064)	(824,032)	0
Total		(2,571,818)	(2,166,815)	(1,781,402)	(824,032)	0

Development of Investment Gain/Loss

Market Value of Assets, 12/31/2014	67,284,074
Contributions Less Benefit Payments & Administrative Expenses	(771,226)
Expected Investment Earnings ¹	4,348,400
Actual Net Investment Earnings	<u>228,241</u>
2016 Actuarial Investment Gain/(Loss)	(4,120,159)

¹ Expected Investment Earnings = 6.50% x (67,284,074 + 0.5 x -771,226)

Development of Actuarial Value of Assets

Market Value of Assets, 12/31/2015	66,741,089
(Gains)/Losses Not Yet Recognized	<u>2,571,818</u>
Actuarial Value of Assets, 12/31/2015	69,312,907
(A) 12/31/2014 Actuarial Assets:	67,487,404
(I) Net Investment Income:	
1. Interest and Dividends	523,011
2. Realized Gains (Losses)	190,618
3. Change in Actuarial Value	2,072,757
4. Investment Expenses	<u>(189,657)</u>
Total	2,596,729
(B) 12/31/2015 Actuarial Assets:	69,312,907
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	3.87%
Market Value of Assets Rate of Return:	0.34%
12/31/2015 Limited Actuarial Assets:	69,312,907
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(1,764,887)

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

INCOME	
Contributions:	
Member	956,092
City	6,385,244
Total Contributions	7,341,336
Earnings from Investments	
Interest & Dividends	523,011
Net Realized Gain (Loss)	190,618
Change in Actuarial Value	2,072,757
Total Earnings and Investment Gains	2,786,386
EXPENSES	
Administrative Expenses:	
Investment Related ¹	189,657
Other	44,597
Total Administrative Expenses	234,254
Distributions to Members:	
Benefit Payments	8,026,249
Refund of Contributions/Transfers	41,716
Total Distributions	8,067,965
Change in Net Assets for the Year	1,825,503
Net Assets Beginning of the Year	67,487,404
Net Assets End of the Year ²	69,312,907

¹ Investment Related expenses include investment advisory, custodial and performance monitoring fees.

² Net Assets may be limited for actuarial consideration.

STATISTICAL DATA ¹

	<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	81	79
Average Current Age	N/A	N/A	42.7	43.4
Average Age at Employment	N/A	N/A	28.0	28.1
Average Past Service	N/A	N/A	14.7	15.3
Average Annual Salary	N/A	N/A	\$98,712	\$100,461
<u>Actives - Tier 2</u>				
Number	N/A	N/A	26	26
Average Current Age	N/A	N/A	30.1	30.8
Average Age at Employment	N/A	N/A	28.2	28.0
Average Past Service	N/A	N/A	1.9	2.8
Average Annual Salary	N/A	N/A	\$70,990	\$75,567
<u>Service Retirees</u>				
Number	N/A	90	86	86
Average Current Age	N/A	N/A	68.8	69.1
Average Annual Benefit	N/A	\$57,210	\$63,874	\$66,938
<u>Beneficiaries</u>				
Number	N/A	22	33	34
Average Current Age	N/A	N/A	67.6	70.7
Average Annual Benefit	N/A	\$31,720	\$32,135	\$33,533
<u>Disability Retirees</u>				
Number	N/A	24	23	22
Average Current Age	N/A	N/A	62.2	61.9
Average Annual Benefit	N/A	\$52,792	\$54,025	\$57,557
<u>Terminated Vested</u>				
Number	N/A	2	3	4
Average Current Age	N/A	N/A	31.5	33.1
Average Annual Benefit	N/A	\$0	\$0 ²	\$0 ²

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

² 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	0	0	0	0	0	0	0	0	0	0	0
25 - 29	1	5	2	3	1	0	0	0	0	0	0	12
30 - 34	0	0	0	2	8	15	0	0	0	0	0	25
35 - 39	0	1	0	0	1	8	3	1	0	0	0	14
40 - 44	0	0	0	0	2	3	9	6	0	0	0	20
45 - 49	0	0	0	0	0	1	5	7	3	0	0	16
50 - 54	0	0	0	0	0	0	1	0	3	6	1	11
55 - 59	0	0	0	0	0	0	0	1	1	1	2	5
60 - 64	0	0	0	0	0	0	0	1	0	0	1	2
65+	0	0	0	0	0	0	0	0	0	0	0	0
Total	1	6	2	5	12	27	18	16	7	7	4	105

VALUATION PARTICIPANT RECONCILIATION

1. Active lives

a. Number in prior valuation 1/1/2015	107
b. Terminations	
i. Vested (partial or full) with deferred benefits	(1)
ii. Non-vested or full lump sum distribution received	0
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>(2)</u>
f. Continuing participants	104
g. New entrants	<u>1</u>
h. Total active life participants in valuation	105

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	86	33	23	3	145
Retired	2	0	0	0	2
Vested Deferred	0	0	0	1	1
Death, With Survivor	(2)	2	0	0	0
Death, No Survivor	0	0	(1)	0	(1)
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	(1)	(1)
Rehires	0	0	0	0	0
Expired Annuities	0	(1)	0	0	(1)
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	0	0	0	1	1
b. Number current valuation	86	34	22	4	146

SUMMARY OF CURRENT PLAN

<u>Article 4 Pension Fund</u>	The Plan is established and administered as prescribed by “Article 4. Firefighters’ Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.
<u>Credited Service</u>	Years and fractional parts of years of service as a sworn Firefighter employed by the City.
<u>Salary</u>	Annual salary, including longevity, attached to firefighter’s rank, as established by the municipality appropriation ordinance, excluding overtime pay, holiday pay and bonus pay.
<u>Normal Retirement</u>	
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 \$1,159.27 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.
<u>Cost-of-Living Adjustment</u>	Tier 1: <i>Retirees:</i> 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.

Disabled Retirees: An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

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. Seven years of service required for non-service connected disability.

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.) 54% 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.

Contributions

Employee 9.455% 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 based on the monthly salary attached to the Member's rank at separation from service. The following schedule applies:

<u>Service</u>	<u>% of Salary</u>
10	15.0%
11	17.6%
12	20.4%
13	23.4%
14	26.6%
15	30.0%
16	33.6%
17	37.4%
18	41.4%
19	45.6%

Board of Trustees

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