

City of North Kansas City Policemen's and Firemen's Retirement Fund

Actuarial Valuation as of October 1, 2016

McCloud & Associates, Inc.
QUALIFIED PLAN CONSULTING AND ADMINISTRATION

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November 15, 2016

Board of Trustees
City of North Kansas City
Policemen's and Fireman's Retirement Fund
City Hall, 2010 Howell Street
North Kansas City, MO 64116

Dear Board Members:

This is a report on the actuarial valuation for the City of North Kansas City Policemen's and Firemen's Retirement Fund (The Plan), which was performed as of October 1, 2016. The purpose of the valuation is to:

- Compare the current value of Trust assets with accrued liabilities to assess the funded condition of the Pension Plan,
- Compute the City's recommended contribution rate for the Fiscal Year beginning October 1, 2016.
- Provide accounting disclosure information for the Plan under applicable Governmental Accounting Standards for the Fiscal Year ended September 30, 2016.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. The employee data was provided by the plan administrator and the Plan asset data was provided by the City administrator. This data has been reviewed for reasonableness, but no attempt has been made to audit such information. Employee data is snapshot data as of the valuation date.

The valuation was based on the provisions of the Plan as amended through the beginning of the Plan Year. Each actuarial assumption used in this valuation is reasonably related to the past experience of the Plan and represents reasonable expectations of future experience under the Plan. The Plan trustees with advice and approval of the actuary set the assumptions and methods for the valuation.

Neither the signing actuary nor the firm of McCloud & Associates has a conflict of interest that would impair the objectivity of our work. This report is intended for use by the Plan trustees and should not be used for any purpose other than as stated herein. This report is only valid when presented in its entirety. It must not be reproduced without permission.

The undersigned meets the Qualification Standards for Prescribed Statements of Actuarial Opinion promulgated by the American Academy of Actuaries.

Respectfully submitted,



Traci M. Christian, EA, MAAA
Enrollment Number 14-669

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Section One:

Valuation Summary

Liabilities and Funded Condition of Pension Plan

	<u>October 1, 2015</u>	<u>October 1, 2016</u>
Actuarial Accrued Liability	\$47,424,761	\$50,832,226
Actuarial Value of Assets	\$46,574,127	\$48,471,548
Funded Status of the Plan	98.2%	95.4%

City Computed Contribution Rate

The City’s recommended contribution rate was computed as a percentage of active member payroll and assumed to be payable mid-year.

	<u>October 1, 2015</u>	<u>October 1, 2016</u>
Normal Cost *	11.44%	13.12%
Amortization of Unfunded Liability	1.03%	2.91%
Interest	0.41%	0.52%
Total Computed Contribution	12.88%	16.55%
Anticipated tax-based portion	13.60%	13.46%
City’s Net Computed Contribution Rate	0.00%	3.09%

*The Normal Cost is calculated NET of anticipated percentage of payroll contributions, which are 6.9% of pay from the city and 3.1% of pay from participants.

Pension Fund Experience

The mortality tables were updated to the most recent MP-2015 blue collar generational tables, causing an increase of \$2.03 million in the plan’s liability. This change is responsible for the drop in the plan’s funded status. The Plan experienced investment gains of approximately \$1.6 million on market value returns of 10.1%, and \$529,226 on an actuarial basis, where returns were 8.1%. The asset gains were offset by a small liability loss, so the net gain was \$523,917.

Benefit Provision Changes

There were no changes to the plan provisions from the prior valuation.

Assumption and Method Changes

The mortality table has been updated to the MP-2015 Generational Blue Collar Employee and Healthy Annuitant Tables.

Participant Data

	<u>October 1, 2015</u>	<u>October 1, 2016</u>
Active Members	87	87
Active Member Payroll	\$5,111,644	\$5,112,351
Average Member Payroll	58,755	58,763
Retirees and Beneficiaries*	77	81
Annual Pensions	\$2,365,178	\$2,552,718
Vested Terminated	6	5
Deferred Payments	\$131,801	\$100,686

* Includes DROP Participants

Financial Data

Actuarial Value of Assets*	\$46,574,127	\$48,471,548
Market Value of Assets	\$45,814,800	\$48,561,193

*Accumulation of DROP balances as of the valuation date are removed from this value.



Section Two:

***Actuarial Calculations –
Funding***

Actuarial Accrued Liability and Funded Status

	<u>October 1, 2015</u>	<u>October 1, 2016</u>
Active Member Contributions	1,790,527	1,843,210
Retirants and Beneficiaries	23,081,864	26,088,082
Disabled Members	4,503,986	4,605,300
Terminated Vested Members	1,057,407	804,730
Active Members (employer-financed portion)	<u>16,990,977</u>	<u>17,490,904</u>
Actuarial Accrued Liability	\$47,424,761	50,832,226
Actuarial Value of Assets	<u>46,574,127</u>	<u>48,471,548</u>
Unfunded Actuarial Accrued liability	850,634	2,360,678
Funded Status of the Plan	98.2%	95.4%

Computed Contribution Rates

The contribution rates shown below are expressed as a percent of active member payroll (under Normal Retirement Age.).

The normal cost can be viewed as the long-term ongoing cost of the Pension Plan.

Accrued liabilities exceeded accrued assets as of October 1, 2016. The excess was amortized as a level percent of payroll over 20 years. This amortization charge was applied to the recommended contribution.

Contribution Recommendation for Fiscal Year Beginning October 1, 2016:

	<u>Dollar Amount</u>	<u>As a Percent Of Current Payroll</u>
Net Normal Cost (excludes % of pay contributions)	\$670,936	13.12%
Amortization of Unfunded Liability	148,706	2.91%
Interest for one half year	26,638	0.52%
Total Computed Contribution	846,280	16.55%
Anticipated Pension Funds Collections from Property Tax Billing	\$(688,000)	(13.46)%
Additional Recommended Contribution	\$158,280	3.09%

Projection of Funded Status and Recommended Contributions
Assumes the Actuarial Recommended Contribution is Made Each Year

Year	Net		Recommended Contribution	Expected Tax Contribution	Additional Recommended	Contribution		Benefit Payments	Assets	Accrued Liability	Unfunded Liability	Funded Ratio
	Normal Cost	Amortization				as a % of Payroll	Payroll					
2016	670,936	148,706	846,280	688,000	158,280	5,112,351	16.6%	2,522,154	48,471,548	50,832,226	2,360,678	95.4%
2017	697,773	154,654	880,131	698,320	181,811	5,316,845	16.6%	2,641,394	50,435,459	52,791,209	2,355,750	95.5%
2018	725,684	160,840	915,337	708,795	206,542	5,529,519	16.6%	2,769,060	52,460,604	54,804,771	2,344,167	95.7%
2019	754,712	167,274	951,950	719,427	232,523	5,750,700	16.6%	2,928,816	54,544,531	56,869,774	2,325,243	95.9%
2020	784,900	173,965	990,028	730,218	259,810	5,980,728	16.6%	3,068,681	56,660,287	58,958,524	2,298,237	96.1%
2021	816,296	180,924	1,029,629	741,171	288,458	6,219,957	16.6%	3,230,672	58,832,931	61,095,281	2,262,350	96.3%
2022	848,948	188,161	1,070,815	752,289	318,526	6,468,755	16.6%	3,418,753	61,045,867	63,262,586	2,216,719	96.5%
2023	882,906	195,687	1,113,647	763,573	350,074	6,727,505	16.6%	3,548,431	63,277,429	65,437,844	2,160,414	96.7%
2024	918,222	203,514	1,158,193	775,027	383,166	6,996,605	16.6%	3,729,417	65,591,888	67,684,323	2,092,435	96.9%
2025	954,951	211,655	1,204,521	786,652	417,868	7,276,470	16.6%	3,827,723	67,944,525	69,956,226	2,011,700	97.1%
2026	993,149	220,121	1,252,702	798,452	454,249	7,567,528	16.6%	3,913,143	70,426,175	72,343,223	1,917,048	97.4%
2027	1,032,875	228,926	1,302,810	810,429	492,381	7,870,229	16.6%	4,007,994	73,061,631	74,868,858	1,807,227	97.6%
2028	1,074,190	238,083	1,354,922	822,585	532,337	8,185,039	16.6%	4,113,634	75,854,380	77,535,271	1,680,891	97.8%
2029	1,117,158	247,606	1,409,119	834,924	574,195	8,512,440	16.6%	4,213,855	78,806,866	80,343,456	1,536,590	98.1%
2030	1,161,844	257,511	1,465,484	847,448	618,036	8,852,938	16.6%	4,309,407	81,938,555	83,311,323	1,372,768	98.4%
2031	1,208,318	267,811	1,524,103	860,160	663,943	9,207,055	16.6%	4,428,670	85,269,549	86,457,298	1,187,749	98.6%
2032	1,256,650	278,524	1,585,067	873,062	712,005	9,575,338	16.6%	4,528,387	88,792,096	88,792,096	979,734	98.9%
2033	1,306,916	289,664	1,648,470	886,158	762,312	9,958,351	16.6%	4,609,911	92,542,757	93,289,545	746,789	99.2%
2034	1,359,193	301,251	1,714,409	899,450	814,958	10,356,685	16.6%	4,697,591	96,559,226	97,046,063	486,837	99.5%
2035	1,413,561	197,606	1,663,529	912,942	750,587	10,770,952	15.4%	4,781,735	100,856,673	101,054,322	197,649	99.8%
2036	1,470,103	-	1,517,882	926,636	591,245	11,201,791	13.6%	4,856,545	105,338,260	105,338,260	-	100.0%
2037	1,528,907	-	1,578,597	940,536	638,061	11,649,862	13.6%	4,952,828	109,929,515	109,929,515	-	100.0%
2038	1,590,064	-	1,641,741	954,644	687,097	12,115,857	13.6%	5,035,168	114,830,135	114,830,135	-	100.0%
2039	1,653,666	-	1,707,410	968,963	738,447	12,600,491	13.6%	5,104,664	120,079,039	120,079,039	-	100.0%
2040	1,719,813	-	1,775,707	983,498	792,209	13,104,511	13.6%	5,139,424	125,716,718	125,716,718	-	100.0%
2041	1,788,605	-	1,846,735	998,250	848,485	13,628,691	13.6%	5,192,918	131,809,080	131,809,080	-	100.0%
2042	1,860,150	-	1,920,604	1,013,224	907,380	14,173,839	13.6%	5,221,882	138,371,303	138,371,303	-	100.0%
2043	1,934,555	-	1,997,429	1,028,423	969,006	14,740,792	13.6%	5,239,737	145,464,418	145,464,418	-	100.0%
2044	2,011,938	-	2,077,326	1,043,849	1,033,477	15,330,424	13.6%	5,253,085	153,139,772	153,139,772	-	100.0%
2045	2,092,415	-	2,160,419	1,059,507	1,100,912	15,943,641	13.6%	5,252,893	161,445,451	161,445,451	-	100.0%

Uses 6.5% assumed rate of return and discount rate. Assumes recommended contribution is made.

The results presented here are ESTIMATES. They are based on the data, assumptions, methods and plan provisions outlined in this report. These results are for **discussion purposes only** and should not be relied upon for purposes of making cash contributions to the Plan nor for any other purposes.

Schedule of Amortization of Unfunded Liability

Twenty-year Amortization of Historical Components of the Unfunded Actuarial Liability

Description	Initial Amount	Remaining Period	Outstanding Balance*	Payment This Year
10/1/15 UAL	\$850,634	19	\$849,691	\$54,914
10/1/16 Change Mortality	2,034,904	20	2,034,904	126,314
10/1/16 Actuarial Gain	(523,917)	20	(523,917)	(32,522)
Total			\$2,360,678	\$148,706

*The total of the outstanding balances equals the current Unfunded Actuarial Liability.

Amounts are amortized as a level percent of pay, so will increase each year by the base salary scale, currently 4.0%. If the interest rate or base salary scale should change, the bases should be recalibrated to be fully amortized over the remaining period.

Recommended City Contributions

These recommended contributions are in addition to anticipated percentage of payroll contributions: 6.9% from the city and 3.1% of pay from participants.

Valuation Date: October 1	Computed City Dollar Contributions	Percent of Payroll
2007	1,093,702	21.7
2008	1,192,596	22.4
2009	1,432,875	24.8
2010	1,413,105	25.5
2011	1,546,257	27.8
2012	1,382,311	27.4
2013	890,916	17.8
2014	710,503	13.6
2015	658,361	12.9
2016	846,280*	16.6*

*Generational mortality tables were first used in the 2016 valuation

Comments and Conclusion

The mortality tables were updated to the MP-2015 blue collar generational tables, which project improvements to mortality into the future. Without this change, the funded status would have grown from 98.2% last year to 99.3%, but with the \$2.03 million increase in liability caused by the mortality assumption change, the funded status is 95.4%. The increase in liability will be amortized into our contribution calculations as a level percentage of pay over the coming 20 years, which causes the recommended annual contribution to increase by \$130,000.

The Plan experienced investment gains of over \$1.6 million on a market value basis, reflecting a return of 10.1%. Twenty percent of those gains are recognized in the actuarial (smoothed) asset value, and the remainder will be recognized over the next four years.

Maintaining current funding practices will keep the plan well funded.

History of Assets and Accrued Liabilities

Valuation Date October 1:	Valuation Assets	Actuarial Accrued Liabilities	Funded Ratio	Unfunded Actuarial Accrued Liabilities
2005	32,750,872	32,266,845	101.5	(484,027)
2006	32,685,099	33,846,633	99.5	1,161,534
2007	33,662,599	37,522,776	89.7	3,860,177
2008	33,999,722	38,836,397	87.5	4,836,675
2009	34,040,208	40,953,104	83.1	6,912,896
2010	34,635,613	42,049,757	82.4	7,414,144
2011	34,604,534	44,441,255	77.9	9,836,721
2012	39,322,148	45,859,772	85.7	6,537,624
2013	42,131,291	45,675,222	92.2	3,543,931
2014	46,376,930	46,677,818	99.4	300,888
2015	46,574,127	47,424,761	98.2	850,634
2016	48,471,548	50,832,226*	95.4	2,360,678*

*Generational mortality was first used in the 2016 valuation.

History of Market Value Asset Returns

Year Ended Sept. 30	Rate of Investment Return
2008	(14.7%)
2009	3.8%
2010	9.9%
2011	0.8%
2012	18.8%
2013	11.6%
2014	8.8%
2015	(0.9%)
2016	10.1%

Valuation History

2016

The mortality tables were updated to MP-2015 Blue Collar with generational improvement for Employees and Healthy Annuitants, reflecting the most recently published research.

2015

The mortality table was updated to the RP-2014 Blue Collar table, without generational projection. The asset smoothing method was revised slightly in this valuation to base the five-year smoothing on gradual recognition of asset gains and losses, rather than adding the five-year average gain to expected assets.

2013

City Contributions were increased from 3.9% to 6.9% of payroll. Employee Contributions increased from 1.1% to 3.1% of payroll. Employees are now required to continue making employee contributions until actual separation of employment (including time in the DROP).



Section Three:

***Retirement Plan
Benefit Provisions***

Benefit Provision Summary

Effective Date

November 6, 1956

Eligibility

All policemen and firemen of the City of North Kansas City are eligible to Participate in the Plan on their employment date unless otherwise excluded by contract.

Average Monthly Salary

Highest 36 consecutive month average out of the last 60 months prior to termination or retirement.

Normal Retirement Date

Normal Retirement is the first of the month coincident with or immediately following the attainment of age 55 and 10 years of Service. Early Retirement is age 45 with 25 Years of Service.

Benefit Formula

2.5% times Average Monthly Salary at actual retirement or termination, times Years of Service up to 20, plus 1% times Average Monthly Salary times Years of Service in excess of 20 but not exceeding 30.

Normal Form

The retirement benefit shall be payable for the Member's lifetime only with an actuarial Equivalent 50% Joint and Survivor Benefit for married participants.

Vesting

A Member who has ten or more years of service is entitled to a benefit at his Normal Retirement Date and shall be considered 100% vested. The Member's benefit at Normal Retirement Date is his accrued benefit unless the terminated Member elects to withdraw his Member contributions with interest in lieu of any other Plan benefits.

Pre-Retirement Death Benefit

A Participant's spouse is entitled to 50% of the Accrued Benefit, reduced for joint life expectancy, payable when the participant would have otherwise reached eligibility for benefits.

Duty Disability Benefit

The greater of a or b, or for Active Members who were Active Members on August 22, 1994 the greatest of a, b, and c:

- a) 50% of Average Monthly Salary for the 12 months preceding the date of retirement.
- b) Projected Normal Retirement Benefit at age 55 assuming continued employment and Average Monthly Salary at the time of disability.
- c) 60% of Average Monthly Salary calculated as of August 22, 1994 and paid until the earlier of death, recovery or Normal Retirement.

Cost of Living Adjustment (COLA)

Monthly Benefits of Members retiring or becoming disabled on or after August 23, 1994 will be increased on each January 1 thereafter. Such increase will be the lesser of the Social Security COLA as of the immediately preceding December 1 or 3%, but not less than 1%. The COLA will be prorated for benefits commencing other than on January 1.

Member Contributions

3.1% of Base Pay Upon non-vested termination, the Member's contributions may be returned with interest at the Federal Mid-Term Rate compounded annually in effect as of each October 1.

City % of Pay Contributions

6.9% of Base Pay



Section Four:

***Actuarial Assumptions
And Methods***

Actuarial Assumptions

Economic Assumptions

- (i) Interest Rate 6.5% (net of expenses)

- (ii) Salary Increases Salary scale consists of a 4% inflation component and an age-based merit scale that uses 2.5% increases up to age 35, 2.0% assumed increases from age 36 to 40, 1.0% increases from age 41 to 45, and 0.0% assumed increases after age 45.

Demographic Assumptions

- (i) Mortality MP-2015 Generational Blue Collar Employee and Healthy Annuitant Tables (previously RP 2014 Blue Collar Healthy Annuitant Tables)

For disabled mortality, the Healthy Annuitant Mortality Table is set forward five years.

- (ii) Sample Rates of Termination of Employment

Termination rates are based on age. Sample rates are as follows:

<u>Age</u>	<u>Annual Rates of Termination</u>
25	3.98%
30	2.93
40	1.06
50	0.00

- (iii) Disability

Sample annual rates of disability rates are as follows:

<u>Age</u>	<u>Rate</u>
25	0.15%
30	0.20
40	0.50
50	0.80

(iv) Retirement

<u>Age</u>	<u>Percent Retiring</u>
45-49	5%
50-54	10%
Age 55	30%
56-64	20%
Age 65	100%

(v) Marital Status

75% of participants are assumed to be married with males 3 years older than their female spouses.

(vi) Cost of Living Increases

2.0%

(vii) Expenses

Administrative expenses will be paid by the Plan

Assumptions for Actuarial Projections

(i) Normal Cost Growth	4.0% per year
(ii) Tax Contribution Increases	1.5%
(iii) Annual Payroll Growth	4.0%
(iv) Annual Investment Return	6.5%

Experience Study and Assumption Review

Demographic and economic experience studies and assumption reviews are recommended about every 5 years. Periodic studies and reviews help to insure that the assumptions used in the valuation are based on the best information we have available to us.

The last assumption review for this plan was done in May of 2012.

Actuarial Method Used for the Valuation

Normal Cost

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

- ❖ The annual normal costs for each individual active member, payable from date of hire to date of retirement, are sufficient to accumulate the value of the member's benefit at the time of retirement;
- ❖ Each annual normal cost is a constant percentage of the member's year-by-year projected covered pay.
- ❖ In calculating the Normal Cost for purposes of the City's recommended contribution rate, it is assumed that the employees will contribute at a rate of 3.1% of eligible payroll and the City is contributing at a rate of 6.9% of eligible payroll.

Financing of Unfunded Actuarial Accrued Liability

New components of unfunded actuarial liability arise when assumptions or methods change, when the plan is amended, or due to annually-measured actuarial gains or losses. Each new component of unfunded liability is amortized over a fixed period, and as a level percent of pay. (Previously, the entire excess of actuarial accrued liabilities over accrued assets was reamortized annually as a level percent-of-payroll over 20 years.)

Active member payroll is assumed to increase at the base salary increase rate for the purpose of determining the level percent-of-payroll full funding credit.

Actuarial Value of Assets.

Asset gains and losses are recognized over five years. Actuarial Value is not allowed to be less than 80% nor more than 120% of the current year's Market Value. Inasmuch as accumulated DROP balances are not valued as plan liabilities, they are removed from the Actuarial Value so contribution calculations will not be understated.

Uncertainty and risks with respect to the results, assumptions, methods, etc.

The results presented in this report are based upon actuarial assumptions and methods. The assumptions represent the expected experience for the Plan and the methods allocate costs to past and future service. When the actual experience of the Plan is different from what is assumed in the valuation, volatility in the funded status of the Plan and the contribution recommendations can result.



Section Five:
Valuation Data

Summary of Asset Information Submitted for the Valuation

Statement of Assets

As of October 1, 2016, the market value of Pension Plan assets was reported to be \$48,561,193.

Market Value of Assets as of October 1, 2015	\$45,814,800
a. Revenues	
(i) Employer Contributions (Tax levy + City)	683,000
(ii) Employer Contributions (6.9% of payroll)	364,105
(iii) Employee Contributions (3.1% of payroll)	162,914
(iv) Investment Income (Net of plan expenses)	4,542,542
b. Disbursement to Members	
(i) Benefits Paid	(3,006,169)
c. Market Value as of October 1, 2016	48,561,193

The plan's Deferred Retirement Option Program (DROP) has two current participants with accumulated DROP balances of \$57,621 as of the current valuation date. These amounts have not yet been paid from the trust, and are a liability of the plan. The computation of the plan's Actuarial Value of Assets, shown on the following page, is reduced by the amount of the accumulated balances so that recommended contribution amounts are not understated.

Actuarial Value of Assets

(1) Market Value of Assets at end of prior year	45,814,800
(2) Contributions for the year – Employer	1,047,105
Contributions for the year – Employee	162,914
(3) Benefit Payments	(3,006,169)
(4) Expected Investment Return	
On Beginning Value	2,977,962
On Contributions	39,326
On Benefit Payments	(97,700)
Total	2,919,588
(5) Expected Assets at Year-end	46,938,239
(6) Market Value of Assets at Year-end	48,561,193
(7) Excess of Market over Expected Assets	1,622,954
(8) Unrecognized gains / (losses)	
(a) 80% of the year just ended (80% x (7))	1,298,363
(b) 60% of two years prior	(2,074,177)
(c) 40% of three years prior	403,498
(d) 20% of four years prior	404,340
(e) Total unrec. gains / (losses) (sum of (a)–(d))	32,024
(9) Smoothed Asset Value [(6) - (8e), 80-120% of (6)]	48,529,169
(10) DROP Account Balances	57,621
(11) Actuarial Value of Assets (9) - (10)	48,471,548
Rate of Return – Actuarial Value, net of expenses	8.09%
Rate of Return – Market Value, net of expenses	10.11%

Participant Summary**Retirees and Beneficiaries Included in the Valuation**

There were 81 retirees and beneficiaries (including 2 DROP participants) included in the valuation, with annual pensions totaling \$2,552,718. The breakdown by age division is as follows:

Attained Ages	Number	Average Annual Pensions
40-44		
45-49	1	\$35,645
50-54	2	13,388
55-59	15	35,725
60-64	11	32,681
65-69	21	37,509
70-74	11	35,428
75-79	5	35,459
Over 80	15	16,016
Total	81	\$31,515

Pensions Being Paid

Valuation Date October 1	No.	Annual Pensions	% of Active Payroll	Average Pension	Discounted Value of Pensions	
					Total	Average
2008	71	1,728,354	32.5	24,343	21,062,804	296,659
2009	69	1,736,725	29.6	25,170	20,838,394	302,006
2010	69	1,754,053	30.9	25,421	20,666,411	299,513
2011	74	1,939,476	34.8	26,209	23,133,378	312,613
2012	76	2,119,575	42.0	27,979	26,339,864	346,577
2013	77	2,230,123	44.5	28,963	26,395,308	342,796
2014	77	2,241,599	43.0	29,112	26,200,434	340,265
2015	77	2,365,178	46.3	30,717	26,427,421	343,213
2016	81	2,552,718	49.9	31,515	30,693,382	378,931

Vested Terminated Members Included in the Valuation

There were 5 vested terminated members included in the valuation, with annual pensions totaling \$100,686. The breakdown is as follows:

Attained Ages	Number	Average Annual Pensions
35-39		
40-44	2	\$21,944
45-49	3	18,933
50-54		
55-59		
Total	5	\$20,137

Active Members – Age and Service Distribution

Age	Service							Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	Over 30	
20 - 24	4							4
25 - 29	9							9
30 - 34	6	6	3					15
35 - 39	2	4	8					14
40 - 44	1	1	3	4				9
45 - 49		1	2	2	5	1		11
50 - 54	2		2	1	7	5	1	18
55 - 59					2	1	2	5
60 - 64					1	1		2
65+	—	—	—	—	—	—	—	—
Total	24	12	18	7	15	8	3	87

Total Active Participant Information

	2016	2015	2014
Active Members	87	87	86
Valuation Payroll	5,112,351	5,111,644	5,213,425
Average Compensation	58,763	58,755	60,621
Average Age (yrs.)	41.5	41.9	42.1
Average Service (yrs.)	13.1	13.5	13.8

Reconciliation With Prior Year

	Actives	Retirees & Beneficiaries	Disabled	Vested Terminations
October 1, 2015 Participants	87	63	14	6
Corrections				
New Participants	9			
Returned to Active				
Retirements	(4)	5		(1)
Deaths		(1)		
New Beneficiaries				
Benefits Expire				
Terminations				
- Vested				
- Non-Vested				
- Lump-Sums	<u>(5)</u>	<u> </u>	<u> </u>	<u> </u>
October 1, 2016 Participants	87	67	14	5

Participants who have stopped accruing benefits under the DROP are counted as retirees in this presentation.



Section Six:

Accounting Disclosures

The information presented in these schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation Date:	October 1, 2016
Actuarial Cost Method:	Entry Age Normal
Amortization method:	Level percent of payroll, fixed bases are created each year
Amortization period:	20 years
Actuarial assumptions:	
Investment rate of return	6.5%*
Projected salary increases	4.0% base

*The long-term expected rate of return on investments was determined using a building block method in which best-estimate ranges of expected future real rates of return (expected returns, net of investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rate of return by the target asset allocation percentage and by adding expected inflation, 2.5%. Estimates of arithmetic real rates of return for each major asset class included in the Fund's target asset allocation as of September 30, 2016 are summarized below:

Asset Class	Long-Term Expected Target Asset Allocation	Real Rate of Return
Fixed Income	25%	2.0%
Equity Securities	65%	5.5%
Real Estate	10%	3.5%

Membership data is detailed in Section Five of this report.

Funding Progress

Actuarial Valuation as of Oct. 1,	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (b)-(a)	Percent Funded (a)/(b)	Annual Covered Payroll (c)	Unfunded AAL as a Percentage of Covered Payroll ((b-a)/c)
2007	33.663	37.523	3.860	89.7	5.041	76.6
2008	34.000	38.836	4.837	87.5	5.318	91.0
2009	34.040	40.953	6.913	83.1	5.859	118.0
2010	34.636	42.050	7.414	82.4	5.669	131.0
2011	34.605	44.441	9.837	77.9	5.571	177.0
2012	39.322	45.860	6.538	85.7	5.049	129.5
2013	42.131	45.675	3.544	92.2	5.015	70.7
2014	46.377	46.678	0.301	99.4	5.213	5.8
2015	46.574	47.425	0.851	98.2	5.112	16.6
2016	48.471	50.832	2.360	95.4	5.112	46.2

Dollar amounts in millions.

Schedule of Contributions

Year Ended	Actuarially Determined Contribution	Contributions in Relation to the Actuarially Determined Contribution	Contribution Deficiency (Excess)	Covered Employee Payroll	Contributions as a Percentage of Covered Employee Payroll
9/30/2015	1,070,230	1,043,030	27,200	5,213,425	20.01%
9/30/2016	1,011,064	1,047,105	(36,041)	5,111,644	20.48%

Pension Expense for Year Ended September 30, 2016

Service cost	\$ 1,096,000
Interest on the total pension liability	3,056,149
Employee contributions	(162,914)
Projected earnings on pension plan investments	(2,919,588)
Pension plan administrative expense	124,368
Outflows / (inflows) of resources recognized in the current year due to	
Difference between expected and actual experience	(90,587)
Changes of assumptions	200,241
Difference between projected and actual earnings on plan investments	366,801
Pension expense	<u>\$ 1,670,470</u>

Changes in the Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Balances at 9/30/15	<u>\$ 47,424,761</u>	<u>\$ 45,814,800</u>	<u>\$ 1,609,961</u>
Changes for the year			
Service cost	1,096,000		1,096,000
Interest	3,056,149		3,056,149
Difference between expected and actual experience	226,581		226,581
Contributions - employer		1,047,105	(1,047,105)
Contributions - employee		162,914	(162,914)
Net investment income		4,666,911	(4,666,911)
Benefit payments, including refunds	(3,006,169)	(3,006,169)	
Administrative expense		(124,368)	124,368
Changes of Assumptions	2,034,904		2,034,904
Other changes	--	--	--
Net changes	<u>\$ 3,407,465</u>	<u>\$ 2,746,393</u>	<u>\$ 661,072</u>
Balances at 9/30/16	<u>\$ 50,832,226</u>	<u>\$ 48,561,193</u>	<u>\$ 2,271,033</u>

Statement of Outflows and Inflows Arising During the Current Period

1. Difference between expected and actual experience of the TPL (gains) / losses	\$ 226,581
2. Assumption Changes (gains) / losses	2,034,904
3. Recognition period: Average of the expected remaining service lives of all plan participants (in years)	6.764
4. Difference between expected and actual return on plan investments	(\$1,622,954)
5. Outflow (Inflow) of Resources to be recognized in the current pension expense:	
a. for the difference between expected and actual experience of the TPL, (1) / (3)	33,498
b. for assumption changes, (2) / (3)	300,843
c. for the difference between expected and actual return on plan investments, (4) / 5	(324,591)

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

	1% Decrease 5.5%	Current Single Discount Rate Assumption 6.5%	1% Increase 7.5%
Total Pension Liability	\$56,816,006	\$50,832,226	\$45,833,201
Plan Fiduciary Net Position	48,561,193	48,561,193	48,561,193
Net Pension Liability / (Asset)	\$ 8,254,813	\$ 2,271,033	(\$ 2,727,992)

Deferred Outflows and Deferred Inflows of Resources to be Recognized in Future Years

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 193,083	\$ 591,141
Changes in Assumptions	1,734,061	479,265
Net difference between projected and actual earnings on pension plan investments	775,814	--
Total	\$ 2,702,958	\$ 1,070,406

Year	Net Deferred Outflows of Resources
2017	\$ 476,455
2018	476,455
2019	476,456
2020	(214,936)
2021	162,683
Thereafter	255,439
Total	\$ 1,632,552



Section Seven:

Glossary of Terms

Glossary of Terms

Accrued Benefit

The benefit earned by a participant payable in the form of a monthly benefit commencing at normal retirement age.

Actuarial Accrued Liability

The actuarial present value of benefits earned as of the valuation date.

Actuarial Gain or Loss

The difference between the plan's actual experience and expected experience based on the actuarial assumptions used in the valuation.

Actuarial Value of Assets

The value of assets as determined by the actuary for the purpose of the valuation. This may or may not include a method of smoothing investment gains and losses over time.

Amortization

The spreading of liabilities or costs over a period of years. A plan's unfunded actuarial accrued liability is amortized over a period of years.

Entry Age Normal Actuarial Cost Method

An actuarial method for determining the annual normal cost and the actuarial accrued liability of a pension plan. Under this method, the annual normal cost is the level amount that would have to be contributed each year from the time each employee entered employment so that his pension will be fully funded by his assumed retirement age.

Normal Cost

That portion of the actuarial present value of plan benefits and expenses allocated to the valuation year.

Present Value

The value of a benefit payment or series of benefit payments determined as of the valuation date by the application of a particular set of actuarial assumptions. It is the single sum which reflects the time value of money (through discounts for investment yield) and the probabilities of payment (taking into account death, disability, withdrawal and age at retirement).

Unfunded Actuarial Accrued Liability

The excess of the actuarial accrued liability over the actuarial value of assets.

Vested Benefit

A benefit that is not forfeited if the participant leaves employment.