

April 9, 2016

The Board of Trustees
City of Livonia Retiree Health and Disability Benefits Plan
Livonia, Michigan 48154

Dear Board Members:

This report contains the results of an actuarial valuation of the City of Livonia Retiree Health and Disability Benefits Plan.

The date of the valuation was November 30, 2015.

The purpose of the actuarial valuation is to:

- Compute the liabilities associated with post-retirement health and disability benefits likely to be paid on behalf of current retired and active participants covered by the Plan, and
- Compute a pre-funding contribution rate for the City to finance Plan benefits as they accrue.

This valuation has been conducted in accordance with generally accepted actuarial principles and practices. Data concerning active members, retirees, beneficiaries and assets was provided by the City of Livonia. This data has been reviewed for reasonableness, but no attempt has been made to audit such information. The valuation was based on the provisions of the Plan as submitted by the City. This valuation has been prepared under the supervision of a Member of the American Academy of Actuaries who meets the qualification standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

Respectfully submitted,



Denise M. Jones
Senior Consultant



Sandra W. Rodwan
Member, American Academy of Actuaries

***City of Livonia
Retiree Health and Disability
Benefits Plan***

Actuarial Valuation as of November 30, 2015

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Section One:

Valuation Summary



Purpose of Valuation

The purpose of the annual actuarial valuation of the City of Livonia Retiree Health and Disability Benefits Plan as of November 30, 2015 is to:

- ❖ Compute the liabilities associated with benefits likely to be paid on behalf of current retired and active participants,
- ❖ Compute a pre-funding contribution rate to finance the benefits promised by the Plan as they accrue.

Assumptions Used in the Valuation

The liabilities and pre-funding contribution rate are very sensitive to the long-term assumptions used in making the valuation. The assumptions used in making this valuation, summarized in Section Four, are only one reasonable set out of a large number of possibilities. To the extent that actual experience differs from the long-term assumptions, the liabilities and contribution rates will be greater or less than those indicated in this report. The assumptions having the greatest impact are the rate of medical care inflation and the discount rate. A 6.0% annual rate for medical care inflation was assumed for the year following the valuation, 5.5% for the next year and 4.75% thereafter.

Actuarial Accrued Liabilities

The total actuarial accrued liabilities of the Plan as of November 30, 2015, were computed to be \$162,780,382.

Funding Value of Assets

The funding value of assets as of November 30, 2015 was \$91,645,995.

Computed City Contribution Rate

The City’s total contribution for Defined Benefit Plan participants was computed to be 14.53% for General, 18.87% for Police, and 15.22% for Fire.

The City’s total contribution rate for Defined Contribution Plan participants was computed to be 14.92% for General, 21.15% for Police employees and 17.02% for Fire.

Participants

| | Defined Benefit Plan | Defined Contribution Plan | Total |
|------------------------------|-----------------------------|----------------------------------|--------------|
| Active Participants | 116 | 441 | 557 |
| Active Participant Payroll | \$9,070,569 | \$23,256,026 | \$32,326,595 |
| Retired Participants | 504 | 146 | 650 |
| Inactive Vested Participants | 19 | 15 | 34 |

| Payroll | |
|----------------------|--------------|
| Defined Benefit | |
| General | \$2,211,854 |
| Police | 3,835,092 |
| Fire | 3,023,623 |
| | |
| Defined Contribution | |
| General | \$13,666,109 |
| Police | 6,246,326 |
| Fire | 3,343,591 |
| | |
| Total | |
| General | \$15,877,963 |
| Police | 10,081,418 |
| Fire | 6,367,214 |
| Total | \$32,326,595 |



Section Two:

***Actuarial Calculations –
Funding***



Recommended City Contribution Rates for the Fiscal Year Beginning December 1, 2016

The City’s computed contribution rates for the year beginning December 1, 2014 are indicated below.

Unfunded actuarial accrued liability was amortized as a level percent of payroll over 40 years for health insurance and 30 years for disability benefits, as adopted by the Board of Trustees. Both periods are unchanged from last year’s valuation. The amortization payment is added to the normal cost to determine the total recommended contribution.

The contribution rate for health insurance should be applied to the combined Defined Benefit Plan and Defined Contribution Plan payroll. The contribution rate for disability benefits should be applied to the Defined Contribution Plan payroll only.

| Contributions for | City Contributions Expressed as Percents of Payroll | | | | | |
|---|---|------------------|-------------|------------------|-------------|------------------|
| | General | | Police | | Fire | |
| | Disability | Health Insurance | Disability | Health Insurance | Disability | Health Insurance |
| Normal Cost | | | | | | |
| Age & service benefits | 0.00% | 6.29% | 0.00% | 5.08% | 0.00% | 5.71% |
| Disability benefits | 0.87 | 0.23 | 2.89 | 0.64 | 3.14 | 0.83 |
| Pre-retirement survivor benefits | 0.00 | 0.14 | 0.00 | 0.07 | 0.00 | 0.10 |
| Termination benefits | | | | | | |
| Deferred age & service benefits | 0.00 | 0.70 | 0.00 | 0.53 | 0.00 | 0.33 |
| Total Normal Cost | 0.87 | 7.36 | 2.89 | 6.32 | 3.14 | 6.97 |
| Total Amortization Payment | (0.48) | 9.17 | (0.61) | 14.55 | (1.34) | 10.25 |
| Total Contribution Requirement | 0.39 | 16.53 | 2.28 | 20.87 | 1.80 | 17.22 |
| Member portion | <u>0.00</u> | <u>2.00</u> | <u>0.00</u> | <u>2.00</u> | <u>0.00</u> | <u>2.00</u> |
| City portion | 0.39%# | 14.53% | 2.28%# | 18.87% | 1.80%# | 15.22 |
| City portion-Combined Disability Allowance and Health Insurance | | | | | | |
| Defined Benefit Plan Participants | | 14.53% | | 18.87% | | 15.22% |
| Defined Contribution Plan Participants | | 14.92% | | 21.15% | | 17.02% |
| Weighted Average – All Participants | | 14.87% | | 20.28% | | 16.17% |

Applies only to Defined Contribution Plan participants who participate in the Retiree Health Savings Plan (RHSP).

Actuarial Accrued Liabilities

The actuarial accrued liabilities as of November 30, 2015 were computed to be the following:

| | <u>General</u> | <u>Police</u> | <u>Fire</u> | <u>Totals</u> |
|---|-------------------|-------------------|-------------------|--------------------|
| Active and vested inactive participants | \$29,716,298 | \$17,161,790 | \$9,906,111 | \$56,784,199 |
| Retirees and beneficiaries | <u>46,136,282</u> | <u>40,586,490</u> | <u>19,273,411</u> | <u>105,996,183</u> |
| Total | 75,852,580 | 57,748,280 | 29,179,522 | 162,780,382 |
| Less: Valuation Assets | <u>46,990,832</u> | <u>28,095,335</u> | <u>16,559,828</u> | <u>91,645,995</u> |
| Unfunded Actuarial Accrued Liabilities | \$28,861,748 | \$29,652,945 | \$12,619,694 | \$71,134,387 |

(\$ amounts +000)

| Valuation Date November 30 | Valuation Value of Assets | Actuarial Accrued Liability | Percent Funded | Unfunded AAL | Annual Covered Payroll | UAAL As a % Of Covered Payroll |
|----------------------------------|---------------------------------|-----------------------------------|-------------------|-----------------|------------------------------|---|
| 2003 | \$30,475 | \$104,386 | 29.2% | \$73,911 | \$34,084 | 216.8% |
| 2004 | 37,690 | 110,156 | 34.2 | 72,465 | 33,355 | 217.3 |
| 2005 | 41,987 | 122,019 | 34.4 | 80,032 | 33,312 | 240.3 |
| 2006 | 47,673 | 122,267 | 39.0 | 74,594 | 34,373 | 217.0 |
| 2007 | 52,802 | 115,685 | 45.6 | 62,883 | 35,354 | 177.9 |
| 2008 | 55,361 | 122,117 | 45.3 | 66,756 | 37,403 | 178.5 |
| 2009 | 57,845 | 137,822 | 42.0 | 79,978 | 36,981 | 216.3 |
| 2010 | 60,361 | 153,223 | 39.4 | 92,862 | 34,062 | 272.6 |
| 2011 | 62,491 | 156,260 | 40.0 | 93,769 | 32,871 | 285.3 |
| 2012 | 65,667 | 169,363 | 38.8 | 103,697 | 30,964 | 334.9 |
| 2013 | 74,550 | 160,552 | 46.4 | 86,002 | 30,560 | 281.4 |
| 2014 | 83,134 | 159,855 | 52.0 | 76,721 | 31,408 | 244.3 |
| 2015 | 91,646 | 162,780 | 56.3 | 71,134 | 32,327 | 220.0 |

**City Contributions Expressed as Percents of Payroll
Weighted Average of All Participants
Comparative Schedule**

| Valuation Date November 30, | General | Police | Fire |
|--|----------------|---------------|-------------|
| 2010 | 22.25% | 21.99% | 21.70% |
| 2011 | 21.08 | 21.02 | 19.59 |
| 2012 | 21.41 | 26.06 | 21.26 |
| 2013 | 19.75 | 21.69 | 18.00 |
| 2014 | 16.88 | 20.79 | 16.89 |
| 2015 | 14.87 | 20.28 | 16.17 |

Comments

Comment 1: The annual rates of medical care inflation were assumed to be 6.0% next year, 5.5% the following year and 4.75% thereafter. These rates include the expected savings from cost savings programs for participants who retire in the future. Higher actual and assumed increases in the medical care inflation rates would result in higher funding requirements.

Comment 2: The funding value of assets spreads the difference between the actual and assumed rate of return over 5 years. As of November 30, 2015, the funding value was \$91,645,995 and the market value was \$92,281,415. The recognized rate of return on the funding value was 9.7% versus the 8.0% assumed.

Comment 3: The Governmental Accounting Standards Board Statements No. 43 and 45 relate to financial reporting for Postemployment Benefit Plans Other Than Pension Plans (OPEB). One of the items to be reported in the financial statements is the annual required contribution (ARC) of the employer. The contribution includes the normal cost and amortization of unfunded actuarial accrued liability. The maximum amortization period is 30 years.

The amortization periods adopted by the Board of Trustees for the funding purposes of this Plan are 30 years for disability benefits and 40 years for health insurance benefits. The 40 year amortization period produces a contribution that is less than the ARC, and hence would result in a net OPEB obligation in the financial reports.

The table on page 7 shows the computed City contributions assuming a 30 year amortization period is used for health benefits as well as disability benefits.

| City Contributions Expressed as Percents of Payroll Based on 30 Year Amortization for Health and Disability | | | | | | |
|--|-------------------|-------------------------|-------------------|-------------------------|-------------------|-------------------------|
| | General | | Police | | Fire | |
| Contributions for | Disability | Health Insurance | Disability | Health Insurance | Disability | Health Insurance |
| Normal Cost | | | | | | |
| Age & service benefits | 0.00% | 6.29% | 0.00% | 5.08% | 0.00% | 5.71% |
| Disability benefits | 0.87 | 0.23 | 2.89 | 0.64 | 3.14 | 0.83 |
| Pre-retirement survivor benefits | 0.00 | 0.14 | 0.00 | 0.07 | 0.00 | 0.10 |
| Termination benefits | | | | | | |
| Deferred age & service benefits | 0.00 | 0.70 | 0.00 | 0.53 | 0.00 | 0.33 |
| Total Normal Cost | 0.87 | 7.36 | 2.89 | 6.32 | 3.14 | 6.97 |
| Total Amortization Payment | (0.48) | 10.55 | (0.61) | 16.73 | (1.34) | 11.79 |
| Total Contribution Requirement | 0.39 | 17.91 | 2.28 | 23.05 | 1.80 | 18.76 |
| Member portion | <u>0.00</u> | <u>2.00</u> | <u>0.00</u> | <u>2.00</u> | <u>0.00</u> | <u>2.00</u> |
| City portion | 0.39%# | 15.91% | 2.28%# | 21.05% | 1.80%# | 16.76 |
| City portion-Combined Disability Allowance and Health Insurance | | | | | | |
| Defined Benefit Plan Participants | | 15.91% | | 21.05% | | 16.76% |
| Defined Contribution Plan Participants | | 16.30% | | 23.33% | | 18.56% |
| Weighted Average – All Participants | | 16.25% | | 22.46% | | 17.71% |

Applies only to Defined Contribution Plan participants who participate in the Retiree Health Savings Plan (RHSP).



Section Three:
Benefit Provisions



Benefit Provision Summary

Participation Requirements

Participants include all persons in the classified and unclassified service of the City who perform services on a permanent part-time or full-time basis. New hires effective 9/8/2011 for AFSCME, 11/2/2011 for LPOA and 12/1/2012 for LLSA, Command, LFFU and District Court participate in a Retiree Health Savings Plan and will not be eligible for retiree health benefits from the VEBA.

Retiree Health Benefits – Defined Benefit Plan Members (Including Members who transferred from the DB Plan to the DC Plan)

Eligibility

General Members: 30 years of service regardless of age, or age 55 with 10 years of service. Permanent part-time General members need only 10 calendar years of membership instead of 10 years of credited service.

Police Officers,
Sergeants &
Lieutenants 25 years of service regardless of age, or age 52 with 10 years of service. (Age 50 with 10 years but less than 25 years of service early retirement).

Police Chief,
Deputy Chief
and Captains 27 years of service regardless of age, or age 50 with 10 years of service. (Age 48 with 10 years but less than 27 years of service early retirement).

Fire Members: 27 years of service regardless of age, or age 52 with 10 years of service (age 50 with 10 years of service early retirement).

All Members: Receipt of disability retirement benefit or death in service survivor benefit.

Benefits 100% City-paid health insurance coverage is provided to all retirees. Spouse coverage is provided while the retiree is alive. Spouse coverage continues after the retiree's death, until attainment of age 65 (or until death if the spouse is receiving a joint and survivor pension). Pursuant to the National Healthcare Reform, effective January 1, 2011, dependent children under age 26 may be covered under the City's Group Health Plan.

Member Contributions

General, Police, and Fire members contribute 2% of pay.

Retiree Health Benefits – Defined Contribution Plan Members

Eligibility:

| | |
|---|--|
| General Members: | Age 55 with 10 years of service. |
| Police Officers, Sergeants & Lieutenants | 25 years of service regardless of age, or age 52 with 10 years of service. |
| Police Chief, Deputy Chief & Captains | 27 years of service regardless of age, or age 50 with 10 years of service. |
| Fire Members: | 27 years of service regardless of age, or age 52 with 10 years of service. |
| All members: | Receipt of disability retirement benefit. |

Benefits: A percentage of the premium is paid by the Plan to all retirees who satisfy the above eligibility requirements. Spouse coverage is provided while the retiree is alive, and for life after the retiree’s death. The amount of the Plan benefit is described below:

| | <u>Age Service Requirement</u> | <u>Percentage of Premium Paid By Plan</u> |
|------------------|--------------------------------|---|
| General Members: | 55 & 10 | 50% |
| | 55 & 15 | 60 |
| | 55 & 20 | 75 |
| | 55 & 25 | 100 |

| | <u>Age Service Requirement</u> | <u>Percentage of Premium Paid By Plan</u> |
|---|--------------------------------|---|
| Police Officers, Sergeants & Lieutenants | 52 & 10 | 50% |
| | 52 & 15 | 60 |
| | 52 & 20 | 75 |
| | 25 years of service | 100 |

| | <u>Age Service Requirement</u> | <u>Percentage of Premium Paid By Plan</u> |
|--|-----------------------------------|---|
| Police Chief, Deputy Chief & Captains | 50 & 10 | 50% |
| | 50 & 15 | 60 |
| | 50 & 20 | 75 |
| | 50 & 25 or 27 years of service | 100 |

| | <u>Age Service Requirement</u> | <u>Percentage of Premium Paid By Plan</u> |
|---------------|-----------------------------------|---|
| Fire Members: | 52 & 10 | 50% |
| | 52 & 15 | 60 |
| | 52 & 20 | 75 |
| | 52 & 25 or 27 years of service | 100 |

Member Contributions

General members (non-Court), Police and Fire members contribute 2% of pay.

Disability Retirement – Defined Contribution Plan Members Only

Eligibility:

Termination of City employment by reason of total and permanent disability after completing at least 10 full years of credited service. The 10 year service requirement is waived for duty disability.

Amount:

- (1) Disability incurred after age 55: A monthly pension computed in the same manner as Normal Pension (see below) under the City of Livonia Employees Retirement System (Defined Benefit Plan) but based on credited service and Average Final Compensation (AFC) at the time of termination.
- (2) Disability incurred before age 55: A monthly pension computed in the same manner as a Normal Pension under the Defined Benefit Plan but based on AFC at time of termination and the credited service the member would have completed had the member continued in service until age 55. The minimum duty disability pension payable to age 55 is 75% of AFC. Worker’s compensation benefits are offset. For non-duty disability cases, the following limitations apply:

| <u>Actual Years of Service</u> | <u>Maximum total Years Used to Compute Benefit</u> | <u>Maximum Benefit As a Percentage of AFC</u> |
|--------------------------------|--|---|
| 10-15 | 20 | 50.0% |
| 16-20 | 25 | 62.5 |
| over 20 | 30 – or actual service if greater | 75.0 |

The Normal Pension under the Defined Benefit Plan is summarized as follows:

| | |
|---|--|
| General Members: | 2.5% of the member's AFC times years of credited service (maximum is 75% of AFC). |
| Police members (Excluding Administrators: | 2.8% of the member's AFC times the first 24 years of credited service, plus 7.8% of AFC for the 25 th year of credited service (maximum is 75% of AFC). |
| Police Administrators: | 2.8% of the member's AFC times years of credited service (maximum is 75% of AFC). |
| Fire Members: | 2.8% of the member's AFC times years of credited service (maximum is 75% of AFC). |

Average final compensation (AFC) is the average of the highest annual compensations received during any 3 years of service contained within the 10 years of service immediately preceding retirement, including base salary, longevity, shift differential, paid time off, holiday pay, and payment of accumulated vacation time.

An additional cost-of-living allowance is paid to disability retirees. The monthly amount is determined as follows:

- (1) For disability retirees (except as noted on the following page):
 - (a) \$20 per month for a one-year period commencing one year after retirement.
 - (b) \$40 per month for a one-year period commencing two years after retirement.
 - (c) \$60 per month for a one-year period commencing three years after retirement.
 - (d) \$80 per month for a one-year period commencing four years after retirement.
 - (e) \$100 per month for a one-year period commencing five years after retirement.
 - (f) \$120 per month commencing six years after retirement.

(2) For General disability retirees who retire on or after December 1, 2007:

- (a) \$25 per month for one year period commencing one year after retirement.
- (b) \$50 per month for one year period commencing two years after retirement.
- (c) \$75 per month for one year period commencing three years after retirement.
- (d) \$100 per month for one year period commencing four years after retirement.
- (e) \$125 per month for one year period commencing five years after retirement.
- (f) \$150 per month for one year period commencing six years after retirement.
- (g) \$175 per month for one year period commencing seven years after retirement.
- (h) \$200 per month for one year period commencing eight years after retirement.
- (i) \$225 per month for one year period commencing nine years after retirement.
- (j) \$250 per month commencing ten years after retirement.

(3) For Fire disability retirees who retire on or after March 20, 2008 and before December 1, 2008:

- (a) \$20 per month for one year period commencing one year after retirement.
- (b) \$40 per month for one year period commencing two years after retirement.
- (c) \$60 per month for one year period commencing three years after retirement.
- (d) \$80 per month for one year period commencing four years after retirement.
- (e) \$100 per month for one year period commencing five years after retirement.
- (f) \$120 per month for one year period commencing six years after retirement.
- (g) \$140 per month for one year period commencing seven years after retirement.
- (h) \$160 per month for one year period commencing eight years after retirement.
- (i) \$180 per month for one year period commencing nine years after retirement.
- (j) \$200 per month commencing ten years after retirement

(4) For Police and Fire disability retirees who retire on or after December 1, 2008:

- a) \$25 per month for one year period commencing one year after retirement.
- b) \$50 per month for one year period commencing two years after retirement.
- c) \$75 per month for one year period commencing three years after retirement.
- d) \$100 per month for one year period commencing four years after retirement.
- e) \$125 per month for one year period commencing five years after retirement.
- f) \$150 per month for one year period commencing six years after retirement.
- g) \$175 per month for one year period commencing seven years after retirement.
- h) \$200 per month for one year period commencing eight years after retirement.
- i) \$225 per month for one year period commencing nine years after retirement.
- j) \$250 per month commencing ten years after retirement

Employee Contributions:

None



Section Four:

***Actuarial Assumptions
And Methods***



Demographic Assumptions

(i) Mortality

RP 2000 Combined Healthy
Annuitant Mortality Table,
projected to 2014

| Sample Ages | Future Life Expectancy (Years) | |
|----------------|-----------------------------------|-------|
| | Men | Women |
| 55 | 27.5 | 29.6 |
| 60 | 23.0 | 25.1 |
| 65 | 18.8 | 20.8 |
| 70 | 14.9 | 16.9 |
| 75 | 11.3 | 13.3 |
| 80 | 8.3 | 10.1 |

(ii) Rates of Disability

| Sample Ages | Percent Becoming Disabled Within Next Year | |
|----------------|---|-------------|
| | General | Police-Fire |
| 20 | 0.02% | 0.07% |
| 25 | 0.04 | 0.12 |
| 30 | 0.07 | 0.24 |
| 35 | 0.11 | 0.40 |
| 40 | 0.16 | 0.55 |
| 45 | 0.20 | 0.71 |
| 50 | 0.25 | 0.87 |
| 55 | 0.30 | 1.03 |

(iii) Termination of Employment

Defined Benefit Participants

| Sample Ages | Years of Service | % of Active Members Separating Within Next Year | | |
|-------------|------------------|---|--------|-------|
| | | General | Police | Fire |
| 25 | | 4.00% | 1.62% | 1.62% |
| 30 | | 3.50 | 1.40 | 1.40 |
| 35 | | 3.25 | 0.83 | 0.83 |
| 40 | | 2.00 | 0.32 | 0.32 |
| 45 | | 1.25 | 0.18 | 0.18 |
| 50 | | 1.25 | 0.18 | 0.18 |
| 55 | | 0.75 | 0.18 | 0.18 |
| 60 | | 0.50 | 0.18 | 0.18 |

Defined Contribution Participants

| Sample Ages | Years of Service | % of Active Members Separating Within Next Year | | |
|-------------|------------------|---|--------|-------|
| | | General | Police | Fire |
| All | 0 | 9.00% | 5.00% | 9.00% |
| | 1 | 8.00 | 4.50 | 7.00 |
| | 2 | 7.50 | 4.00 | 6.00 |
| | 3 | 7.50 | 3.50 | 4.00 |
| | 4 | 4.00 | 3.50 | 3.00 |
| 25 | 5 & Over | 4.00 | 3.00 | 3.00 |
| 30 | | 3.00 | 2.50 | 2.00 |
| 35 | | 2.50 | 2.00 | 1.00 |
| 40 | | 1.50 | 1.40 | 0.50 |
| 45 | | 1.00 | 0.80 | 0.20 |
| 50 | | 0.50 | 0.50 | 0.20 |
| 55 | | 0.50 | 0.50 | 0.20 |
| 60 | | 0.50 | 0.50 | 0.20 |

(iv) Retirement Rates

**Percent of Active Defined Benefit Plan Members Retiring within Year
Following Attainment of Indicated Retirement Age or Service**

| Retirement Ages | Age Based | | | Service Based | | |
|--------------------|-----------|--------|------|---------------|--------|------|
| | General | Police | Fire | Service | Police | Fire |
| | | | | 25 | 75% | |
| | | | | 26 | 25 | |
| | | | | 27 | 25 | 40% |
| | | | | 28 | 25 | 40 |
| | | | | | | |
| 45-50 | 70% | | - | 29 | 25 | 40 |
| 51 | 70 | | - | 30 & up | 100 | 100 |
| 52 | 70 | 10% | 35% | | | |
| 53 | 70 | 10 | 20 | | | |
| 54 | 70 | 10 | 20 | | | |
| | | | | | | |
| 55 | 45 | 10 | 10 | | | |
| 56 | 30 | 10 | 10 | | | |
| 57 | 25 | 10 | 10 | | | |
| 58 | 25 | 10 | 10 | | | |
| 59 | 30 | 10 | 10 | | | |
| | | | | | | |
| 60 | 25 | 100 | 100 | | | |
| 61 | 25 | 100 | 100 | | | |
| 62 | 20 | 100 | 100 | | | |
| 63 | 20 | 100 | 100 | | | |
| 64 | 20 | 100 | 100 | | | |
| | | | | | | |
| 65 | 20 | 100 | 100 | | | |
| 66 | 20 | 100 | 100 | | | |
| 67 | 20 | 100 | 100 | | | |
| 68 | 20 | 100 | 100 | | | |
| 69 & Up | 100 | 100 | 100 | | | |

**Percent of Active Defined Contribution Plan Members Retiring within Year
Following Attainment of Indicated Retirement Age or Service**

| Retirement Ages | Age Based | | | Service Based | | |
|--------------------|-----------|--------|------|---------------|--------|------|
| | General | Police | Fire | Service | Police | Fire |
| 52 | | 10% | 10% | | | |
| 53 | | 8 | 8 | | | |
| 54 | | 8 | 8 | | | |
| | | | | | | |
| 55 | 25% | 8 | 8 | 25 | 50% | |
| 56 | 20 | 8 | 8 | 26 | 20 | 20% |
| 57 | 15 | 8 | 5 | 27 | 20 | 20 |
| 58 | 15 | 9 | 8 | 28 | 20 | 20 |
| 59 | 10 | 9 | 8 | 29 | 100 | 100 |
| | | | | | | |
| 60 | 10 | 100 | 100 | 30& Up | | |
| 61 | 25 | 100 | 100 | | | |
| 62 | 40 | 100 | 100 | | | |
| 63 | 30 | 100 | 100 | | | |
| 64 | 30 | 100 | 100 | | | |
| | | | | | | |
| 65 | 50 | 100 | 100 | | | |
| 66 | 50 | 100 | 100 | | | |
| 67 | 50 | 100 | 100 | | | |
| 68 | 50 | 100 | 100 | | | |
| 69 & Up | 100 | 100 | 100 | | | |

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 participant, payable from date of hire to date of retirement, are sufficient to accumulate the value of the participant's benefit at the time of retirement;
- ❖ Each annual normal cost is a constant percentage of the participant's year-by-year projected covered pay.

Financing of Unfunded Actuarial Accrued Liability. Unfunded actuarial accrued liability was amortized as a level percent of payroll over 40 years for health insurance benefits and over 30 years for disability benefits.



Section Five:
Valuation Data



Summary of Asset Information Submitted for the Valuation

Statement of Assets

As of November 30, 2015, the net market value of Plan assets was reported to be \$92,281,415.

Revenues and Expenses for the Year Ended November 30, 2015:

| | |
|---|----------------|
| a. Revenues | |
| (i) Member Contributions | \$ 538,593 |
| (ii) Employer Contributions | 5,361,926 |
| (iii) Investment Income (Net of Expenses) | 1,431,842 |
| (iv) Other income | <u>0</u> |
| (v) Total Income | 7,332,361 |
| b. Expenses | |
| (i) Retirement benefits | 143,807 |
| (ii) Post Retirement Health Benefits | 5,345,164 |
| (iii) Administrative Expenses | <u>290,677</u> |
| (iv) Total Expenses | 5,779,647 |

Investment Allocation

The reported asset allocation at market value was as follows:

| | |
|--|----------------|
| a. Cash and Short Term | |
| (i) Cash (incl. Checking/Savings Accounts) | \$ 0 |
| (ii) Accrued Interest/Dividends | 183,993 |
| (iii) Short Term Investments | 1,220,994 |
| (iv) Receivables | 680,461 |
| b. Fixed Income | 30,421,802 |
| c. Equities | 60,110,659 |
| d. Other | 250,797 |
| e. Less accounts payable | <u>587,291</u> |
| f. Net Market Value of Assets -- November 30, 2015 | \$92,281,415 |

Funding Value of Assets

| | <u>2014</u> | <u>2015</u> |
|---|--------------------|--------------------|
| A. Funding Value Beginning of Year | \$74,550,464 | \$83,134,248 |
| B. Market Value End of Year | 90,728,701 | 92,281,415 |
| C. Market Value Beginning of Year | 83,226,134 | 90,728,701 |
| D. Non-Investment Income Net Cash Flow | (172,953) | 397,011 |
| E. Investment Income | | |
| E1. Market Total B-C-D | 7,675,520 | 1,155,703 |
| E2. Amount for Immediate Recognition (8.0%) | 5,957,119 | 6,666,620 |
| E3. Amount for Phased-In Recognition E1 – E2 | 1,718,401 | (5,510,917) |
| F. Phased-In Recognition of Investment Income | | |
| F1. From the Current Year 0.20 x E3 | 343,680 | (1,102,183) |
| F2. First Prior Year | 1,750,202 | 343,680 |
| F3. Second Prior Year | 763,203 | 1,750,202 |
| F4. Third Prior Year | (306,787) | 763,203 |
| F5. Fourth Prior Year | 249,320 | (306,787) |
| F6. Total Recognized Investment Gain | 2,799,618 | 1,448,115 |
| G. Funding Value End of Year A + D + E2 + F6 | \$83,134,248 | \$91,645,995 |
| H. Market Rate of Return | 9.2% | 1.3% |
| I. Recognized Rate of Return | 11.8% | 9.7% |

Participant Summary

Retirees and Beneficiaries

As of November 30, 2015, there were 650 retirees included in the valuation.

| | Defined Benefit Plan | Defined Contribution Plan | Total |
|--------|-----------------------------|----------------------------------|--------------|
| Number | 504 | 146 | 650 |

All Retirees and Beneficiaries - November 30, 2015

| Attained Age | General | Police | Fire | Totals |
|-------------------------|----------------|---------------|-------------|---------------|
| 40-44 | 1 | | | 1 |
| 45-49 | | 14 | | 14 |
| 50-54 | 3 | 33 | 3 | 39 |
| 55-59 | 34 | 28 | 11 | 73 |
| 60-64 | 49 | 17 | 18 | 84 |
| 65-69 | 84 | 19 | 24 | 127 |
| 70-74 | 56 | 26 | 19 | 101 |
| 75-79 | 43 | 21 | 13 | 77 |
| 80-84 | 46 | 8 | 15 | 69 |
| 85-89 | 26 | 6 | 6 | 38 |
| 90-94 | 16 | 3 | 4 | 23 |
| 95-99 | 4 | | | 4 |
| Totals | 362 | 175 | 113 | 650 |

As of November 30, 2015, there were 34 inactive vested participants.

| | Defined Benefit Plan | Defined Contribution Plan | Total |
|--------|-----------------------------|----------------------------------|--------------|
| Number | 19 | 15 | 34 |

**All Inactive Vested Participants -
November 30, 2015**

| Attained Age | General | Police | Fire | Totals |
|-------------------------|----------------|---------------|-------------|---------------|
| 40-44 | 1 | 1 | | 2 |
| 45-49 | 7 | 4 | 1 | 12 |
| 50-54 | 12 | 2 | | 14 |
| 55-59 | 3 | | | 3 |
| 60-64 | | 1 | | 1 |
| 75-79 | | 1 | | 1 |
| 95-99 | 1 | | | 1 |
| Totals | 24 | 9 | 1 | 34 |

Active Participants

As of November 30, 2015, there were 557 active participants.

| | Defined Benefit Plan | Defined Contribution Plan | Total |
|----------|-----------------------------|----------------------------------|--------------|
| Number | 116 | 441 | 557 |
| Payroll | \$9,070,569 | \$23,256,026 | \$32,326,595 |
| Averages | | | |
| Age | 49.6 | 45.5 | 46.6 |
| Service | 23.2 | 10.3 | 13.1 |
| Salary | \$78,195 | \$52,735 | \$58,037 |

**Defined Benefit Plan Active Members - November 30, 2015
Age and Service Distribution**

| Attained Age | Service | | | | Totals | |
|---------------------|----------------|--------------|--------------|--------------|---------------|--------------------|
| | 15-19 | 20-24 | 25-29 | 30-34 | No. | Payroll |
| 40-44 | 14 | 11 | | | 25 | \$2,078,386 |
| 45-49 | 8 | 22 | 8 | | 38 | 3,087,953 |
| 50-54 | 5 | 12 | 19 | 2 | 38 | 2,826,071 |
| 55-59 | | 1 | 9 | | 10 | 774,536 |
| 60-64 | 1 | 2 | | | 3 | 188,488 |
| 65-69 | | 1 | 1 | | 2 | 115,135 |
| Total | 28 | 49 | 37 | 2 | 116 | \$9,070,569 |

Group Averages:

Age: 49.6 years
 Service: 23.2 years
 Annual Pay: \$78,195

Defined Contribution Plan Active Members - November 30, 2015
Age and Service Distribution

| Attained Age | Service | | | | | | | Totals | |
|-----------------|------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|---------------------|
| | 0-4 | 5-9 | 10-14 | 15-19 | 20-24 | 25-29 | Over 30 | No. | Payroll |
| 20-24 | 23 | | | | | | | 23 | \$747,202 |
| 25-29 | 53 | 5 | | | | | | 58 | 2,835,867 |
| 30-24 | 15 | 20 | 2 | | | | | 37 | 2,023,739 |
| 35-39 | 13 | 7 | 14 | 7 | | | | 41 | 2,374,962 |
| 40-44 | 14 | 5 | 8 | 15 | 1 | | | 43 | 2,434,559 |
| 45-49 | 12 | 12 | 8 | 11 | 2 | 4 | | 49 | 2,702,454 |
| 50-54 | 11 | 12 | 6 | 12 | 2 | 7 | 2 | 52 | 2,765,814 |
| 55-59 | 14 | 21 | 14 | 15 | 5 | 6 | 9 | 84 | 4,580,780 |
| 60-64 | 6 | 7 | 7 | 4 | 2 | 3 | 2 | 31 | 1,512,528 |
| 65-69 | 1 | 2 | 1 | 7 | 6 | | 1 | 18 | 1,008,480 |
| 70-74 | 1 | | | 1 | 1 | | 1 | 4 | 220,503 |
| 75-79 | | 1 | | | | | | 1 | 49,138 |
| Total | 163 | 92 | 60 | 72 | 19 | 20 | 15 | 441 | \$23,256,026 |

Group Averages:

Age: 45.5 years
 Service: 10.3 years
 Annual Pay: \$52,735