AUS'IN POLICE RETIREMENT SYSTEM

ACTUARIAL VALUATION
AS OF DECEMBER 31, 2014
(Updated August 31, 2015)

August 31, 2015
Mr. Sam Jordan, CEO
Austin Police Retirement System
2520 South IH 35, Suite 100
Austin, TX 78704

## Re: Austin Police Retirement System

Dear Mr. Jordan:
We are pleased to present to the Board this report of the annual actuarial valuation of the Austin Police Retirement System. 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(s).

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 applicable laws and regulations issued to date at the state and federal level. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience.

In conducting the valuation, we have relied on personncl, plan design, financial reports, and asset information supplied by the System, 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 reasonablencss. 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 hercin. 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 Austin, nor does anyone at Foster \& Foster Inc. act as a member of the Board of Trustees of the Austin Police Retirement System. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

If there are any questions, concems, or comments about any of the items contained in this report, please contact me at 239-433-5500.

Respectfully submitted,

Foster \& Foster Inc.

By:


Bradley R. Heihrichs, FSA, EA, MAAA
Enrolled Actlary \#14-6901

## BRH//ke

Enclosures

## TABLE OF CONTENTS

Section Title Pages
I Introduction
a. Summary of Report ..... 5
b. Changes Since Prior Report ..... 7
c. Comparative Summary of Principal Valuation Results ..... 8
II Valuation Information
a. Gain/Loss Analysis ..... 12
b. Actuarial Assumptions and Methods ..... 13
c. Valuation Notes ..... 19
III Trust Fund ..... 20
IV Member Statistics
a. Valuation Participant Reconciliation ..... 24
b. Statistical Data ..... 25
c. Age and Service Distribution ..... 26
V Summary of Benefit Provisions ..... 27
V1 Governmental Accounting Standards ..... 30
Board Statements

## SUMMARY OF REPORT

The updated annual actuarial valuation of the Austin Police Retirement System, performed as of December 31, 2014, has been completed and the results are presented in this Report.

The pension costs, compared with those developed in the December 31, 2013 actuarial valuation report, are as follows:

| Valuation Date | New Benefits New Assums 12/31/2014 | Old Benefits Old Assums 12/31/2014 | Old Benefits Old Assums 12/31/2013 |
| :---: | :---: | :---: | :---: |
| Normal Cost |  |  |  |
| \% of Payroll Under Assumed Ret Age. | 21.605\% | 22.055\% | 21.775\% |
| Expected Member Contributions |  |  |  |
| \% of Total Annual Payroll | 13.000\% | 13.000\% | 13.000\% |
| City Normal Cost Rate |  |  |  |
| \% of Total Annual Payroll | 8.605\% | 9.055\% | 8.775\% |
| Funding Period 'To Amortize UAAL (expressed in number of years) | 28.6 | 31.1 | 28,9 |

As can be seen above, the funding period required to amortize the Unfunded Actuarial Accrued Liability initially increased from 28.9 to 31.1 years since the prior valuation. This increase is the result of net unfavorable actuarial experience during the past year. The principal components of unfavorable experience resulted from a $6.5 \%$ investment return (Actuarial Asset Basis) that fell short of the $8.0 \%$ assumption and unfavorable retirement experience. These actuarial losses were partially offset by average increases in compensation that were lower than the assumed rate.

In addition, the Board of Trustees approved a number of benefit and actuarial assumption changes throughout the past year, as discussed on page 7. As shown, this resulted in a 2.5 year reduction in the required funding period. The specific details of the impact associated with implementing these changes are displayed in the comparative summary section of this report.

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:


By:


## CHANGES SINCE PRIOR REPORT

## 1. Benefit Provisions

There have been a number of changes in benefits since the prior valuation, as detailed below.

- Effective February 18, 2015, eliminate the opportunity to purchase permissive service in conjunction with utilizing the Forward or Retro-DROP.
- Effective February 18, 2015, permissive service credit factors shall be determined based on an interest rate that is 50 basis points lower than the valuation assumption and generational mortality.
- Effective April 1, 2015, eliminate Retro-DROP for members with less than 23 years of APRS service.
- Effective August 1, 2015, the Forward DROP interest rate will be set annually in the same manner as the PROP interest rate, except for those with 23 years of APRS service as of July 31,2015 who will not be affected.
- New hires beginning February 1, 2016 will be required to pay the full actuarial cost for purchase of military service. All others will continue to pay $25 \%$ of the actuarial cost, which will be based on an interest rate that is 50 basis points lower than the valuation assumption and generational mortality.


## 2. Actuarial Assumptions/Methods

As approved by the Board of Trustees, there have been multiple changes to the actuarial assumptions since the prior valuation, as detailed below.

- The investment return assumption has been decreased from $8.00 \%$ to $7.90 \%$ per year compounded annually, net of all expenses.
- The expected increase in salary due to general wage increases has been lowered from $3.75 \%$ to $3.50 \%$ per year.
- For members that enter the system prior to age 33, the retirement rates have been increased by $25.0 \%$ above their current level. Additionally, some slight modifications have been made to the retirement rates due to anticipated future PRP usage (as described in our April 2015 analysis).
- The annual assumed interest rate credited to PROP accounts has been decreased from $4.00 \%$ to $2.25 \%$ per year.
- The disability rates have been reduced in half.


## COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS <br> (Exclusive of Retiree Death Benefit Fund)

Valuation Date
A. Participant Data
Actives
Service Retirees + DROP
Beneficiaries
QDRO
Disability Retirees
Terminated Vested
Total
Total Annual Payroll
Payroll Under Assumed Ret. Age

Annual Rate of Payments to:
Service Retirees + DROP
Beneficiaries
QDRO
Disability Retirees
Terminated Vested
B. Assets

## Actuarial Value <br> Market Value

C. Liabilities

Present Value of Benefits
Active Members
Retirement Benefits
Vested Benefits
Death Benefits
Disability Benefits
Refund of Contributions
Service Retirees + DROP
Beneffciaries
QDRO
Disability Retirees
Terminated Vested

Total

| New Benefits | Old Benefits | Old Benefits |
| ---: | ---: | ---: |
| New Assums | Old Assums | Old Assums |
| $12 / 31 / 2014$ | $\underline{12 / 31 / 2014}$ | $\underline{12 / 31 / 2013}$ |


| 1,777 | 1,777 | 1,732 |
| ---: | ---: | ---: |
| 645 | 645 | 606 |
| 48 | 48 | 46 |
| 31 | 31 | 27 |
| 3 | 3 | 4 |
| 27 | 27 | 26 |
|  | 2,531 | 2,441 |
| $152,544,227$ | $152,544,227$ | $147,138,718$ |
| $150,574,998$ | $150,574,998$ | $145,794,226$ |


| $40,547,932$ | $40,547,932$ | $38,015,613$ |
| ---: | ---: | ---: |
| $2,058,727$ | $2,058,727$ | $1,963,282$ |
| 449,896 | 449,896 | 404,654 |
| 103,149 | 103,149 | 136,509 |
| 782,938 | 782,938 | 690,455 |

```
653,192,335
```

638,019,067
653,192,335
604,841,897
594,421,396
$\left.\begin{array}{lrrr} & \begin{array}{r}\text { New Benefits } \\ \text { New Assums }\end{array} & \begin{array}{r}\text { Old Benefits } \\ \text { Old Assums } \\ \text { Valuation Date }\end{array} & \begin{array}{r}\text { Old Benefits } \\ \text { Old Assums } \\ 12 / 31 / 2014\end{array} \\ \text { C. Liabilities - (Continued) } & & & \\ \text { Present Value of Future Salaries } & & & \\ \text { Normal Cost (Entry Age Normal) } & 1,577,429,601\end{array}\right)$

| Valuation Date | New Benefits New Assums 12/31/2014 | Old Benefits Old Assums 12/31/2014 | Old Benefits Old Assums 12/31/2013 |
| :---: | :---: | :---: | :---: |
| E. Pension Cost |  |  |  |
| Normal Cost (with interest) |  |  |  |
| Expected Member Contributions |  |  |  |
| City Normal Cost Rate |  |  |  |
| Funding Period to Amortize UAAL ** | 28.6 years | 31.1 years | 28.9 years |
| F. PRB Preferred 20-Year Funding Cost |  |  |  |
| Normal Cost (with interest) \% of Payroll Under Assumed Ret. Age* | 21.605 | 22.055 | 21.775 |
| Payment Required to Amortize |  |  |  |
| Liability over 20 years |  |  |  |
| Total 20-Year Funding Cost $\%$ of Total Annual Payroll | 37.102 | 37.600 | 37.510 |
| * Contributions developed above include $0.025 \%$ of payroll for assumed additional administrative expenses for participation in the Proportionate Retirement Program |  |  |  |
| ** The period required to amortize the UAA contribution rate to the Fund of $21.63 \%$ October 1, 2015 less the calculated contr | based on the $C$ ior to October red to fund the | currently sche <br> 5 , and 21.313 <br> ee Death Bene | annual and after nd. |

## COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS <br> (Retiree Death Benefit Fund)

| Valuation Date | New Benefits New Assums 12/31/2014 | Old Benefits Old Assums $12 / 31 / 2014$ | Old Benefits Old Assums 12/31/2013 |
| :---: | :---: | :---: | :---: |
| Present Value of Benefits |  |  |  |
| Active Members | 1,259,665 | 1,215,447 | 1,108,914 |
| Retired and Terminated Vested Members | 2,075,482 | 2,050,586 | 1,900,139 |
| Total | 3,335,147 | 3,266,033 | 3,009,053 |
| Present Value of Future Normal Costs | 461,775 | 464,068 | 461,737 |
| Normal Cost | 61,011 | 58,208 | 43,669 |
| Actuarial Accrued Liability | 2,873,372 | 2,801,965 | 2,547,316 |
| Asset Value of Fund | 788,429 | 788,429 | 689,006 |
| Unfunded Actuarial Accrued Liability (UAAL) | 2,084,943 | 2,013,536 | 1,858,310 |
| Payment Required to Amortize Unfunded Actuarial Accrued Liability over 21 years (as of $12 / 31 / 2014$ ) |  |  |  |
|  |  |  |  |
| \% of Total Annual Payroll | 0.099 | 0.097 | 0.090 |
| Normal Cost (with interest) |  |  |  |
| \% of Total Annual Payroll | 0.042 | 0.040 | 0.031 |
| Total Required City Contribution Rate |  |  |  |
| Allocated to the Retiree Death Beneffit Fund |  |  |  |
| $\%$ of Total Annual Payroll | 0.141 | 0.137 | 0.121 |

[^0]GAIN/LOSS ANALYSIS
(Exclusive of Retiree Death Benefit Fund)
a. Total Gain/(Loss)

1. UAAL, Beginning of Year 306,202,257
2. Normal Cost Applicable for Year 30,490,921
3. Interest on (1) and (2) 26,935,454
4. Contributions During Year 53,885,237
5. Interest on (4) 2,113,944
6. Expected UAAL, End of Year: (1) $+(2)+(3)-(4)-(5) \quad 307,629,451$
7. Actual UAAL, End of Year (Before Changes) 313,608,715

Total Actuarial Gain/(Loss)
b. Gain/(Loss) on Assets

1. Actuarial Value of Assets (AVA), Beginning of Year 604,841,897
2. Contributions Less Benefit Payments 8,562,111
3. Expected Investment Earnings 48,723,248
4. Expected AVA, End of Year: (1) $+(2)+(3) \quad 662,127,256$
5. Actual Actuarial Value of Assets, End of Year 653,192,335

Gain/(Loss) on Assets
$(8,934,921)$
c. Gain/(Loss) on Liabilities

1. Expected Actuarial Accrued Liability: $a(6)+b(4)$

969,756,707
2. Actual Actuarial Accrued Liability (Before Changes)

966,801,050
Gain/(Loss) on Liabilities
$2,955,657$

| Mortality Rates - All Lives | RP-2000 Combined Healthy without projection - Sex Distinct. Based on a study of over 650 public safety funds, this table reffects a $10 \%$ margin for future mortality improvements. |
| :---: | :---: |
| Interest Rate | $7.90 \%$ per year, compounded annually, net of all expenses. |
| Core Inflation | 3.25\% per year. |
| Payroll Growth | $3.50 \%$ per year for amortization of the Unfunded Actuarial Accrued Liability. |
| Administrative Expenses (PRP) | $0.025 \%$ of payroll for assumed additional administrative expenses for participation in the Proportionate Retirement Program. |
| DROP Election | $75 \%$ of those assumed to retire who are eligible for at least a 12 -month DROP lump sum will make such an election (RETRO) or will have made such an election (FORWARD). See following tables for allocation between RETRO and FORWARD. |
| DROP Period Election | Members elect the maximum period eligible (up to 36 months for RETRO and up to 60 months for FORWARD). |
| PROP Investment Accounts | $75 \%$ retiring in DROP will elect to leave their lump sum in the System until age 60. Average annual rate credited to the PROP accounts will be $2.25 \%$. |
| Marital Status | $85 \%$ of actives are assumed to be married at time of benefit commencement. Females are assumed to be 3 years younger than Males. |
| Funding Method | Entry Age Normal Actuarial Cost Method |
| Actuarial Asset Method | All assets are valued at market value with an adjustment made to uniformly spread actuarial investment gains and losses (as measured by actual market value investment return against expected market value investment return) over a five-year period. The asset value of the Retiree Death Benefit Fund is then subtracted to determine the Actuarial Value of Assets. |
| Retirement Rates | See following tables. |
| Termination Rates | See following tables. |

Disability Rates

Salary Increases
Pre-Retirement Death Payment Form

See following tables. $55 \%$ of disablements are assumed to be service related.

See following tables.
Married: Joint and $100 \%$ to Survivor Single: 15-Year Certain and Life Annuity

## Retirement Rates

| For Entry Ages Under 32 $^{1}$ |  |  |  | For Entry Ages 33 and Above |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| APRS <br> Service | 22 \& Unde | $23-27$ | $28-32$ | AGE | $33-37$ | $38-42$ | 43 \& Over |  |
| $\mathbf{0 - 2 2}$ | 0.0625 | 0.125 | 0.125 | $\mathbf{3 3 - 3 7}$ | 0.05 |  |  |  |
| $\mathbf{2 3}$ | 0.1875 | 0.1875 | 0.28125 | $\mathbf{3 8} \mathbf{4 2}$ | 0.05 | 0.10 |  |  |
| $\mathbf{2 4}$ | 0.125 | 0.125 | 0.1875 | $\mathbf{4 3 - 4 7}$ | 0.05 | 0.10 | 0.10 |  |
| $\mathbf{2 5}$ | 0.125 | 0.125 | 0.1875 | $\mathbf{4 8}$ | 0.05 | 0.10 | 0.10 |  |
| $\mathbf{2 6}$ | 0.1875 | 0.1875 | 0.3125 | $\mathbf{4 9}$ | 0.05 | 0.10 | 0.10 |  |
| $\mathbf{2 7}$ | 0.1875 | 0.1875 | 0.3125 | $\mathbf{5 0}$ | 0.05 | 0.10 | 0.10 |  |
| $\mathbf{2 8}$ | 0.3125 | 0.3125 | 0.3125 | $\mathbf{5 1}$ | 0.05 | 0.10 | 0.10 |  |
| $\mathbf{2 9}$ | 0.3125 | 0.3125 | 0.375 | $\mathbf{5 2}$ | 0.20 | 0.10 | 0.10 |  |
| $\mathbf{3 0}$ | 0.375 | 0.375 | 0.50 | $\mathbf{5 3}$ | 0.35 | 0.10 | 0.10 |  |
| $\mathbf{3 1}$ | 0.375 | 0.375 | 0.625 | $\mathbf{5 4}$ | 0.75 | 0.10 | 0.10 |  |
| $\mathbf{3 2}$ | 0.375 | 0.375 | $1.00^{2}$ | $\mathbf{5 5}$ | 0.20 | 0.10 | 0.10 |  |
| $\mathbf{3 3}$ | 0.375 | 0.375 |  | $\mathbf{5 6}$ | 0.25 | 0.10 | 0.10 |  |
| $\mathbf{3 4}$ | 0.50 | 0.50 |  | $\mathbf{5 7}$ | 0.30 | 0.10 | 0.10 |  |
| $\mathbf{3 5}$ | 0.50 | 0.625 |  | $\mathbf{5 8}$ | 0.35 | 0.10 | 0.10 |  |
| $\mathbf{3 6}$ | 0.50 | 0.625 |  | $\mathbf{5 9}$ | 0.50 | 0.10 | 0.10 |  |
| $\mathbf{3 7}$ | 0.625 | $1.00^{2}$ |  | $\mathbf{6 0}$ | 1.00 | 0.50 | 0.10 |  |
| $\mathbf{3 8}$ | 0.625 |  |  | $\mathbf{6 1}$ |  | 0.35 | 0.10 |  |
| $\mathbf{3 9}$ | 0.625 |  |  | $\mathbf{6 2}$ |  | 0.35 | 0.80 |  |
| $\mathbf{4 0}$ | 0.625 |  |  | $\mathbf{6 3}$ |  | 0.35 | 0.40 |  |
| $\mathbf{4 1}$ | 0.625 |  |  | $\mathbf{6 4}$ |  | 0.35 | 0.40 |  |
| $\mathbf{4 2}$ | $1.00^{\mathbf{2}}$ |  |  | $\mathbf{6 5}$ |  | 1.00 | 1.00 |  |

${ }^{1}$ Rates are based on APRS service only and apply after a Member is eligible for retirement with combined APRS and Proportionate Retirement Program (PRP) service. Entry ages are determined based on APRS service only,
${ }^{2} 100 \%$ retirement rate will be effective at age 60 , if earlier.
${ }^{3}$ Rates are based on age and apply after a Member is eligible for retirement with combined APRS and PRP service. Entry ages are determined based on APRS service only.

Termination Rates

${ }^{3}$ APRS service combined with Proportionate Retirement Program service.

## Disability Rates

| Age | Probability of Disablement During Year |
| :---: | :---: |
| 20 | 0.00007 |
| 22 | 0.00008 |
| 24 | 0.00009 |
| 26 | 0.000105 |
| 28 | 0.000125 |
| 30 | 0.000155 |
| 32 | 0.000200 |
| 34 | 0.000245 |
| 36 | 0.000270 |
| 38 | 0.000310 |
| 40 | 0.000460 |
| 42 | 0.000660 |
| 44 | 0.000865 |
| 46 | 0.001275 |
| 48 | 0.001670 |
| 50 | 0.001895 |
| 52 | 0.002020 |
| 54 | 0.002280 |
| 56 | 0.002660 |
| 58 | 0.003300 |
| 60 | 0.004555 |
| 62 Above | 0 |

## Salary Increases

| Years of Service | Increase in Salary |
| :---: | :---: |
|  | $18.0 \%$ |
| 1 | 11.2 |
| 2 | 5.8 |
| 3 | 0.9 |
| 4 | 0.9 |
| 5 | 7.1 |
| 6 | 0.5 |
| 7 | 0.5 |
| 8 | 0.5 |
| 9 | 7.1 |
| 10 | 0.3 |
| 11 | 0.3 |
| 12 | 0.3 |
| 13 | 7.1 |
| 14 | 0.2 |
| 15 | 7.2 |
| 16 | 0.2 |
| 17 | 0.1 |
| 18 | 0.1 |
| 19 | 0.1 |
| 20 | 0.1 |
| 21 | 0.1 |
| 22 | 0.1 |
| 23 | 0.1 |
| 24 | 0.1 |
| $25 \&$ Above | 0.0 |

${ }^{1}$ Expected increases in salary as shown above are in addition to $3.50 \%$ increase per year due to general wage increases.

## Retirement Option Election

(Members with 23+ years of APRS service on April 1, 2015)

| Service at Termination <br> of Employment | No DROP <br> Elected |
| :---: | :---: | :---: | :---: |
| 23 or less |  |$\quad$| RETRO DROP |
| :---: |
| 24 |

${ }^{1}$ Police officers elect a type of service retirement benefit that does not include payment of a lump sum distribution.

## Retirement Option Election

## (Members with less than 23 years of APRS service on April 1, 2015)

| Service at Termination <br> of Employment | No DROP <br> 23 or less | Elected $^{100 \%}$ |
| :---: | :---: | :---: |
| 24 | 25 | FORWARD DROP <br> Elected |
| 25 | 25 | $0 \%$ |
| 26 | 25 | 75 |
| 27 | 25 | 75 |
| 28 | 25 | 75 |
| 29 | 25 | 75 |
| 30 | 25 | 75 |
| 31 | 25 | 75 |
| 32 | 25 | 75 |
| 33 | 25 | 75 |
| 34 | 25 | 75 |
| 35 | 25 | 75 |
| 36 | 25 | 75 |
| 37 | 25 | 75 |
| 38 | 25 | 75 |
| 39 | 25 | 75 |
| 40 | 25 | 75 |
| 41 | 25 | 75 |
| 42 | 25 | 75 |
|  |  | 75 |

${ }^{1}$ Police officers elect a type of service retirement benefit that does not include payment of a lump sum distribution.

## VALUATION NOTES

Total Annual Payroll is the annual rate of pay as of the valuation date of all active participants.

Payroll under Assumed Retirement Age is the annual rate of pay as of the valuation date of all active participants who are not subject to a $100 \%$ probability of retirement on the valuation date.

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.

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. The funding span utilized in determination of the normal cost rate for each benefit is to the last age at which that benefit is payable.
(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, 2014

ASSETS
Cash and Cash Equivalents:
Short Term Investments
Checking Account
Prepaid Expenses
Total Cash and Equivalents
Receivables:
Member Contributions
Member Buy-Back Contributions
City Contributions
lnvestment Income
Total Receivable
Investments:
Partnership Interests
Corporate Bonds
Corporate Stocks
International Stocks
International Government Securities
Real Estate Interests
Alternatives
Retiree Death Benefit Fund
Total Investments
Net Fixed Assets
Total Assets
LIABILITIES
Payables:
Refunds of Member Contributions
Other
Total Liabilities
NET POSITION RESTRICTED FOR PENSIONS

MARKET VALUE
37,830,337,78
153,946.92
8,753.50
37,993,038.20

876,848.56
193.40

1,458,941.18
3,632,401.31
5,968,384.45

38,899,824.00
32,788,000.75
245,824,415.46
63,260,869.00
34,202,073.64
144,472,514.65
35,871,586.00
$788,429.77$
596,107,713.27
471,327.18
$640,540,463.10$

123,514.01
2,397,881.81
2,521,395.82
$638,019,067.28$

# STATEMENT OF CHANGES IN FIDUCIARY NET POSITION FOR THE YEAR ENDED DECEMBER 31, 2014 <br> Market Value Basis 

| ADDITIONS |  |  |  |
| :---: | :---: | :---: | :---: |
| Contributions: |  |  |  |
| Member |  | 19,457,407.16 |  |
| Buy-Back |  | 2,207,397.66 |  |
| City |  | 31,279,861.10 |  |
| City for Proportionate Retirement Program |  | 940,570.88 |  |
| City for Retiree Death Benefit |  | 179,308.32 |  |
| Total Contributions |  |  | 54,064,545.12 |
| Investment Income: |  |  |  |
| Miscellaneous Income | 9,381,778.35 |  |  |
| Net Realized Gain (Loss) | 30,414,503.77 |  |  |
| Unrealized Gain (Loss) | $(9,066,319.27)$ |  |  |
| Net Increase in Fair Value of Investments |  | 30,729,962.85 |  |
| Interest \& Dividends |  | 6,363,159.11 |  |
| Less Investment Expense ${ }^{1}$ |  | (1,518,804.85) |  |
| Net Investment Income |  |  | 35,574,317.11 |
| Total Additions |  |  | 89,638,862.23 |
| DEDUCTIONS |  |  |  |
| Distributions to Members: |  |  |  |
| Benefit Payments |  | 39,129,106.98 |  |
| Lump Sum DROP Distributions |  | 1,928,952.08 |  |
| Lump Sum PROP Distributions |  | 3,766,347,40 |  |
| Retiree Death Benefits |  | 80,000.00 |  |
| Refunds of Member Contributions |  | 498,719.47 |  |
| Total Distributions |  |  | 45,403,125.93 |
| Administrative Expense |  |  | 1,327,071.04 |
| Total Deductions |  |  | 46,730,196.97 |
| Net Increase in Net Position |  |  | 42,908,665,26 |
| NET POSITION RESTRICTED FOR PENSIONS |  |  |  |
| Beginning of the Year |  |  | 595,110,402.02 |
| End of the Year |  |  | 638,019,067.28 |

${ }^{1}$ Investment related expenses include investment advisory, custodial and performance monitoring fees.

## ACTUARIAL ASSET VALUATION

December 31, 2014

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 Market Value of Assets.

Gains/(Losses) Not Yet Recognized

| Plan Year |  | Amounts Not Yet Recognized by Valuation Year |  |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | ---: | ---: |
| Ending | Gain/(Loss) | 2015 | 2016 | 2017 | 2018 | 2019 |
| $12 / 31 / 2011$ | $(56,982,781)$ | $(11,396,556)$ | 0 | 0 | 0 | 0 |
| $12 / 31 / 2012$ | $8,502,880$ | $3,401,152$ | $1,700,576$ | 0 | 0 | 0 |
| $12 / 31 / 2013$ | $4,991,349$ | $2,994,809$ | $1,996,540$ | 998,270 | 0 | 0 |
| $12 / 31 / 2014$ | $(13,701,378)$ | $(10,961,102)$ | $(8,220,827)$ | $(5,480,551)$ | $(2,740,276)$ | 0 |
| Total |  | $(15,961,697)$ | $(4,523,711)$ | $(4,482,281)$ | $(2,740,276)$ | 0 |

Development of Investment Gain/Loss
Market Value of Assets, including Retiree Death Benefit Fund, 12/31/2013

$$
\begin{array}{r}
595,110,402 \\
8,661,419 \\
47,948,624 \\
34,247,246 \\
\hline(13,701,378)
\end{array}
$$

Contributions Less Benefit Payments
Expected Investment Earnings*
Actual Net Investment Earnings
2015 Actuarial Investment Gain/(Loss)
*Expected Investment Earnings $=0.08 * 595,110,402+[(1+0.08) \wedge 0.5-1] * 8,661,419$

## Development of Actuarial Value of Assets

(1) Market Value of Assets, including Retiree Death Benefit Fund, 12/31/2014

638,019,067
(2) Gains/(Losses) Not Yet Recognized
(3) Actuarial Value of Assets, $12 / 31 / 2014$, (1) - (2)
$\frac{(15,961,697)}{653,980,764}$
(A) $12 / 31 / 2013$ Actuarial Assets, including Retiree Death Benefit Fund:

605,530,903
(1) Net Investment Income:

1. Interest, Dividends and Misc Income

7,897,046
2. Realized Gains (Losses) 30,414,504
3. Change in Actuarial Value 4,223,345
4. Investment and Administrative Expenses
$(2,845,876)$
Total
39,689,018
(B) 12/31/2014 Actuarial Assets, including Retiree Death Benefit Fund:

653,980,764
Actuarial Assets Rate of Return $=2 \mathrm{I} /(\mathrm{A}+\mathrm{B}-1): \quad 6.51 \%$
Market Value of Assets Rate of Return: $\quad 5.71 \%$
12/31/2014 Limited Actuarial Assets, including Retiree Death Benefit Fund:
$653,980,764$

12/31/2014 Limited Net Actuarial Assets, excluding Retiree Death Benefit Fund: 653,192,335

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS<br>DECEMBER 31, 2014<br>Actuarial Asset Basis

REVENUES

| Contributions: | $19,457,407,16$ |
| :--- | ---: |
| Member | $2,207,397.66$ |
| Buy-Back | $31,279,861.10$ |
| City | $940,570.88$ |
| City for Proportionate Retirement Program | $179,308.32$ |
| City for Retiree Death Benefit |  |
|  |  |
| Total Contributions |  |
| Earnings from Investments: | $6,363,159.11$ |
| Interest \& Dividends | $1,533,886.59$ |
| Miscellaneous lncome | $30,414,503.77$ |
| Net Realized Gain (Loss) | $4,223,344.56$ |
| Change in Actuarial Value |  |
|  |  |
| Total Earnings and Investment Gains |  |
|  |  |
| Distributions to Members: | $39,129,106,98$ |
| Benefit Payments | $1,928,952.08$ |
| Lump Sum DROP Distributions | $3,766,347,40$ |
| Lump Sum PROP Distributions | $80,000.00$ |
| Retiree Death Benefits | $498,719.47$ |
| Refunds of Member Contributions |  |

Total Distributions

Expenses:

| Investment related ${ }^{\prime}$ | $1,518,804.85$ |
| :--- | :--- |
| Administrative | $1,327,071.04$ |

$\begin{array}{lr}\text { Total Expenses } & 2,845,875.89\end{array}$
Change in Net Assets for the Year $\quad 48,350,437.33$
Net Assets Beginning of the Year $\quad 604,841,897.18$

Net Assets End of the Year ${ }^{2}$ 653,192,334.51
${ }^{1}$ Investment related expenses include investment advisory, custodial and performance monitoring fees.
${ }^{2}$ Net Assets may be limited for actuarial consideration, and exclude the Retiree Death Benefit Fund of $\$ 788,429.77$.

## VALUATION PARTICIPANT RECONCILIATION

1. Active lives
a. Number in prior valuation 12/31/2013 1732
b. Terminations
i. Vested (partial or full) with deferred 4
benefits
ii. Non-vested or full lump sum distribution
received
c. Deaths
i. Beneficiary receiving benefits 0
ii. No future benefits payable $\quad 0$
d. Disabled 0
e. Retired 37
f. DROP 5
g. Continuing participants 1669
h. New entrants 108
i. Total active life participants in valuation 1777
2. Non-Active lives (including beneficiaries receiving benefits)

|  | Service <br> Retirees, <br> DROP | Receiving <br> Death <br> Barticipants | $\underline{\text { Benefits }}$ |
| :--- | :---: | :---: | :---: | :---: | :---: | :---: | :---: | | Receiving |
| :---: |
| Disability |
| Benefits | | Receiving |
| :---: |
| QDRO |
| Benefits |$\quad$| Vested |
| :---: |
| Deferred |$\quad$| Total |
| :---: |
| a. Number prior <br> valuation |
| b. In |
| c. Out |

## STATISTICAL DATA

|  | 12/31/2012 | 12/31/2013 | 12/31/2014 |
| :---: | :---: | :---: | :---: |
| Actives | 1,709 | 1,732 | 1,777 |
| Average Current Age | 39.6 | 39.9 | 40.0 |
| Average Age at Employment | 28.1 | 28.3 | 28.3 |
| Average Past Service | 11.5 | 11.6 | 11.7 |
| Average Annual Salary | \$82,079 | \$84,221 | \$84,896 |

## 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 |
| $20-24$ | 15 | 2 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 17 |
| $25-29$ | 31 | 24 | 35 | 32 | 2 | 16 | 0 | 0 | 0 | 0 | 0 | 140 |
| $30-34$ | 33 | 30 | 33 | 42 | 17 | 171 | 15 | 1 | 0 | 0 | 0 | 342 |
| $35-39$ | 12 | 9 | 17 | 14 | 8 | 117 | 125 | 30 | 0 | 0 | 0 | 332 |
| $40-44$ | 11 | 6 | 3 | 7 | 7 | 71 | 130 | 161 | 16 | 0 | 0 | 412 |
| $45-49$ | 2 | 0 | 2 | 2 | 1 | 42 | 61 | 113 | 90 | 6 | 0 | 319 |
| $50-54$ | 0 | 0 | 0 | 0 | 0 | 18 | 20 | 34 | 59 | 29 | 0 | 160 |
| $55-59$ | 0 | 0 | 0 | 0 | 0 | 7 | 3 | 8 | 19 | 8 | 2 | 47 |
| $60-64$ | 0 | 0 | 0 | 0 | 0 | 5 | 0 | 1 | 0 | 1 | 1 | 8 |
| $65+$ | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 | 0 |

## AUSTIN POLICE RETIREMENT SYSTEM

 SUMMARY OF BENEFIT PROVISIONS| Creditable Service | Total years and completed months (excluding a month in which service amount to fewer than 15 days) during which a Member makes contributions to the System. |
| :---: | :---: |
| Earnings | Base pay, plus longevity pay. |
| Average Final Compensation | Average Earnings for the highest 36 months over the last 120 months of service. |
| Member Contributions | 13.0\% of Earnings. |
| City Contributions | $21.63 \%$, effective October $1,2012$. 21.313\%, effective October 1, 2015. |
| Normal Retirement |  |
| Date | Earlier of age 62, age 55 and 20 years of Creditable Service, or 23 years of Creditable Service, regardless of age (excluding military service). |
| Benefit | $3.20 \%$ of Average Final Compensation times Creditable Service. |
| Form of Benefit | Modified Cash Refund (options available). |
| Vesting |  |
| Schedule | 100\% after 10 years of Creditable Service. |
| Benefit Amount | Member will receive his (her) accrued benefit payable at the Normal Retirement Date based upon actual Creditable Service prior to termination. |
|  | Non-vested members recejve a refund of accumulated contributions. |
| Disability |  |
| Eligibility | Total and permanent as determined by the Board. Members must have 10 years of Creditable Service if the disability was nonservice related. |
| Benefit | Accrued benefit at date of disability, but not less than $64 \%$ of Average Final Compensation for service related disablements. |
| Form of Benefit | Modified Cash Refund (options available). |

Before Retirement Eligibility

After Retirement Eligibility

Retiree Death Benefit Fund

## Cost of Living Adjustment

Eligibility
Amount

Twice the amount of the Member's accumulated contributions, subject to a minimum of $\$ 10,000$.

Member's accrued benefit as of the date of death, payable based on optional annuity selected either by Member or beneficiary. Additionally, a lump sum death beneffit is payable in the amount of $\$ 10,000$.

Effective September 1, 2003, a separate fund (funded as a portion of the City's contribution rate) was established to pay post-retirement lump sum death benefits. Effective September 1,2007 , the amount of these benefits was increased to $\$ 10,000$.

## Normal Retirement.

Determined by the actuary if providing a COLA (not to exceed $6.0 \%$ per year) will not impair financial stability of the System, PostRetirement benefit increases will automatically be provided when the System's benefit accrual rate is increased.

Effective September 1, 2009, the System and the City began participating in the statewide Proportionate Retirement Program (PRP). Service in other participating public employee retirement systems can be combined with service in the System to satisfy the System's requirements for service retirement eligibility and for eligibility for vested benefits of a terminated Member. The participating systems, in addition to the System, are the six statewide systems, the City of Austin Employees' Retirement System, and the systems for the City of El Paso employees.

## Forward DROP

## Eligibility

Participation Period
Rate of Return

Form of Distribution

## Retro DROP

Eligibility

## Participation Period

Rate of Return
Form of Distribution

Completion of 23 years of Creditable Service, excluding military service.

Not to exceed 60 months.
Effective August 1, 2015, equal to the PROP interest rate (currently $2.25 \%$ ), except for those with 23 years of APRS service as of July 31, 2015 who will receive $5.00 \%$ interest credit per year.

Cash lump sum (or rollover to PROP account) at termination of employment.

Completion of 23 years of Creditable Service, excluding military service, as of April $1,2015$. Members with less than 23 years as of this date will not be eligible to participate in Retro DROP.

Upon election to retroactively enter DROP, the Retro DROP period will not exceed 36 months.
$5.0 \%$, compounded annually.
Cash lump sum (or rollover to PROP account) at termination of employment.

## STATEMENT OF FIDUCIARY NET POSITION DECEMBER 31, 2014

| Asseis | MARKET VALUE |
| :---: | :---: |
| Cash and Cash Equivalents: |  |
| Short Term Investments | 37,830,338 |
| Checking Account | 153,947 |
| Prepaid Expenses | 8,753 |
| Total Cash and Equivalents | 37,993,038 |
| Receivables: |  |
| Member Contributions | 876,849 |
| Member Buy-Back Contributions | 193 |
| City Contributions | 1.458,941 |
| Investment Income | 3,632,401 |
| Total Receivable | 5,968,384 |
| Investments: |  |
| Partnership Interests | 38,809,824 |
| Corporate Bonds | 32,788,001 |
| Corporate Stocks | 245,824,415 |
| International Stocks | 63,260,869 |
| Intemational Government Securities | 34,202,074 |
| Real Estate Interests | 144,472,515 |
| Alternatives | 35,871,586 |
| Retiree Death Benefit Fund | 788,430 |
| Total livestments | 596,107,714 |
| Net Fixed Assets | 471,327 |
| Total Assets | 640,540,463 |
| LIABILITIES |  |
| Payables: |  |
| Refinds of Member Contributions | 123,514 |
| Other | 2,397,882 |
| Total Liabilitics | 2,521,396 |
| NET POSITION RESTRICTED FOR PENSIONS | 638,019,067 |

# STATEMENT OF CHANGES IN FIDUCIARY NET POSITION <br> FOR THE YEAR ENDED DECEMBER 31, 2014 <br> Market Value Basis 

| ADDITIONS |  |  |
| :---: | :---: | :---: |
| Contributions: |  |  |
| Member | 19,457,407 |  |
| Buy-Back | 2,207,398 |  |
| City | 31,279,861 |  |
| City for Proportionate Retirement Program | 940,571 |  |
| Cily for Retiree Death Benefit | 179,308 |  |
| Total Contributions |  | 54,064,545 |
| Investment Income: |  |  |
| Net Increase in Fair Value of Investments | 30,729,963 |  |
| Interest \& Dividends | $6,363,159$ |  |
| Less Investment Expense' | $(1,518,805)$ |  |
| Net lnvestment Income |  | 35,574,317 |
| Total Additions |  | 89,638,862 |
| DEDUCTIONS |  |  |
| Distributions to Members: |  |  |
| Benefit Payments | 39,129,107 |  |
| L.ump Sum DROP Distributions | 1,928,952 |  |
| Lump Sum Prop Distributions | 3,766,348 |  |
| Retiree Death Benefits | 80,000 |  |
| Refinds of Member Contributions | 498,719 |  |
| Total Distributions |  | 45,403,126 |
| Administrative Expense |  | 1,327,071 |
| Total Deductions |  | 46,730,197 |
| Net herease in Net Position |  | 42,908,665 |
| NEY POSITION RESTRICTED FOR PENSIONS |  |  |
| Begiming of the Ycar |  | 595,110,402 |
| End of the Year |  | 638,019,067 |

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

## NOTES TO THE FINANCIAL STATEMENTS

(For the Year Ended December 31, 2014)

Plan Deseription

## Plan Admimistration

The Plan is a single-employer defined benefit pension plan administered by the Plan's Board of Trustecs comprised of:
a. One council momber designated by the city council;
b. The city manager or the city manager's designec;
c. The director of finance or the director's designee;
d. Five police officer members elected by the police officer members of the system, cach of whom serves for a term of four years;
e. One legally qualified voter of the city, resident for the preceding five years, to be appointed by the police retirement board to serve for a term of four years and until the member's successor is duly selected and qualified.
f. Two retired members to be elected by the retired members to serve for a term of four yomrs, with the term of one member expiring each odd-numbered year.

## Plan Membership as of Decentrer 31, 2013:

## Inactive Plan Mombers or Beneficiaries Currently Receiving Benefits

Inactive Plan Members Entitled to But Not Yet Receiving Benelits
Active Plan Members

## Benefits Provided

The Plan provides retirement, temination, disability and death bencfits.
Normal Retirement:
Date; Barlier of age 62, age 55 and 20 years of Creditable Service, or 23 years of Creditable Service, regardless of age (excluding military sorvice).
Benefit: $3.20 \%$ of Average Final Compensation times Creditable Service.

## Vesting:

Schedule: $100 \%$ after 10 years of Creditable Service.
Benefit Amount: Member will reccive his (her) accrued benefit payable at the Normal Retirement Date based upon actual Creditable Service prior to termination.
Non-vested members receive a refind of accumulated contributions.
Disability:
Eligibility: Total and permanent as determined by the Board. Members must have 10 years of Creditable Sorvice if the disability was non-service related.
Benefit accrued to date of disability but not less than $64 \%$ of Average Final Compensation for service related disablements. Death Bencfits:
Before Retirement Eligibility: Twice the amount of the Member's accumulated contributions, subject to a minimum of $\$ 10,000$. Afler Retirement Eligibility: Member's acoued benefit as of the date of death, payable based on optional ammity selected either by Member or beneficiary. Additionally, a lump sum death benefit is payable in the amount of $\$ 10,000$.

## Retiree Death Benefil Fund:

Effective September 1, 2003, a separate fund (funded as a portion of the City's conitbution rate) was established to pay postretirement lump sum death bencfits. Effective September 1, 2007, the amount of these benefits was increased to $\$ 10,000$.
Cost of living Adjustment:
Eligibility: Normal Retirement.
Amount: Determined by the actuary if providing a COLA (not to exceed $6.0 \%$ per year) will not impair financial stability of the System. Post-Retirement benefit incroases will attomatically be provided when the System's bencfit acerual rate is increased,

## Proportionate Retirement Program:

Effective September 1, 2009, the System and the City began participating in the statewide Proportionate Retirement Program (PRP). Service in other participating public employee retirement systems can be combined with service in the System to satisfy the System's requirements for service retirement eligibility and for eligibility for vested benelits of a terminated Member. The participating systems, in addition to the System, are the six statewide systems, the City of Austin Employees' Retirement System, and the systems for the City of El Paso employees.

## Contributions

The Sponsor contribution is a tixed rate of $21.63 \%$ of total payroll.
Investments
Investment Policy:
The following was the Board's adopted asset allocation policy as of December 31, 2014:

| Asset Class | Target Allocation |  |
| :--- | :---: | :---: |
| Domestic Equity |  | $43.50 \%$ |
| International Equity |  | $21.00 \%$ |
| Domestic Bonds | $9.00 \%$ |  |
| International Bonds |  | $6.50 \%$ |
| Real Estate | $20.00 \%$ |  |
| Total | $100.00 \%$ |  |

## Contcentrations:

The Plan did not hold investments in any one organization that represent 5 percent or more of the Peusion Plan's Fiduciary Net Position.

## Rate of Return:

For the year ended December 31, 2014, the amual money-weighted rate of return on Pension Plan investments, net of Pension Plan investmont expense, was 5.71 percent.
The money-weighted rate of return expresses investment performance, nel of investment expense, adjusted for the changing amounts actually invested.

## Deferred Retirement Option Program

## Forward DROP:

Eligibility: Members with completion of 23 years of Creditable Service as of July 31, 2015, excluding military service. Participation period not to exceed 60 months. Rate of Retum: $5.00 \%$, compounded amually. After July 31 , the Rate of Return is: $2,25 \%$ compounded annually.
Form of Distribution: Cash lump sum (or rollover to PROP account) at termination of employment. Effective February 18,2015 , the opportunity to purchase permissive service is no longer available. Retro DROP:
Eligibility: Completion of 23 years of Creditable Service, excluding military service. Participation period upon election to retroactively enter DROP, the Retro DROP period will not exceed 36 months. Rate of Return $5.00 \%$, compounded amually. Effective February 18, 2015, the opportunity to purchase permissive service is no longer available. Effective April 1, 2015, no Retro DROP will be available for Members with less than 23 yoars of APRS service. Form of Distribution: Cash hump sum (or rollover to PROP account) at termination of employment.
The PROP balance as December 31, 2014 is $\$ 21,768,360$.
The DROP balance as December 31, 2014 is $\$ 0$.

## NET PENSION LIABILITY OF THE SPONSOR

The components of the Nel Pension Liability of the Sponsor on December 31, 2014 were as follows:

| Total Pension Liability | $\$ 971,622,936$ |
| :--- | :--- |
| Plan Fiduciary Net Position | $\$(638,019,067)$ |
| Sponsor's Nef Pension Liability | $\$ 333,603,869$ |
| Plan Fiduciary Net Position as a percentage of Total Pension Liability | $\frac{\$ 5.67 \%}{}$ |

## Actuarial Assumptions:

The Total Pension Liability was determined by an actuarial valuation as of December 31, 2013 updated to December 31, 2014 using the following actuatial assumptions:

| Inflation | $3.25 \%$ |
| :--- | ---: |
| Salary Increases | Service Based |
| Discount Rate | $7.90 \%$ |
| Investment Rate of Return | $7,90 \%$ |

Mortality rates (all lives) were based on the RP-2000 Combined Heallhy without projection - Sex Distinct. Based on a study of over 650 public safety funds, this table rellects a $10 \%$ margin for future mortality improvements.

The actuarial assumptions used in the December 31,2013 valuation were based on the results of an actuarial experience study for the period 2012-2013.

The Long-Term Expected Rate of Retum on Pension Plan investments was determined using a building-block method in which bestestimate ranges of expected future real rates of return (cxpected returns, net of Pension Plan investment expenses and inflation) are developed for each mạior asset class.
These ranges are combined to produce the Long-Term Expected Rate of Return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation.

Best estimates of arithmetic real rates of return for each major asset class included in the Pension Plan's target asset allocation as of December 31, 2014 are summarized in the following table:

| Asset Class | Long Term <br> Expected Real <br> Rato of Retum |
| :--- | :---: |
| Domestic Equity | $7.50 \%$ |
| International Equity | $8.50 \%$ |
| Domestic Bonds | $2.50 \%$ |
| International Bonds | $3.50 \%$ |
| Real Estate | $4.50 \%$ |

## Discount Rate:

The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate of $13,00 \%$ of compensation and that sponsor contributions will be made at the current contribution rate of $21.63 \%$ of total payroll. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected fiture benefit paymonts of curent plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension hability.

Current

Sponsor's Net Pension I iability

| $1 \%$ Decrease <br> $6.90 \%$ | Discount Rate <br> $\$ .90 \%$ | $1 \%$ Increase <br> $8.90 \%$ |
| :---: | :---: | :---: |
| $\$ 446,103,498$ | $\$ 333,603,869$ | $\$ 238,081,968$ |

## SCHEDULE OF CHANGES IN NET PENSION LIABILITY AND RELATED RATIOS Last 10 Tiscal Ycars

|  | 12/31/2014 | 12/31/2013 |
| :---: | :---: | :---: |
| Total Pension Liability |  |  |
| Service Cost | 30,253,628 | 28,769,060 |
| Intercst | 72,442,934 | 68,919,471 |
| Changes of benefif terms | (11,015,618) | - |
| Differences between Expeeted and Actual Experience | - | - |
| Changes of assumptions | 14,137,496 | - |
| Contributions - Buy Back | 2,207,398 | - |
| Benefit Payments, including Refunds of Employee Contributions | $(45,403,126)$ | $(42,825,265)$ |
| Net Change in Total Pension Liability | 62,622,712 | 54,863,266 |
| Total Pension Liability - Begiming | 909,000,224 | 854,136,958 |
| Total Pension Liability - Ending (a) | 971,622,936 | \$909,000,224 |
| Plan Fiduciary Net Position |  |  |
| Contributions - Employer | 32,399,740 | 31,160,764 |
| Contributions - Employee | 19,457,407 | 19,467,960 |
| Contributions - Buy Back | 2,207,398 | - |
| Net Investment fncome | 35,574,317 | 49,524,150 |
| Benefit Payments, including Refunds of Employee Contributions | $(45,403,126)$ | $(42,825,265)$ |
| Administrative Expense | $(1,327,071)$ | $(1,114,856)$ |
| Other | - | - |
| Net Change in Plan Fiduciary Net Position | 42,908,665 | 56,212,753 |
| Plan Fiduciary Net Position - Begiming | 595,110,402 | 538,897,649 |
| Plan Fiduciary Net Position - Ending (b) | \$638,019,067 | \$595,110,402 |
| Net Pension Liability - Ending (a) - (b) | \$333,603,869 | \$313,889,822 |
| Plan Fiduciary Net Position as a percentage of the Total Pension Liability | $65.67 \%$ | 65.47\% |
| Covered Employee Payroll | \$149,790,754 | \$144,089,468 |
| Net Pension Liability as a percentage of Covered Employee Payroll | $222.71 \%$ | 217.84\% |

SCHEDULE OF CONTRIBUTIONS
Last 10 Fiscal Years

|  | 12/31/2014 | 12/31/2013 |
| :---: | :---: | :---: |
| Actuarially Determined Contribution | N/A | $\mathrm{N} / \mathrm{A}$ |
| Contributions in relation to the Actuarially |  |  |
| Detemined Contributions Contribution Defficiency (Excess) | N/ $/$ | $N / \Lambda$ |
|  | \$ | \$ |
| Covered Employee Payroll | \$149,790,754 | \$144,089,468 |
| Contributions as a percentage of Covered |  |  |
| Employee Payroll | 21.63\% | 21.63\% |

Notes to Schedule
Valuation Date:
12/31/2012
Mcthods and assumptions used to determine liabilities;

| Actuarial Cost Method: | Entry Age Nomal Actuarial Cost Method. |
| :---: | :---: |
| Amortization Method: | Level Percentage of Pay, Closed. |
| Remaining Amortization Period: | 30 Years. |
| Actuarial Asset Method: | All assets are valued at market value with an adjustment made to uniformly spread actuarial investment gains and losses (as moasured by actual market value investment return against expected market value investment return) over a five-year period. The asset value of the Retiree Death Bencfit Fund is then subtracted to determine the Actuarial Value of Assets. <br> $3.50 \%$ (previously $4.00 \%$ ) per year for amortization of the Untunded Actuarial |
| Payroll Growth: | Accrued Liability. |
| Interest Rate: | 8.00\% per year, compounded amually, net of investment related expenses. |
| Retirement Rates: | See table on next page. |
| Tcrmination Rates: | See table on next page. |
| Disability Rates: | See table on next page. $55 \%$ of disablements are assumed to be servico related. |
| Salary Increases: | See table on next page. |
| Mortality Rates- All lives: | RP-2000 Combined Healthy without projection - Sex Distinct. |
| PROP Investment Accounts: | $75 \%$ retiring in DROP will clect to leave their lump sum in the System until age 60. Average annual rate credited to the PROP accounts will be $4.0 \%$. |
| Marital Status: | $85 \%$ of actives are assumed to be married at time of benefit commencement Pemales are assumed to be 3 years younger than Males. |

GASB 67

Retirement Rates Table:

| For Entry Ages Under 32 |  |  |  | For Enlry Ages 33 and Above |  |  |  |
| :---: | :---: | :---: | :---: | :---: | :---: | :---: | :---: |
| APRS <br> Service |  <br> Under | $23-27$ | $28-32$ | Age | $33-37$ | $38-42$ | $43 \&$ <br> Over |
| $0-22$ | 0.05 | 0.05 | 0.05 | $33-37$ | 0.10 |  |  |
| 23 | 0.15 | 0.15 | 0.225 | $38-42$ | 0.10 | 0.10 | 0.10 |
| 24 | 0.10 | 0.10 | 0.15 | $43-47$ | 0.10 | 0.10 | 0.10 |
| 25 | 0.10 | 0.10 | 0.15 | 48 | 0.10 | 0.10 | 0.10 |
| 26 | 0.15 | 0.15 | 0.25 | 49 | 0.10 | 0.10 | 0.10 |
| 27 | 0.15 | 0.15 | 0.25 | 50 | 0.10 | 0.10 | 0.10 |
| 28 | 0.25 | 0.25 | 0.25 | 51 | 0.10 | 0.10 | 0.10 |
| 29 | 0.25 | 0.25 | 0.3 | 52 | 0.10 | 0.10 | 0.10 |
| 30 | 0.30 | 0.30 | 0.4 | 53 | 0.10 | 0.10 | 0.10 |
| 31 | 0.30 | 0.30 | 0.5 | 54 | 0.10 | 0.10 | 0.10 |
| 32 | 0.30 | 0.30 | $1.00^{2}$ | 55 | 0.20 | 0.10 | 0.10 |
| 33 | 0.30 | 0.30 |  | 56 | 0.25 | 0.10 | 0.10 |
| 34 | 0.40 | 0.40 |  | 57 | 0.30 | 0.10 | 0.10 |
| 35 | 0.40 | 0.50 |  | 58 | 0.35 | 0.10 | 0.10 |
| 36 | 0.40 | 0.50 |  | 59 | 0.50 | 0.10 | 0.10 |
| 37 | 0.50 | $1.00^{2}$ |  | 60 | 1.00 | 0.50 | 0.10 |
| 38 | 0.50 |  |  | 61 |  | 0.35 | 0.10 |
| 39 | 0.50 |  |  | 62 |  | 0.35 | 0.80 |
| 40 | 0.50 |  |  | 63 |  | 0.35 | 0.40 |
| 41 | 0.50 |  |  | 64 |  | 0.35 | 0.40 |
| 42 | $1.00^{2}$ |  |  | 65 |  | 1.00 | 1.00 |

${ }^{1}$ Rates are based on APRS service only and apply atter a Member is eligible for retirement with combined APRS and Proportionate Retiroment Program (PRP) scrvice.
${ }^{2} 100 \%$ retirement rate will be offective at ago 60, if carlicr.
${ }^{3}$ Rates are based on age and apply after a Mcmber is eligible for retirement with combined APRS and PRP service. Entry ages are determined based on APRS service only.
Termination Rates Table:

| Combined Years of Service ${ }^{\text {l }}$ | Probability of Termination During Year |
| :---: | :---: |
|  | 0.05 |
| 1 | 0.02 |
| 2 | 0.02 |
| 3 | 0.02 |
| 4 | 0.02 |
| 5 | 0.02 |
| 6 | 0.02 |
| 7 | 0.02 |
| 8 | 0.02 |
| 9 | 0.02 |
| 10 | 0.01 |
| 11 | 0.01 |
| 12 | 0.05 |
| 13 | 0.05 |
| 14 | 0.05 |
| 15 \& Above | 0.00 |
| APRS service combined with Proportionate Relirement Program service. |  |

GASB 67

| Disability Rates Table: | Age | Probability of Disablement During Year |
| :---: | :---: | :---: |
|  | 20 | 0.00014 |
|  | 22 | 0.00016 |
|  | 24 | 0.00018 |
|  | 26 | 0.00021 |
|  | 28 | 0.00025 |
|  | 30 | 0.00031 |
|  | 32 | 0.00040 |
|  | 34 | 0.00049 |
|  | 36 | 0.00054 |
|  | 38 | 0.00062 |
|  | 40 | 0.00092 |
|  | 42 | 0.00132 |
|  | 44 | 0.00173 |
|  | 46 | 0.00255 |
|  | 48 | 0.00334 |
|  | 50 | 0.00379 |
|  | 52 | 0.00404 |
|  | 54 | 0.00456 |
|  | 56 | 0.00532 |
|  | 58 | 0.00660 |
|  | 60 | 0.00911 |
|  | 62 \& Above | 0.00000 |
| Salary Increase Table: | Years of Service | Increase in Salay ${ }^{1}$ |
|  | 0 | 18.0\% |
|  | 1 | 11.2\% |
|  | 2 | 5.8\% |
|  | 3 | 0.9\% |
|  | 4 | 0.9\% |
|  | 5 | 7.1\% |
|  | 6 | 0.5\% |
|  | 7 | 0.5\% |
|  | 8 | 0.5\% |
|  | 9 | 7.1\% |
|  | 10 | 0.3\% |
|  | 11 | 0.3\% |
|  | 12 | 0.3\% |
|  | 13 | 7.1\% |
|  | 14 | 0.2\% |
|  | 15 | 7,2\% |
|  | 16 | 0.2\% |
|  | 17 | 0.1\% |
|  | 18 | 0.1\% |
|  | 19 | 0.1\% |
|  | 20 | 0.1\% |
|  | 21 | 0.1\% |
|  | 22 | 0.1\% |
|  | 23 | 0.1\% |
|  | 24 | 0.1\% |
|  | 25 \& Above | 0.0\% |

CASB 67
SCHEDULE OF INVESTMENT RETURNS
Last 10 Fiscal Years

|  | $12 / 31 / 2014$ | $12 / 31 / 2013$ |
| :--- | ---: | ---: | ---: |
| Annual Money-Weighted Rate of Return | $5.71 \%$ | $8.90 \%$ |
| Net of Investment Expense |  |  |


[^0]:    * The Retiree Death Benefit Fund was established effective September 1, 2003. The Fund operates as a separate account within the system that is used to advance fund and to pay the $\$ 10,000$ post-retirement lump sum death benefits for retirees.

