



City of Roanoke Pension Plan

GASB 67/68 Report as of June 30, 2015

Produced by Cheiron

November 2015

TABLE OF CONTENTS

<i>Section</i>	<i>Page</i>
Letter of Transmittal	i
Section I Board Summary	1
Section II Certification	3
Section III Determination of Discount Rate	4
Section IV Projection of Total Pension Liability	5
Section V GASB 67 Reporting Information.....	6
Section VI GASB 68 Collective Information	10
Section VII GASB 68 Reporting Information for Participating Employers	14
 <i>Appendices</i>	
Appendix A Membership Data, Methods, Assumptions and Plan Provisions Information	24
Appendix B Glossary of Terms.....	25

LETTER OF TRANSMITTAL

November 5, 2015

Board of Trustees
City of Roanoke Pension Plan
215 Church Avenue, SW Room 465
Roanoke, Virginia 24011

Dear Members of the Board:

The purpose of this report is to provide accounting and financial reporting information under GASB 67 for the City of Roanoke Pension Plan (RPP) and under GASB 68 for participating employers. This information includes:

- Determination of the discount rate as of June 30, 2015,
- Projection of RPP's Total Pension Liability from the valuation date to the measurement date,
- Note disclosures and required supplementary information under GASB 67 for RPP,
- Determination of collective amounts under GASB 68, and
- Schedules for the financial reporting of participating employers under GASB 68.

If you have any questions about the report or would like additional information, please let us know.

Sincerely,
Cheiron



Kevin J. Woodrich, FSA, FCA, MAAA
Principal Consulting Actuary



Stephen T. McElhaney, FSA, FCA, MAAA
Principal Consulting Actuary

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION I - BOARD SUMMARY

The purpose of this report is to provide accounting and financial disclosure information under Government Accounting Standards Board Statements 67 and 68 for the City of Roanoke Pension Plan and the participating employers. This information includes:

- Determination of the discount rate as of June 30, 2015,
- Projection of RPP’s Total Pension Liability from the valuation date to the measurement date,
- Note disclosures and required supplementary information under GASB 67 for RPP,
- Determination of collective amounts under GASB 68, and
- Schedules for the financial reporting of participating employers under GASB 68.

Highlights

The measurement date for the City of Roanoke Pension Plan (RPP) is June 30, 2015. Measurements are based on the fair value of assets as of June 30, 2015 and the Total Pension Liability as of the valuation date, June 30, 2014, updated to June 30, 2015. Effective July 1, 2015, active employees are required to contribute 5% of pay, except for those hired or rehired after June 30, 2014 that elect to participate in the Hybrid plan. Prior to this change, only active employees hired or rehired after June 30, 2014 that elected the traditional defined benefit plan were required to contribute 5% of pay. An estimate for the change in liabilities due to this change was reflected as well as the addition of service cost and interest cost offset by actual benefit payments.

The table below provides a summary of the key collective results during this measurement period.

Table I-1 Summary of Collective Results				
Measurement Date				
	6/30/2015		6/30/2014	
Net Pension Liability	\$	140,151,689	\$	117,385,767
Deferred Outflows		(1,137,524)		0
Deferred Inflows		17,141,755		35,238,629
Net Impact on Statement of Net Position	\$	156,155,920	\$	152,624,396
Pension Expense (\$ Amount)	\$	18,661,568	\$	9,194,882
Pension Expense (% of Payroll)		27.29%		12.80%

The Net Pension Liability (NPL) increased \$22,765,922 since the prior measurement date, primarily due to investment losses and the increase in liability associated with the

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION I - BOARD SUMMARY

implementation of the employee contributions. There were also actuarial gains that reduced the NPL and assumption changes that increased the NPL. The assumption change was an update to the trend for the medical supplement to reflect the current marketplace. The investment losses are recognized over five years, and the actuarial gains and assumption changes are recognized over the average remaining service life, which is four years. Unrecognized amounts are reported as deferred inflows and deferred outflows. As of the end of the reporting year, RPP and its participating employers would report a Net Pension Liability of \$140,151,689, Deferred Inflows of \$17,141,755, and Deferred Outflows of \$1,137,524. Consequently, the net impact on the aggregate of participating employers' Statements of Net Position due to RPP would be \$156,155,920 at the end of the measurement year. In addition, any contributions between the measurement date and each individual employer's reporting date would be reported as deferred outflows to offset the cash outflow reported.

For the measurement year ending June 30, 2015, the collective annual pension expense is \$18,661,568 or 27.29% of covered-employee payroll. This amount is not related to participating employers' contributions to RPP (\$15,130,044), but instead represents the change in the net impact on participating employer's Statements of Net Position plus employer contributions (\$156,155,920 – \$152,624,396 + \$15,130,044). The collective pension expense is significantly larger than the collective expense for the prior year. Volatility in pension expense from year to year is to be expected. It will largely be driven by investment gains or losses, but other changes can also have a significant impact. A breakdown of the components of the net pension expense is shown in the report.

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION II - CERTIFICATION

The purpose of this report is to provide accounting and financial reporting information under GASB 67 for the City of Roanoke Pension Plan (RPP) and under GASB 68 for the employers that participate in RPP. This report is for the use of RPP, the participating employers and their auditors in preparing financial reports in accordance with applicable law and accounting requirements. This report is not appropriate for other purposes, including the measurement of funding requirements for RPP.

In preparing our report, we relied on information (some oral and some written) supplied by RPP. This information includes, but is not limited to, the plan provisions, employee data, and financial information. We performed an informal examination of the obvious characteristics of the data for reasonableness and consistency in accordance with Actuarial Standard of Practice No. 23.

Future actuarial measurements may differ significantly from the current measurements due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; and changes in plan provisions or applicable law.

To the best of our knowledge, this report and its contents have been prepared in accordance with generally recognized and accepted actuarial principles and practices that are consistent with the Code of Professional Conduct and applicable Actuarial Standards of Practice set out by the Actuarial Standards Board. Furthermore, as credentialed actuaries, we meet the Qualification Standards of the American Academy of Actuaries to render the opinion contained in this report. This report does not address any contractual or legal issues. We are not attorneys and our firm does not provide any legal services or advice.

This report was prepared for RPP for the purposes described herein and for the use by the plan auditor in completing an audit related to the matters herein. Other users of this report are not intended users as defined in the Actuarial Standards of Practice, and Cheiron assumes no duty or liability to any other user.



Kevin J. Woodrich, FSA, FCA, MAAA
Principal Consulting Actuary



Stephen T. McElhaney, FSA, FCA, MAAA
Principal Consulting Actuary

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION III - DETERMINATION OF DISCOUNT RATE

The discount rate used to measure the Total Pension Liability was 7.75%.

The projection of cash flows used to determine the discount rate assumed that plan member contributions will continue to be made at the rates specified in the Charter. Employer contributions were assumed to be made in accordance with the contribution policy in effect for the June 30, 2014 actuarial valuation. That policy includes contributions equal to the employer portion of the Entry Age normal cost for members as of the valuation date plus an amortization payment on the unfunded actuarial liability. The Unfunded Actuarial Liability (UAL) as of June 30, 2013 is being amortized over a closed 30-year period (29 years remaining as of June 30, 2014). However, for the increase in the unfunded liability due to the codified COLA on June 30, 2013, the amortization amount is phased in over a five-year period. The City will pay 40% of such amount in Fiscal year ending June 30, 2015, 60% of such amount in Fiscal year ending June 30, 2016, 80% of such amount in Fiscal year ending June 30, 2017, 90% of such amount in Fiscal year ending June 30, 2018 and the full amount necessary to pay off the remaining balance over 26 years thereafter. All rates are developed using a level-percent of pay amortization method with a 3% per annum increase in payments. Finally, the employer contribution rate also includes 0.5% of pay to cover administrative expenses.

Based on these assumptions, the City's fiduciary net position was projected to be fully available to make projected future benefit payments for current members. Consequently, the single equivalent rate used to determine the Total Pension Liability as of June 30, 2014 is 7.75%.

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION IV - PROJECTION OF TOTAL PENSION LIABILITY

The Total Pension Liability (TPL) at the end of the measurement year, June 30, 2015, is measured as of a valuation date of June 30, 2014 and projected to June 30, 2015. Effective July 1, 2015, active employees are required to contribute 5% of pay, except for those hired or rehired after June 30, 2014 that elect to participate in the Hybrid plan. Prior to this change, only active employees hired or rehired after June 30, 2014 that elected the traditional defined benefit plan were required to contribute 5% of pay. An estimate for the change in liabilities due to this change was reflected as well as the addition of service cost and interest cost offset by actual benefit payments. Furthermore, because the TPL shown in the prior report was measured as of June 30, 2013 and projected to June 30, 2014, it will not match the amounts measured as of June 30, 2014 that are shown in this exhibit.

The table below shows the projection of the TPL at discount rates equal to the rate used for disclosure and plus and minus 1% from the rate used for disclosure.

Table IV-1			
Projection of Collective Total Pension Liability from Valuation to Measurement Date			
Discount Rate	6.75%	7.75%	8.75%
Valuation Collective Total Pension Liability, 6/30/2014			
Actives	\$ 226,278,015	\$ 196,470,174	\$ 171,767,205
Deferred Vested	12,326,414	9,977,492	8,156,202
Retirees	<u>341,801,109</u>	<u>315,627,955</u>	<u>292,956,731</u>
Total	\$ 580,405,538	\$ 522,075,621	\$ 472,880,138
Service Cost, beginning of year	7,494,579	5,805,254	4,536,441
Benefit Payments	(32,487,715)	(32,487,715)	(32,487,715)
Interest	38,586,798	39,651,869	40,352,613
Collective Total Pension Liability, 6/30/2015	\$ 593,999,200	\$ 535,045,029	\$ 485,281,477

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION V – GASB 67 REPORTING INFORMATION

Note Disclosures

The table below shows the changes in the Total Pension Liability, the Plan Fiduciary Net Position (i.e., fair value of System assets), and the Net Pension Liability during the measurement year.

Table V-1 Change in Collective Net Pension Liability			
	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/2014	\$ 515,458,672	\$ 398,072,905	\$ 117,385,767
Changes for the year:			
Service cost	5,805,254		5,805,254
Interest	39,139,055		39,139,055
Changes of benefits	10,150,490		10,150,490
Differences between expected and actual experience	(4,537,426)		(4,537,426)
Changes of assumptions	1,516,699		1,516,699
Contributions - employer		15,130,044	(15,130,044)
Contributions - member		329,048	(329,048)
Net investment income		14,322,252	(14,322,252)
Benefit payments	(32,487,715)	(32,487,715)	0
Administrative expense		(473,194)	473,194
Net changes	<u>19,586,357</u>	<u>(3,179,565)</u>	<u>22,765,922</u>
Balances at 6/30/2015	<u>\$ 535,045,029</u>	<u>\$ 394,893,340</u>	<u>\$ 140,151,689</u>

During the measurement year, the collective NPL increased by \$22,765,922. The service cost and interest cost increased the collective NPL by \$44,944,309 while contributions and investment income offset by administrative expenses decreased the collective NPL by \$29,308,150.

The City now requires all employees, except those electing to participate in the Hybrid plan, to contribute 5% of pay. The City increased the pay for those affected employees hired before June 30, 2014 to help offset this new requirement. This bump in pay resulted in a \$10,150,490 increase in the collective TPL. Concurrent with the June 30, 2014 actuarial valuation, the medical trend for the retiree supplement was updated to more accurately reflect the current marketplace, which increased the TPL by \$1,516,699. There were actuarial experience gains during the year of \$4,537,426.

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION V – GASB 67 REPORTING INFORMATION

Changes in the discount rate affect the measurement of the TPL. Lower discount rates produce a higher TPL and higher discount rates produce a lower TPL. Because the discount rate does not affect the measurement of assets, the percentage change in the NPL can be very significant for a relatively small change in the discount rate. The table below shows the sensitivity of the collective NPL to the discount rate.

Table V-2			
Sensitivity of Collective Net Pension Liability to Changes in Discount Rate			
	1% Decrease 6.75%	Discount Rate 7.75%	1% Increase 8.75%
Total Pension Liability	\$ 593,999,200	\$ 535,045,029	\$ 485,281,477
Plan Fiduciary Net Position	<u>394,893,340</u>	<u>394,893,340</u>	<u>394,893,340</u>
Collective Net Pension Liability	<u>\$ 199,105,860</u>	<u>\$ 140,151,689</u>	<u>\$ 90,388,137</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	66.5%	73.8%	81.4%

A 1% decrease in the discount rate increases the TPL by approximately 11% and increases the collective NPL by approximately 42%. A 1% increase in the discount rate decreases the TPL by approximately 9% and decreases the collective NPL by approximately 36%.

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION V – GASB 67 REPORTING INFORMATION

Required Supplementary Information

The schedules of Required Supplementary Information generally start with information as of the implementation of GASB 67, and eventually will build up to 10 years of information. The schedule below shows the changes in collective NPL and related ratios required by GASB for the two years since implementation.

Table V-3		
Schedule of Changes in Collective Net Pension Liability and Related Ratios		
	FYE 2015	FYE 2014
<u>Total Pension Liability</u>		
Service cost (MOY)	\$ 5,805,254	\$ 5,439,998
Interest (includes interest on service cost)	39,139,055	38,234,758
Changes of benefit terms	10,150,490	0
Differences between expected and actual experience	(4,537,426)	0
Changes of assumptions	1,516,699	0
Benefit payments, including refunds of member contributions	(32,487,715)	(31,664,771)
Net change in total pension liability	\$ 19,586,357	\$ 12,009,985
Total pension liability - beginning	515,458,672	503,448,687
Total pension liability - ending	\$ 535,045,029	\$ 515,458,672
<u>Plan fiduciary net position</u>		
Contributions - employer	\$ 15,130,044	\$ 12,893,068
Contributions - member	329,048	-
Net investment income	14,322,252	70,217,743
Benefit payments, including refunds of member contributions	(32,487,715)	(31,664,771)
Administrative expense	(473,194)	(499,240)
Net change in plan fiduciary net position	\$ (3,179,565)	\$ 50,946,800
Plan fiduciary net position - beginning	398,072,905	347,126,105
Plan fiduciary net position - ending	\$ 394,893,340	\$ 398,072,905
Net pension liability - ending	\$ 140,151,689	\$ 117,385,767
Plan fiduciary net position as a percentage of the total pension liability	73.81%	77.23%
Covered employee payroll	\$ 68,380,924	\$ 71,827,677
Net pension liability as a percentage of covered employee payroll	204.96%	163.43%

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION V – GASB 67 REPORTING INFORMATION

If an Actuarially Determined Contribution (ADC) is defined, a schedule of the last 10 years of these amounts compared to the actual amount contributed should be disclosed. An ADC is a contribution amount determined in accordance with Actuarial Standards of Practice. The full 10 years of information should be shown in this schedule, if it is available. This is shown below.

Table V-4 Schedule of Collective Employer Contributions		
	FYE 2015	FYE 2014
Actuarially Determined Contribution	\$ 15,130,044	\$ 12,893,068
Contributions in Relation to the Actuarially Determined Contribution	<u>15,130,044</u>	<u>12,893,068</u>
Contribution Deficiency/(Excess)	<u>\$ 0</u>	<u>\$ 0</u>
Covered-Employee Payroll	\$ 68,380,924	\$ 71,827,677
Contributions as a Percentage of Covered-Employee Payroll	22.13%	17.95%

The notes below summarize the key methods and assumptions used to determine the ADC for FYE 2015.

Notes to Schedule

Valuation Date	6/30/2013
Timing	Actuarially determined contribution rates are calculated based on the actuarial valuation one year prior to the beginning of the plan year

Key Methods and Assumptions Used to Determine Contribution Rates:

Actuarial cost method	Projected Unit Credit
Asset valuation method	5-year smoothed market
Amortization method	Closed 30-year periods as a level percentage of payroll as of June 30, 2013. Increase in unfunded due to the Codified COLA, the amortization amount is being phased in over a 5-year period. The City will pay 40% of such amount in Fiscal Year ending June 30, 2015.
Discount rate	7.75%
Amortization growth rate	3.00%
Price inflation	2.75%
Salary increases	2.75% inflation plus 0.5% for national productivity plus merit (age-based)
Mortality	125% of sex distinct RP-2000 Healthy Mortality tables with generational mortality projection using Scale AA

A complete description of the methods and assumptions used to determine contribution rates for the year ending June 30, 2015 can be found in the June 30, 2013 actuarial valuation report

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION VI – GASB 68 COLLECTIVE INFORMATION

Employers that participate in RPP are required to implement GASB 68 for their first fiscal year that commenced after June 15, 2014. The amounts reported as of their fiscal year end (their reporting date) must be based on a measurement date up to 12 months prior to their reporting date. For employers with a reporting date of June 30, their 2015 disclosures can be based on either the June 30, 2014 or 2015 measurement dates. We understand that some or all of the employers have elected to implement GASB 68 based on the 2014 measurement date. As a result, the GASB 68 schedules are based on deferred inflows and outflows equal to \$0 as of June 30, 2013. For employers which used the June 30, 2014 measurements for their June 30, 2015 reporting dates, the amounts developed in this report as of June 30, 2015 will be used by the employers at their June 30, 2016 reporting dates.

Because RPP is a cost-sharing multiple-employer pension plan, each employer participating in RPP must reflect a portion of the collective Net Pension Liability, Pension Expense and Deferred Outflows and Inflows in their financial statements. This section develops the collective amounts that are allocated to participating employers.

The impact of experience gains or losses and assumption changes on the TPL are recognized in expense over the average expected remaining service life of all active and inactive members of RPP. As of the measurement date, this recognition period was four years.

During the year, there was an experience gain of \$4,537,426, of which \$1,134,357 of that gain was recognized as a reduction in collective pension expense in the current year and an identical amount will be recognized in each of the next three years, resulting in a collective deferred inflow of resources as of June 30, 2015 of \$3,403,069.

Assumption changes since the last measurement date increased the TPL by \$1,516,699, of which \$379,175 of that increase was recognized as an increase in pension expense in the current year and an identical amount will be recognized in each of the next three years, resulting in a collective deferred outflow of resources as of June 30, 2015 of \$1,137,524.

The plan implemented employee contributions. Employees received increases in pay to offset the effect of making these contributions. This increase in pay increased the TPL by 10,150,490, which was fully recognized in pension expense.

The impact of investment gains or losses is recognized over a period of five years. During the measurement year, there was an investment loss of \$15,862,857, of which \$3,172,571 of that loss was recognized in the current year and an identical amount will be recognized in each of the next four years. Unrecognized investment gains from prior periods were \$35,238,629 of which \$8,809,657 was recognized as a reduction in collective pension expense in the current year. The combination of unrecognized investment losses this year and unrecognized net investment gains from prior periods results in a collective deferred outflow of resources as of June 30, 2015 of \$13,738,686.

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION VI – GASB 68 COLLECTIVE INFORMATION

The table below summarizes the current balances of collective deferred outflows and deferred inflows of resources along with the net recognition over the next five years.

Table VI-1		
Schedule of Collective Deferred Inflows and Outflows of Resources		
	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 0	\$ 3,403,069
Changes in assumptions	1,137,524	0
Net difference between projected and actual earnings on pension plan investments	0	13,738,686
Total	<u>\$ 1,137,524</u>	<u>\$ 17,141,755</u>
Amounts reported as deferred outflows and deferred inflows of resources will be recognized in pension expense as follows:		
Measurement year ended June 30:		
2016	(6,392,268)	
2017	(6,392,268)	
2018	(6,392,268)	
2019	3,172,573	
2020	0	
Thereafter	\$ 0	

The collective annual pension expense recognized by the participating employers can be calculated two different ways. First, it is the change in the amounts reported on the participating employers' Statements of Net Position that relate to RPP and are not attributable to employer contributions. That is, it is the change in collective NPL plus the changes in collective deferred outflows and inflows plus participating employer contributions.

Alternatively, annual pension expense can be calculated by its individual components. While GASB does not require or suggest the organization of the individual components shown in the table on the following page, we believe it helps to understand the level and volatility of the collective pension expense.

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION VI – GASB 68 COLLECTIVE INFORMATION

Table VI-2 Calculation of Collective Pension Expense		
	Measurement Year Ending	
	2015	2014
Change in Net Pension Liability	\$ 22,765,922	\$ (38,936,815)
Change in Deferred Outflows	(1,137,524)	0
Change in Deferred Inflows	(18,096,874)	35,238,629
Employer Contributions	<u>15,130,044</u>	<u>12,893,068</u>
Pension Expense	\$ 18,661,568	\$ 9,194,882
Pension Expense as % of Payroll	27.29%	12.80%
Operating Expenses		
Service cost	\$ 5,805,254	\$ 5,439,998
Employee contributions	(329,048)	-
Administrative expenses	<u>473,194</u>	<u>499,240</u>
Total	\$ 5,949,400	\$ 5,939,238
Financing Expenses		
Interest cost	\$ 39,139,055	\$ 38,234,758
Expected return on assets	<u>(30,185,109)</u>	<u>(26,169,457)</u>
Total	\$ 8,953,946	\$ 12,065,301
Changes		
Benefit changes	\$ 10,150,490	\$ 0
Recognition of assumption changes	379,175	0
Recognition of liability gains and losses	(1,134,357)	0
Recognition of investment gains and losses	<u>(5,637,086)</u>	<u>(8,809,657)</u>
Total	\$ 3,758,222	\$ (8,809,657)
Pension Expense	\$ 18,661,568	\$ 9,194,882

First, there are components referred to as operating expenses. These are items directly attributable to the operation of the plan during the measurement year. Service cost less employee contributions represents the increase in employer-provided benefits attributable to the year, and administrative expenses are the cost of operating RPP for the year.

Second, there are the financing expenses: the interest on the Total Pension Liability less the expected return on assets.

The final category is changes. This category will drive most of the volatility in pension expense from year to year. It includes any changes in benefits made during the year and the recognized amounts due to assumption changes, gains or losses on the TPL, and investment gains or losses.

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION VI – GASB 68 COLLECTIVE INFORMATION

The total collective pension expense more than doubled from the prior year increasing by \$9,466,686. The recognition of changes increased by \$12,567,879, which is more than the total increase in pension expense.

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

SECTION VII – GASB 68 REPORTING INFORMATION FOR PARTICIPATING EMPLOYERS

Proportionate Shares

GASB 68 requires that the proportionate share for each employer be determined based on the “employer’s projected long-term contribution effort to the pension ... as compared to the total projected long-term contribution effort of all employers ...” Although not required as part of RPP’s GASB 67 reporting requirements, RPP is following the advice of the AICPA¹ and making a determination of each employer’s proportionate share, which will be reviewed by RPP’s auditor.

Proportionate shares for each participating employer are determined based on the ratio of each participating employer’s actual contribution to RPP during the measurement year to the sum of the actual contributions for all participating employers. The table below shows the actual employer contributions and proportionate shares for each participating employer for the current and prior measurement years.

Table VII-1 Determination of Employers' Proportionate Share				
Employer	June 30, 2015		June 30, 2014	
	Employer Contribution	Proportionate Share	Employer Contribution	Proportionate Share
City of Roanoke	\$ 13,122,478	86.7313%	\$ 11,136,823	86.3784%
City of Roanoke School Board	527,115	3.4839%	467,487	3.6259%
Roanoke Regional Airport Commission	582,412	3.8494%	517,514	4.0139%
Roanoke Valley Resource Authority	8,003	0.0529%	12,608	0.0978%
Roanoke Valley Detention Commission	366,717	2.4238%	305,838	2.3721%
Western Virginia Water Authority				
- Water	240,463	1.5893%	210,289	1.6310%
- Sewer	282,856	1.8695%	242,509	1.8809%
Total	\$15,130,044	100.0000%	\$12,893,068	100.0000%

¹http://www.aicpa.org/interestareas/governmentauditquality/resources/gasbmatters/downloadabledocuments/aicpaslgep_cs_er_reporting_whitepaper.pdf

The table below shows the proportionate share of the collective NPL (under three discount rates), the collective deferred outflows, the collective deferred inflows, and the collective pension expense allocated to each participating employer as of June 30, 2015.

Employer	Proportionate Share	Share of NPL @ 6.75%	Share of NPL @ 7.75%	Share of NPL @ 8.75%	Share of Deferred Outflows	Share of Deferred Inflows	Pension Expense
City of Roanoke	86.7313%	\$ 172,687,023	\$ 121,555,328	\$ 78,394,771	\$ 986,589	\$ 14,867,260	\$ 16,185,413
City of Roanoke School Board	3.4839%	6,936,641	4,882,739	3,149,029	39,630	597,201	650,150
Roanoke Regional Airport Commission	3.8494%	7,664,329	5,394,963	3,479,378	43,788	659,850	718,354
Roanoke Valley Resource Authority	0.0529%	105,317	74,133	47,811	602	9,067	9,871
Roanoke Valley Detention Commission	2.4238%	4,825,862	3,396,950	2,190,798	27,571	415,476	452,313
Western Virginia Water Authority							
- Water	1.5893%	3,164,405	2,227,442	1,436,546	18,079	272,435	296,590
- Sewer	1.8695%	3,722,282	2,620,134	1,689,805	21,266	320,465	348,878
Total	100.0000%	\$199,105,860	\$140,151,689	\$ 90,388,137	\$ 1,137,524	\$ 17,141,755	\$ 18,661,568

The proportionate share allocated to each individual employer will change on each measurement date. The net effect of the change in proportion on the share of the collective NPL, collective deferred outflows, and collective deferred inflows allocated to each employer becomes a deferred outflow or inflow for that employer and is recognized over the average future working life of RPP's active and inactive members (four years).

Similarly, the difference between each employer's actual contributions and the employer's proportionate share of collective employer contributions becomes a deferred outflow or inflow for that employer and is recognized over the average future working life of RPP's active and inactive members (four years). Because proportionate shares are determined based on each employer's actual contributions, there is no difference between the actual contributions and the proportionate share of collective contributions for each employer.

The table below shows the change in proportion and the impact of that change in proportion on the proportionate share of the collective NPL, collective deferred outflows, and collective deferred inflows. It also shows any contribution differences.

Employer	Proportionate Shares		Impact of Change in Proportion				Contributions		
	6/30/2014	6/30/2015	Net Pension Liability	Deferred Outflows	Deferred Inflows	Net Effect	Actual	Proportionate Share	Difference
City of Roanoke	86.3784%	86.7313%	\$ 414,235	\$ 0	\$ (124,351)	\$ 538,586	\$ 13,122,478	\$ 13,122,478	\$ 0
City of Roanoke School Board	3.6259%	3.4839%	(166,667)	0	50,033	(216,700)	527,115	527,115	0
Roanoke Regional Airport Commission	4.0139%	3.8494%	(193,122)	0	57,974	(251,096)	582,412	582,412	0
Roanoke Valley Resource Authority	0.0978%	0.0529%	(52,699)	0	15,820	(68,520)	8,003	8,003	0
Roanoke Valley Detention Commission	2.3721%	2.4238%	60,636	0	(18,203)	78,838	366,717	366,717	0
Western Virginia Water Authority									
- Water	1.6310%	1.5893%	(48,968)	0	14,700	(63,668)	240,463	240,463	0
- Sewer	1.8809%	1.8695%	(13,413)	0	4,027	(17,440)	282,856	282,856	0
Total	100.0000%	100.0000%	\$ 0	\$ 0	\$ 0	\$ 0	\$15,130,044	\$15,130,044	\$ 0

The table below shows the reconciliation of deferred outflows and inflows due to proportion changes for each participating employer from the prior measurement date to the current measurement date.

**Table VII-4
Reconciliation of Deferred Outflows and Inflows Due to Proportion Change**

Employer	Deferred Outflows				Deferred Inflows			
	Current Year		Recognition	6/30/2015	Current Year		Recognition	6/30/2015
	6/30/2014	Net Effect			6/30/2014	Net Effect		
City of Roanoke	\$ 741,788	\$ 538,586	\$ 381,910	\$ 898,464	\$ 0	\$ 0	\$ 0	\$ 0
City of Roanoke School Board	0	0	0	0	(387,133)	(216,700)	(183,219)	(420,614)
Roanoke Regional Airport Commission	19,111	0	6,370	12,741	0	(251,096)	(62,774)	(188,322)
Roanoke Valley Resource Authority	0	0	0	0	(13,952)	(68,520)	(21,781)	(60,690)
Roanoke Valley Detention Commission	86,408	78,838	48,513	116,733	0	0	0	0
Western Virginia Water Authority								
- Water	0	0	0	0	(129,552)	(63,668)	(59,101)	(134,119)
- Sewer	0	0	0	0	(316,670)	(17,440)	(109,917)	(224,193)
Total	\$ 847,307	\$ 617,424	\$ 436,793	\$ 1,027,938	\$ (847,307)	\$ (617,424)	\$ (436,792)	\$ (1,027,939)

The table below shows the reconciliation of deferred outflows and inflows due to contribution differences for each participating employer from the prior measurement date to the current measurement date.

**Table VII-5
Reconciliation of Deferred Outflows and Inflows Due to Contribution Differences**

Employer	Deferred Outflows				Deferred Inflows			
	Current Year		Recognition	6/30/2015	Current Year		Recognition	6/30/2015
	6/30/2014	Difference			6/30/2014	Difference		
City of Roanoke	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0
City of Roanoke School Board	0	0	0	0	0	0	0	0
Roanoke Regional Airport Commission	0	0	0	0	0	0	0	0
Roanoke Valley Resource Authority	0	0	0	0	0	0	0	0
Roanoke Valley Detention Commission	0	0	0	0	0	0	0	0
Western Virginia Water Authority								
- Water	0	0	0	0	0	0	0	0
- Sewer	0	0	0	0	0	0	0	0
Total	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0	\$ 0

The table below summarizes the deferred outflows allocated to each employer for experience, assumption changes, investment returns, proportion changes and contribution differences.

**Table VII-6
Schedule of Employers' Deferred Outflows at June 30, 2015**

Employer	Proportionate Shares	Experience	Assumption Changes	Investment Return	Proportion Change	Contribution Difference
City of Roanoke	86.7313%	\$ 0	\$ 986,589	\$ 0	\$ 898,465	\$ 0
City of Roanoke School Board	3.4839%	0	39,630	0	0	0
Roanoke Regional Airport Commission	3.8494%	0	43,788	0	12,741	0
Roanoke Valley Resource Authority	0.0529%	0	602	0	0	0
Roanoke Valley Detention Commission	2.4238%	0	27,571	0	116,733	0
Western Virginia Water Authority						
- Water	1.5893%	0	18,079	0	0	0
- Sewer	1.8695%	0	21,266	0	0	0
Total	100.0000%	\$ 0	\$ 1,137,524	\$ 0	\$ 1,027,939	\$ 0

The table below summarizes the deferred inflows allocated to each employer for experience, assumption changes, investment returns, proportion changes and contribution differences.

Table VII-7
Schedule of Employers' Deferred Inflows at June 30, 2015

Employer	Proportionate Shares	Experience	Assumption Changes	Investment Return	Proportion Change	Contribution Difference
City of Roanoke	86.7313%	\$ 2,951,525	\$ 0	\$ 11,915,736	\$ 0	\$ 0
City of Roanoke School Board	3.4839%	118,559	0	478,642	420,614	0
Roanoke Regional Airport Commission	3.8494%	130,997	0	528,853	188,322	0
Roanoke Valley Resource Authority	0.0529%	1,800	0	7,267	60,690	0
Roanoke Valley Detention Commission	2.4238%	82,482	0	332,994	0	0
Western Virginia Water Authority						
- Water	1.5893%	54,085	0	218,350	134,119	0
- Sewer	1.8695%	63,620	0	256,845	224,193	0
Total	100.0000%	\$ 3,403,069	\$ 0	\$13,738,686	\$ 1,027,939	\$ 0

The table below shows the net amount of deferred outflows and inflows to be recognized by each participating employer in each of the next five years and the total thereafter.

Table VII-8							
Schedule of Employers' Recognition of Deferred Outflows and Inflows at June 30, 2015							
Employer	Recognition for Measurement Year Ending						Thereafter
	2016	2017	2018	2019	2020		
City of Roanoke	\$ (5,162,185)	\$ (5,162,185)	\$ (5,409,450)	\$ 2,751,613	\$ 0	\$ 0	0
City of Roanoke School Board	(405,919)	(405,920)	(276,875)	110,529	0	0	0
Roanoke Regional Airport Commiss	(302,466)	(302,466)	(308,837)	122,124	0	0	0
Roanoke Valley Resource Authority	(25,162)	(25,161)	(20,511)	1,678	0	0	0
Roanoke Valley Detention Commiss	(106,421)	(106,422)	(135,226)	76,896	0	0	0
Western Virginia Water Authority							
- Water	(160,694)	(160,694)	(117,510)	50,422	0	0	0
- Sewer	(229,420)	(229,420)	(123,863)	59,311	0	0	0
Total	\$ (6,392,267)	\$ (6,392,267)	\$ (6,392,271)	\$ 3,172,573	\$ 0	\$ 0	0

The table below shows the calculation of the pension expense for each participating employer. The calculation is shown first as the sum of the proportionate share of the collective pension expense and the amounts recognized for proportion changes and contribution differences. The right side of the table shows the calculation as the sum of the changes in NPL and deferred amounts not attributable to contributions.

Table VII-9
Schedule of Employers' Pension Expense for the Measurement Year Ending June 30, 2015

Employer	Collective Pension Expense	Change in Proportion	Contribution Difference	Employer Pension Expense	Change in Employer			Employer Contributions	Employer Pension Expense
					Net Pension Liability	Deferred Outflows	Deferred Inflows		
City of Roanoke	\$ 16,185,413	\$ 381,909	\$ 0	\$ 16,567,322	\$ 20,159,406	\$ 1,143,265	\$ 15,571,296	\$ 13,122,478	\$ 16,567,323
City of Roanoke School Board	650,150	(183,219)	0	466,931	626,474	39,630	647,028	527,115	466,931
Roanoke Regional Airport Commission	718,354	(56,404)	0	661,950	683,223	37,418	566,268	582,412	661,950
Roanoke Valley Resource Authority	9,871	(21,781)	0	(11,910)	(40,657)	602	(21,346)	8,003	(11,910)
Roanoke Valley Detention Commission	452,313	48,513	0	500,826	612,429	57,896	420,424	366,717	500,826
Western Virginia Water Authority									
- Water	296,590	(59,101)	0	237,489	312,852	18,079	297,748	240,463	237,489
- Sewer	348,878	(109,917)	0	238,961	412,195	21,266	434,825	282,856	238,961
Total	\$18,661,568	\$ 0	\$ 0	\$18,661,568	\$ 22,765,922	\$ 1,318,155	\$17,916,242	\$ 15,130,044	\$18,661,569

The table below summarizes the information needed for each employer's schedules of required supplementary information.

Table VII-10 Schedule of Employers' RSI Information at June 30, 2015									
Employer	Proportionate Shares	Proportionate Share of NPL	Covered- Employee Payroll	Share of NPL as a % of Payroll	Plan Fiduciary Net Position as % of TPL	Contractually Required Contribution	Actual Contributions	Contribution Deficiency	Contributions as a % of Payroll
City of Roanoke	86.7313%	\$ 121,555,328	\$ 59,030,490	205.9%	73.8%	\$ 13,122,478	\$ 13,122,478	\$ 0	22.23%
City of Roanoke School Board	3.4839%	4,882,739	2,690,735	181.5%	73.8%	527,115	527,115	0	19.59%
Roanoke Regional Airport Commission	3.8494%	5,394,963	2,619,937	205.9%	73.8%	582,412	582,412	0	22.23%
Roanoke Valley Resource Authority	0.0529%	74,133	36,001	205.9%	73.8%	8,003	8,003	0	22.23%
Roanoke Valley Detention Commission	2.4238%	3,396,950	1,649,649	205.9%	73.8%	366,717	366,717	0	22.23%
Western Virginia Water Authority									
- Water	1.5893%	2,227,442	1,081,705	205.9%	73.8%	240,463	240,463	0	22.23%
- Sewer	1.8695%	2,620,134	1,272,407	205.9%	73.8%	282,856	282,856	0	22.23%
Total	100.0000%	\$ 140,151,689	\$68,380,924	205.0%	73.8%	\$ 15,130,044	\$ 15,130,044	\$ 0	22.13%

**CITY OF ROANOKE PENSION PLAN
GASB 67 AND 68 REPORTING FOR JUNE 30, 2015 MEASUREMENT DATE**

**APPENDIX A – MEMBERSHIP DATA, METHODS, ASSUMPTIONS AND PLAN
PROVISIONS INFORMATION**

Membership Data: Please refer to the June 30, 2014 actuarial valuation report for a complete summary of the data.

Plan Provisions: Please refer to the June 30, 2014 actuarial valuation report for a complete summary of the Plan.

Assumptions: The actuarial assumptions used in this report are identical to those disclosed in the June 30, 2014 actuarial valuation report of the RPP.

Methods: The entry age normal cost method as specified in GASB Nos. 67 and 68 was used to develop both the TPL and the ADC disclosures. We used a level percent allocation in developing the ADC. For developing the TPL, we used a level salary allocation for the Plan.

Discount Rate: Based on these assumptions, the System's fiduciary net position was projected to be available to make projected future benefit payments for current members. Therefore, projected benefit payments are discounted at the long-term expected return on assets of 7.75%.

APPENDIX B - GLOSSARY OF TERMS

1. Actuarially Determined Contribution

A target or recommended contribution for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

2. Actuarial Valuation Date

The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

3. Deferred Inflow of Resources

An acquisition of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience gains on the Total Pension Liability, assumption changes reducing the Total Pension Liability, or investment gains that are recognized in future reporting periods.

4. Deferred Outflow of Resources

A consumption of net assets by a government employer that is applicable to a future reporting period. In the context of GASB 68, these are experience losses on the Total Pension Liability, assumption changes increasing the Total Pension Liability, or investment losses that are recognized in future reporting periods.

5. Entry Age Actuarial Cost Method

The actuarial cost method required for GASB 67 and 68 calculations. Under this method, the actuarial present value of the projected benefits of each individual included in an actuarial valuation is allocated on a level basis over the earnings of the individual between entry age and assumed exit ages. The portion of this actuarial present value allocated to a valuation year is called the Service Cost. The portion of this actuarial present value not provided for at a valuation date by the actuarial present value of future service costs is called the Total Pension Liability.

6. Measurement Date

The date as of which the Total Pension Liability and Plan Fiduciary Net Position are measured. The Total Pension Liability may be projected from the Actuarial Valuation Date to the Measurement Date. The Measurement Date must be the same as the Reporting Date for the plan.

APPENDIX B - GLOSSARY OF TERMS

7. Net Pension Liability

The liability of employers and nonemployer contributing entities to employees for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Plan Fiduciary Net Position.

8. Plan Fiduciary Net Position

The fair or market value of assets.

9. Reporting Date

The last day of the plan or employer's fiscal year.

10. Service Cost

The portion of the actuarial present value of projected benefit payments that is attributed to the current period of employee service in conformity with the requirements of GASB 67 and 68. The Service Cost is the normal cost calculated under the entry age actuarial cost method.

11. Total Pension Liability

The portion of the actuarial present value of projected benefit payments that is attributed to past periods of employee service in conformity with the requirements of GASB 67 and 68. The Total Pension Liability is the actuarial liability calculated under the entry age actuarial cost method.



Classic Values, Innovative Advice