City of Greenville
Firemen's Pension Fund

Funding Report as of July 1, 2012
For the Plan Year Ending June 30, 2013
And For The Fiscal Year Ending June 30, 2013

Actuarial Valuation

SHDR
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A division of BB&T

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Board of Trustees
City of Greenville Fire Department Pension Fund
City Hall
206 South Main Street
Greenville, SC 29601

Gentlemen:

Stanley, Hunt, DuPree & Rhine, a division of BB&T, has prepared an actuarial valuation for The City of Greenville Firemen's Pension Fund as of July 1, 2012. The information presented in this valuation is applicable to the twelve months ending June 30, 2013. The purpose of the valuation is to:

- Determine the existing and projected plan liabilities for benefits earned by active, retiree, and widowed participants.
- Measure the sufficiency of current funding levels and investment returns.
- Provide disclosures which the City of Greenville can use to meet the requirements of the Government Accounting Standards Board Statements relating to the Pension Fund for the fiscal year ending June 30, 2013.

We look forward to presenting these results, discuss with you any questions, and provide any additional information as may be requested.

Sincerely,

Paul B. Burdulis

Paul B. Burdulis, ASA, FCA, MAAA
Senior Vice President and Consulting Actuary
(864) 527-0630

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Introduction

The valuation is based upon the premise that the Plan will continue in existence, so that future events must also be considered.

These future events are assumed to occur in accordance with the actuarial assumptions and concern such events as the earnings of the fund, the number of participants who will remain to retirement, their ages at retirement and expected benefits.

The valuation was performed on a closed group basis, i.e. no future employees are considered in determining current Plan liabilities and costs.

Actuarial Certification

We have performed an actuarial valuation of the City of Greenville Firemen's Pension Fund (the Plan) as of July 1, 2012 for the Plan Year ending June 30, 2013. The results of the valuation are set forth herein. The information in this report represents our statement of findings, conclusions, and recommendations.

All costs, liabilities, and other factors under the Plan were determined in accordance with generally accepted actuarial principles and procedures. In our opinion, the actuarial assumptions used are reasonable. These assumptions represent our best estimate of the anticipated experience under the Plan by taking into account actual Plan experience and reasonable future expectations. The results presented in this report, in our opinion, fully and fairly disclose the actuarial position of the Plan.

We have also performed an actuarial valuation to determine the Plan's funded status, Annual Required Contribution (ARC), and Annual Pension Cost (APC) under Governmental Accounting Board Standard Number 27 (GASB No. 27) for the City of Greenville's fiscal year ending June 30, 2013. This information is required to be presented in the City's financial statements under GASB No 25. These liabilities and costs were based on the Plan Sponsor's actuarial assumptions as prescribed under GASB No. 27.

Actuarial computations under GASB Nos. 25 and 27 are for purposes of fulfilling employer accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of GASB Nos. 25 and 27. Determinations for purposes other than meeting employer financial accounting requirements may be significantly different from the results reported herein.

The valuation is based on the unaudited assets and employee data provided by the City of Greenville and the Greenville Fire Department, respectively. We did not audit the data supplied to us, but have reviewed both, including a comparison to the previous year's data. Based on our review, the data and assets appear to be adequate and reasonable.

The information contained herein is not intended or written to be used, and cannot be used, for the purpose of avoiding tax-related penalties.

Stanley, Hunt, DuPree & Rhine

I am a member of an actuarial organization and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Paul B Burdulis

Paul B. Burdulis, EA, ASA, FCA, MAAA Senior Vice President / Consulting Actuary	December 7, 2012 Date

As part of our quality standards, the valuation results as reported herein have been reviewed by:

Robt A Grid

Robert Grider, EA, MAAA Vice President / Consulting Actuary	December 7, 2012 Date

Summary of Plan Provisions

Effective Date

June 25, 1946

Eligibility Requirements

All regular employees of the Fire Department are eligible for benefits provided by this plan.

Contributions by Participating Employees

Participating employees contributed initially at the rate of 1% of salary. Salary deductions were increased, effective July 1, 1952, to 3% of salary. Deductions remained at this level until June 24, 1975 when they were raised to the current level of 5.775% of salary. Beginning in the 1997 plan year, the City offered to pay 4% of the State-directed contribution level, so that the net rate is now 1.775%.

Contributions from Other Sources

The following sums are also paid into the Fund:

1. Any money, real estate, personal property or other assets made available by gift, devise or bequest;
2. All forfeitures and fines imposed upon any member of the Department by way of discipline;
3. All proceeds from sales of condemned or discarded personal property and equipment in use by the Department;
4. The income from any tax levy imposed by the City Council in order to supplement or support this fund.

The City currently contributes 19.425% of participating payroll.

includes 4%

Service Retirement Benefits

A member who has attained age 55 and completed at least 25 years of service may retire with a monthly benefit equal to 50% of his monthly compensation at the time of his retirement. For each year of service in excess of 25 years, an additional 2% of final compensation will be provided. In no event will more than 35 years of service be considered for the purpose of benefit determination. An adjustment of up to 6% of the percentage of benefit will be added to the benefit calculation to reflect accrued general leave time.

Disability Retirement Benefits

1. Line of Duty Disability
   A member who incurs a disability while engaged in the performance of his duty will be retired with a monthly benefit equal to 50% of his monthly compensation at the time of his disability.

Summary of Plan Provisions (continued)

2. Disability Other Than in Line of Duty

   a. A member who becomes disabled other than in the line of duty after the completion of 10 years of service will be retired with a monthly benefit equal to one-third of his monthly compensation at the time of disability.

   b. A member who becomes disabled other than in the line of duty after the completion of 20 years of service will be retired with a monthly benefit equal to one-half of his monthly compensation at the time of disability.

Death Benefits

1. Upon the death of a retired member, the lawful widow will receive a monthly benefit equal to one-half of the benefit which the member was receiving, plus a lump sum of $200. Such monthly benefit shall continue during her lifetime regardless of whether she remarries.

2. Upon death of an active member, the lawful widow will receive a monthly benefit equal to one-half of the member's monthly salary at the time of his death, plus a lump sum of $200. Such monthly benefit shall continue during her lifetime regardless of whether she remarries.

3. If in the case of (1) or (2) above there is no lawful widow, the monthly benefits shall be paid to the surviving children until the youngest child attains age 18.

4. In the case of (2) above, the designated beneficiary may elect to take a refund of the member's contributions with 4% interest thereon in lieu of any monthly pension.

5. The minimum widow's benefit is $750 per month.

Withdrawal Benefits

A member who leaves the service of the Fire Department prior to becoming eligible for retirement benefits shall be entitled to a refund of his contributions plus four percent interest.

Members have a vested interest in their accrued benefits from the retirement plan of fifty percent after ten years of service. For each year of service beyond ten years, a member shall be entitled to an additional ten percent. A member becomes one hundred percent vested in his accrued retirement benefit after the completion of fifteen years of service.

A member's accrued retirement benefit will be based on earnings and actual service at date of termination. The vested accrual benefit is payable upon Normal Retirement Age, age 55. In lieu of a monthly pension, a vested participant may elect upon termination to take a refund of his contributions with 4% interest.

Actuarial Assumptions

Development of Actuarial Assumptions

In determining costs for a retirement program, it is necessary to make certain assumptions as to the expected future experience that will take place within the program. These assumptions include the rates of mortality to be experienced by both the active, retired and widowed plan participants, the rates of termination of employment prior to retirement, the rates at which plan participants can be expected to take disability retirement, the age at which retirement will actually occur, the rates at which salaries will increase, the rate of investment return to be earned by the fund and the expenses to be incurred. The ultimate cost of any given retirement plan will depend upon actual plan experience.

It is possible to derive actuarial assumptions from the experience of the group under consideration. This is most often the case in very large groups. For plans of this size, the assumptions are best determined from the experience of similar groups, and standard published tables are available which can be used. Changes to assumptions will be considered when actual experience differs substantially and when estimates for the future suggest these changes.

Actuarial Assumptions for Valuation of Liabilities and Costs

Mortality Rate: RP-2000 Combined Mortality Table projected to 2023 using Scale AA, Sex-distinct.

Disability Rate: The following are examples of the probability that a participant will become disabled within one year. A disabled mortality assumption is also utilized. Duty-related disabilities are assumed to be 50% of all disabilities.

Age	Percentage
25	0.068%
40	0.230%
55	1.176%

Withdrawal Rate: The following are examples of the probability that a participant will terminate within one year for reasons other than death.

Age	Percentage
25	7.72%
40	5.15%
55	0.94%

Salary Scale: Assumes salaries increase at 4% per year. Below is the ratio of salary at normal retirement to salary at the following ages:

Age	Percentage
25	324%
40	180%

Actuarial Assumptions (continued)

Rate of Retirement: 50 % of all remaining active participants are assumed to retire each year following attainment of age 55 or the completion of 35 years of service, if later, but not beyond age 62.

Interest Rate:

Pre-Retirement: 7.0%
Post-Retirement: 7.0%

Marriage: It is assumed that 75% of the actives are married at death or retirement with spouses that are three years younger.

Other: The inclusion of accrued general leave in the benefit calculation is assumed to increase retirement benefits by 4%.

Actuarial Methods

Actuarial Cost Method

The Actuarial Cost Method used is known as the Projected Unit Credit Method. The method divides the cost of funding benefits into two parts: normal cost and past service liability. Normal cost is the present value of the projected normal retirement benefit divided by a participant's total service. Past service liability is the present value of the projected retirement benefit multiplied by the ratio of past service over total service. If the past liability were fully funded, the total annual cost would be normal cost.

Because liabilities under a pension plan are based on actuarial assumptions (mortality, investment return, etc.) which will never precisely coincide with actual experience, variations known as actuarial gains and losses will occur, determined each time an actuarial valuation of the plan is made. Such gains or losses are a component of the unfunded liability and are amortized to determine the recommended contribution.

Effective July 1, 2009, the amortization cost for any Unfunded Liability as of each valuation date is determined using a 30-year amortization period.

Actuarial Valuation of Asset Method

The Actuarial Value of Assets is determined at Market Value.

Valuation Date

July 1

Changes from Prior Report

Plan Provisions
No Changes.

Actuarial Cost Method
No Changes.

Actuarial Assumptions
No Changes.

Summary of Plan Participants

	June 30, 2011	June 30, 2012
1. ACTIVES		
a. Number	136[1]	137
b. Expected Annual Earnings	$ 6,118,232	$ 5,943,619
c. Average Expected Earnings	$ 44,987	$ 43,384
d. Average Current Age	40.9	40.5
e. Average Past Service	17.4	16.3
2. DEFERRED VESTED		
a. Number	5	4
b. Average Annual Deferred Pension	$ 12,459	$ 12,564
3. PARTICIPANTS IN PAY STATUS		
a. Retirees[2]	62[3]	69[4]
b. Surviving Widows	29	27
c. Average Annual Retiree Pension	$ 28,461	$ 29,910
d. Average Annual Widow Pension	$ 14,909	$ 14,712

[1] Excludes one active employee previously retired and receiving pension benefits.
[2] Includes 3 Disabled Retirees.
[3] Includes one active employee previously retired.
[4] Excludes two Alternate Payees receiving total annual benefits of $7,116 under QDROs applicable to two retired participants receiving benefits.

Statement of Assets

	Market Value	
	6/30/2011	6/30/2012
Assets		
Cash & Cash Equivalents	$ 5,473	$ 3,373
Net Accounts Receivable	154,342	128,229
Investments Held by Agent	36,415,394	36,555,176
Total Assets	$ 36,575,209	$ 36,686,778
Liabilities		
Accounts Payables	0	0
Total Liabilities	0	0
Net Assets	$ 36,575,209	$ 36,686,778

Statement of Income and Expenses

Net Assets at 7/1/2011			$ 36,575,209
Income			
Employer Contribution	$ 1,297,772		
Employee Contribution	118,586		
Other Contributions	168,173		
Investment Earnings	1,197,584		
Investment Expenses	(282,370)		
Total Net Income		$ 2,499,745	
Expenses			
Pension Payments	2,378,657		
Other Expenses	9,519		
Total Expenses		2,388,176	
Net Increase in Pension Trust Assets			111,569
Net Assets at 6/30/2012			$ 36,686,778

Plan Termination Liability

1. Assumptions

   a. Discount Rate: 7%

   b. Mortality Table:

      (1) RP-2000 Combined Mortality Table Projected to 2023 using Scale AA, Sex-distinct

      (2) Females assumed to be 3 years younger than their spouses

      (3) All Active Participants are 100% vested

2. Present Value of Accrued Benefits	$ 39,480,793
3. Market Value of Assets	36,686,778
4. Excess Assets/(Shortfall) = (3)-(2)	$ (2,794,015)

Summary of Actuarial Valuation results as of July 1, 2012

1.	Present Value of Future Benefits		
	a. Active Lives		
	(1) Retirement	$ 20,798,434	
	(2) Vesting	3,245,521	
	(3) Death	513,430	
	(4) Disability	2,184,473	
	(5) Total		26,741,858
	b. Deferred Vesteds		417,105
	c. Retirees		21,382,625
	d. Widows		3,421,280
	e. Total		51,962,868
2.	Present Value of Future Employee Contributions		881,687
3.	Accrued Liability		
	a. Active Lives		19,163,176
	b. Deferred Vesteds		417,105
	c. Retirees		21,382,625
	d. Widows		3,421,280
	e. Total		44,384,186
4.	Actuarial Value of Assets		36,686,778
5.	Actual Unfunded Liability / (Surplus) = [(3)-(4)]		7,697,408
6.	Increase in (3) Due to Method Change	0	
7.	Increase in (3) Due to Benefit Changes	0	
8.	Increase in (3) Due to Assumption Change	0	
9.	Expected Unfunded Liability	5,667,366	
10.	Gain or (Loss) = (9)-[(5)-(6)-(7)-(8)]		(2,020,042)
11.	Funding Requirements		
	a. Normal Cost		
	(1) Retirement	575,856	
	(2) Vesting	127,356	
	(3) Death	21,523	
	(4) Disability	78,503	
	(5) Total		803,238
	b. Less Expected Employee Contributions		(99,952)
	c. Net Employer Normal Cost = (a)-(b)		703,286
	d. Thirty Year Amortization of Unfunded Liability / (Surplus)		579,726
	e. Employer Funding Requirement at beginning of Fiscal Year		1,283,012

Analysis of Results

Investment Return

During our compilation of the plan's accounting over the prior year, we determined the approximate investment return over each period. We have summarized our results below and included results for the past 20 years.

Year	Estimated Annual Rate of Return	
1992	6.9%	
1993	7.9%	
1994	(2.6)%	
1995	16.3%	
1996	7.7%	
Five Year Average		7.1%
6/30/1998	8.4%	
6/30/1999	3.4%	
6/30/2000	2.4%	
6/30/2001	10.3%	
6/30/2002	6.5%	
Five Year Average		6.2%
6/30/2003	3.3%	
6/30/2004	7.7%	
6/30/2005	7.2%	
6/30/2006	4.8%	
6/30/2007	12.6%	
Five Year Average		7.1%
6/30/2008	(2.1)%	
6/30/2009	(12.9)%	
6/30/2010	10.9%	
6/30/2011	18.4%	
6/30/2012	2.5%	
Five Year Average		2.8%
Twenty Year Average		5.8%

Analysis of Results (continued)

Actual Earnings Increases

Total payroll over the past year decreased 2.9%; the total continuing active payroll increased by 4.0%, reflecting both merit and cost of living components for participants.

Retirement

Over the prior year, seven active participants retired and began receiving payments from the plan. In addition two Alternate Payees named under Qualified Domestic Relation Orders commenced receiving benefits.

Death

There were no deaths among active participants, one death among retirees (with a survivor benefit) and three deaths among widows.

Disabilities

No participants became disabled during the period.

Terminations

Two active participants terminated or transferred before the earliest retirement age, both participants received lump sum payouts.

New Participants

During the year ended June 30, 2012, nine new participants entered the Plan. Under closed group valuation methodology, no new participants are expected.

Actuarial Gain/Loss Analysis

Components of Gain:

- Loss on assets

Expected assets at 7/1/2012	$ 38,314,024	
Actual assets at 7/1/2012	36,686,778	
Gain/(Loss)		$ (1,627,246)

- Loss on liabilities

Expected accrued liability at 7/1/2012	$ 43,981,390	
Actual accrued liability at 7/1/2012	44,384,186	
Gain/(Loss)		$ (402,796)

Aggregate Gain /(Loss)		$ (2,030,042)

Government Accounting Standards Board Information (GASB Nos. 25 and 27)

A. Annual Pension Cost for Fiscal Year ending 6/30/2012

1. Annual Required Contribution	$ 1,141,384
2. Interest on Net Pension Obligation (Asset)	(301,767)
3. Amortization of Net Pension Obligation (Asset)	(335,849)
4. Annual Pension Cost = (1)+(2)-(3)	$ 1,175,466

B. Net Pension Obligation (Asset) as of 6/30/2012

1. Net Pension Obligation (Asset) at Beginning of Year	$ (4,310,950)
2. Actual Employer Contribution (including other contributions)	1,465,945
3. Annual Pension Cost	1,175,466
4. Net Pension Obligation 6/30/2012 = (1)-(2)+(3)	$ (4,601,429)
5. Increase/(Decrease) in NPO from Beginning of Period	$ (290,479)

C. Basic Information

1. Amortization Method: Level Dollar
2. Amortization Period: 30 years
3. Amortization Period: Open Method
4. The employer funding policy is based upon a 1974 City Ordinance (as subsequently modified) that requires an employer contribution of 19.425% of participating payroll. Employee contributions are mandatory at 1.775% of compensation. Contributions are assumed to be made uniformly throughout the year.

D. Trend Data

	Fiscal Year Ending		
	6/30/2013	6/30/2012	6/30/2011
1. Valuation Date	7/1/2012	7/1/2011	
7/1/2010			
2. Actuarial Value of Assets	$36,686,778	$36,575,209	$31,472,141[5]
3. Actuarial Accrued Liability	44,384,186	42,662,169	39,703,090
4. Unfunded Actuarial Accrued Liability / (Surplus)	7,697,408	6,086,960	8,230,949
5. Assets as % of Actuarial Accrued Liability	82.7%	85.7%	79.3%
6. Annual Covered Payroll	5,943,619	5,882,915	5,995,874
7. Unfunded Actuarial Liability as % of Payroll	129.5%	103.5%	137.3%

[5] Shown as reported for the July 1, 2010 valuation. This amount was later revised to be $31,418,072.

Government Accounting Standards Board Information (GASB Nos. 25 and 27) (continued)

E. Development of Annual Pension Cost for fiscal year ending 6/30/2013

1.	Annual Required Contribution with interest adjustment	$ 1,327,158
2.	Interest on Net Pension Obligation	(322,100)
3.	Amortization of Net Pension Obligation with interest adjustment	(358,478)
4.	Annual Pension Cost = (1)+(2)-(3)	$ 1,363,536

Age and Service Distribution

Schedule of Active Participant Data

	Completed Years of Service											
	< 1 Yr.		1-4 Yrs.		5-9 Yrs.		10-14 Yrs.		15-19 Yrs.		20-24 Yrs.	
Age Group	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.
0-24	2	-	2	-	0	-	0	-	0	-	0	-
25-29	3	-	9	-	11	-	0	-	0	-	0	-
30-34	1	-	6	-	8	-	5	-	1	-	0	-
35-39	0	-	1	-	2	-	8	-	3	-	0	-
40-44	0	-	0	-	1	-	1	-	7	-	8	-
45-49	0	-	0	-	0	-	0	-	3	-	10	-
50-54	0	-	1	-	0	-	0	-	2	-	2	-
55-59	0	-	0	-	0	-	0	-	0	-	0	-
60-64	0	-	0	-	0	-	0	-	0	-	0	-
65-69	0	-	0	-	0	-	0	-	0	-	0	-
70+	0	-	0	-	0	-	0	-	0	-	0	-
Total	**6**	-	**19**	-	**22**	-	**14**	-	**16**	-	**20**	-

	Completed Years of Service									
	25-29 Yrs.		30-34 Yrs.		35-39 Yrs.		40 Yrs. +		Total	
Age Group	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.
0-24	0	-	0	-	0	-	0	-	4	-
25-29	0	-	0	-	0	-	0	-	23	-
30-34	0	-	0	-	0	-	0	-	21	-
35-39	0	-	0	-	0	-	0	-	14	-
40-44	0	-	0	-	0	-	0	-	17	-
45-49	16	-	1	-	0	-	0	-	30	-
50-54	9	-	8	-	0	-	0	-	22	-
55-59	3	-	1	-	2	-	0	-	6	-
60-64	0	-	0	-	0	-	0	-	0	-
65-69	0	-	0	-	0	-	0	-	0	-
70+	0	-	0	-	0	-	0	-	0	-
Total	**28**	-	**10**	-	**2**	-	**0**	-	**137**	-

qualified
ERISA / IRS requirements for trust conformance

→ ordinance / trust

- city attorney?
- SHDR?
→