REPORT ON THE ACTUARIAL VALUATION OF THE REGISTERS OF DEEDS' SUPPLEMENTAL PENSION FUND PREPARED AS OF DECEMBER 31, 2009





December 16, 2010

Ms. Debra C. Bryan
Deputy Director
Department of State Treasurer
Retirement Systems Division
325 North Salisbury Street
Raleigh, NC 27603-1385

Dear Ms. Bryan:

We submit herewith our Report on the Actuarial Valuation of the Registers of Deeds' Supplemental Pension Fund, prepared as of December 31, 2009. The report has been prepared in accordance with North Carolina General Statute 161-50.

An investigation of the demographic assumptions, economic assumptions and other assumptions for the Local Governmental Employees' Retirement System (LGERS) was made during 2010. This valuation includes all assumption changes approved by the Board of Trustees as a result of this investigation.

An audit of the "Report on the Actuarial Valuation of the Registers of Deeds' Supplemental Pension Fund prepared as of December 31, 2007" was completed during 2010. Buck reviewed the findings of the audit report with the Retirement Systems Division and agreed to make certain changes to the valuation report. These changes have been included in this valuation.

The valuation has been prepared in accordance with the parameters of Statement Nos. 25 and 27 of the Governmental Accounting Standards Board. As provided in Section 161-50.2 of the General Statutes (as amended by Session Law 2007-245), contributions to support the Fund are equal to 1.50% of the monthly receipts collected pursuant to Article 1 of Chapter 161 of the General Statutes. The total annual required contribution (ARC) under GASB for the 2011-2012 fiscal year is \$0. However, since this Plan is a cost-sharing multiple employer plan, the amounts collected in accordance with the Statutes are suitable for use in the financial statements of the employers as the ARC under GASB 27.

The plan sponsor selected the assumptions used for the results in this report. I believe that these assumptions are reasonable and comply with the requirements of GASB Nos. 25 and 27. I prepared this report in accordance with the requirements of these standards.

I am an Enrolled Actuary, a Fellow of the Society of Actuaries and a Member of the American Academy of Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained in this report. This report has been prepared in accordance with all applicable Actuarial Standards of Practice, and I am available to answer questions about it.

The Table of Contents, which immediately follows, outlines the material contained in the report.

Respectfully submitted,

Richard A. Mackesey, FSA, EA, MAAA

Principal, Consulting Actuary

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REPORT ON THE ACTUARIAL VALUATION OF THE REGISTERS OF DEEDS' SUPPLEMENTAL PENSION FUND PREPARED AS OF DECEMBER 31, 2009

SECTION I - SUMMARY OF PRINCIPAL RESULTS

 This report, prepared as of December 31, 2009, presents the results of an overall actuarial valuation of the system. For convenience of reference, the principal results of the valuation and a comparison with the results of the previous valuation are summarized below.

TABLE I SUMMARY OF PRINCIPAL RESULTS

VALUATION DATE	12	2/31/2009		12/31/2008	
Active members included in valuation Number Reported compensation Valuation compensation	\$	100 6,092,173 6,259,228	\$	100 6,023,750 6,163,989	
Terminated vested participants Number		0		0	
Beneficiaries Number Annual allowances	\$	84 1,486,314	\$	86 1,503,183	
Assets: Market related actuarial value Market value		38,913,032 38,043,269	\$	37,212,564 36,371,826	
Unfunded accrued liability	\$ (17,073,438)	\$	(18,847,361)	
Fiscal Year Ending	Jun	June 30, 2012		June 30, 2011	
Annual required employer contribution: Normal Accrued liability Total	\$ 	636,670 (636,670) 0	\$ 	606,851 (606,851) 0	
Liquidation period		N/A*		N/A*	

^{*} If the annual required employer contribution (ARC) is based on 30 year amortization of the unfunded accrued liability, the ARC is less than \$0, which is not allowed under GASB 25/27. Therefore, the accrued liability contribution has been set such that the total employer ARC equals \$0.



- 2. Tables summarizing the membership of the system as of the valuation date are shown in Section II.
- 3. An allocation of investments by category is shown in Section III.
- 4. Comments on the valuation results are provided in Section IV.
- 5. Comments on the experience and actuarial gains during the valuation year are provided in Section V.
- 6. Accounting information to be disclosed in the financial statements of the System and the employer is provided in Section V.
- 7. Schedule A of this report presents a summary of the results of the valuation, including present and prospective assets and liabilities of the Fund as of December 31, 2009.
- 8. Schedule B of this report presents the development of the actuarial value of assets.
- 9. Schedule C of this report outlines the full set of actuarial assumptions and methods employed.
- 10. Schedule D gives a summary of the benefit and contribution provisions of the system.
- 11. Schedule E provides detailed tabulations of the membership of the system as of the valuation date.

SECTION II - MEMBERSHIP DATA

Data regarding the membership of the system for use as a basis for the valuation were furnished by the System's office. The following tables summarize the membership of the system as of December 31, 2009 upon which the valuation was based.

TABLE II

THE NUMBER AND REPORTED COMPENSATION OF ACTIVE MEMBERS INCLUDED IN THE VALUATION AS OF DECEMBER 31, 2009

GROUP	NUMBER	AVERAGE AGE	AVERAGE SERVICE	EPORTED IPENSATION
Males	17	53.0	11.0	\$ 1,298,267
Females	83	<u>54.9</u>	<u>20.6</u>	 4,793,906
Total	100	54.6	19.0	\$ 6,092,173



TABLE III

THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF BENEFICIARIES INCLUDED IN THE VALUATION AS OF DECEMBER 31, 2009

GROUP	NUMBER	AVERAGE AGE	ANNUAL RETIREMENT ALLOWANCES		
Males	15	69.6	\$	259,650	
Females	69	<u>70.9</u>		1,226,664	
Total	84	70.7	\$	1,486,314	

SECTION III – ASSET ALLOCATION

The following table shows an allocation of investments by category for the Register of Deeds' Supplemental Pension Fund as of December 31, 2009.

TABLE IV

ALLOCATION OF INVESTMENTS BY CATEGORY
FOR THE REGISTER OF DEEDS' SUPPLEMENTAL
PENSION FUND AS OF DECEMBER 31, 2009

Cash and Receivables	0.3%
Fixed Income (LTIF)	99.7
Public Equity	0.0
Other*	<u>0.0</u>
Total	100.0%

^{*} Real Estate, Alternatives, Inflation and Credit.

SECTION IV - COMMENTS ON VALUATION

- Schedule A of this report presents a summary of the results of the valuation, including present and prospective assets and liabilities of the Fund as of December 31, 2009.
- 2. The results of the valuation show that the Fund has total prospective liabilities of \$25,784,316 of which \$14,269,287 is for the prospective benefits payable on account of present beneficiaries and \$11,515,029 is for the prospective benefits payable on account of present active members. Against these liabilities, the



- Fund has present assets of \$38,913,032 leaving a balance of \$(13,128,716) as the present value of contributions to be made in the future.
- 3. The employer's contributions consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions totaling \$636,670 are required to provide the benefits of the Fund for the average new member and include the amount required for administrative expenses.
- 4. Prospective employer normal contributions have a present value of \$3,944,722. When this amount is subtracted from \$(13,128,716) which is the present value of total contributions, the result is an unfunded actuarial accrued liability of \$(17,073,438).

SECTION V - COMMENTS ON EXPERIENCE AND GAINS

The following table shows a detailed reconciliation of the change in unfunded accrued liability since the prior valuation.

RECONCILIATION OF CHANGE IN UNFUNDED ACCRUED LIABILITY
SINCE THE PRIOR VALUATION
(IN MILLIONS)

Unfunded accrued liability as of 12/31/08	\$ (18.8)
Normal cost during 2009	0.6
Reduction due to actual contributions during 2009	(0.8)
Interest on unfunded accrued liability, normal cost and contributions	(1.4)
Asset (gain)/loss	0.2
Accrued liability (gain)/loss	0.1
Change in economic, demographic and other assumptions	3.0
Unfunded accrued liability as of 12/31/09	\$ (17.1)



SECTION VI - ACCOUNTING INFORMATION

Statement Nos. 25 and 27 of the Governmental Accounting Standards Board (GASB) set forth certain items of information to be disclosed in the financial statements of the System and the employer. One such item is a distribution of the number of employees by type of membership, as follows:

NUMBER OF ACTIVE AND RETIRED PARTICIPANTS AS OF DECEMBER 31, 2009

GROUP	NUMBER
Retired participants and beneficiaries currently receiving benefits	84
Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits	0
Active participants Total	<u>100</u> 184

2. Another such item is the schedule of funding progress as shown below.

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation <u>Date</u>	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry Age (b)	Unfunded AAL (UAAL) (b-a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a)/c)
12/31/2004	\$24,262,625	\$12,240,374	\$(12,022,251)	198.2%	\$5,549,180	(216.6)%
12/31/2005	28,242,174	11,787,725	(16,454,449)	239.6	5,366,955	(306.6)
12/31/2006	32,371,059	17,375,253	(14,995,806)	186.3	5,558,147	(269.8)
12/31/2007	35,452,796	17,829,797	(17,622,999)	198.8	5,868,775	(300.3)
12/31/2008	37,212,564	18,365,203	(18,847,361)	202.6	6,023,750	(312.9)
12/31/2009	38,913,032	21,839,594	(17,073,438)	178.2	6,092,173	(280.3)

3. The annual required contribution (ARC) of the employer, determined in accordance with the parameters of GASB 25/27, is shown below. If the accrued liability contribution is based on amortization of the unfunded actuarial accrued liability of \$(17,073,438) over a 30-year period, the total employer ARC would be less than \$0, which is not allowed under GASB 25/27. Therefore, the accrued liability contribution has been set such that the total ARC equals \$0.



2011/2012 FISCAL YEAR ANNUAL REQUIRED EMPLOYER CONTRIBUTION RATES (ARC) BASED ON THE VALUATION AS OF DECEMBER 31, 2009

ANNUAL REQUIRED CONTRIBUTION (ARC)	AMOUNT		
Normal	\$ 636,670		
Accrued liability	<u>(636,670)</u>		
Total	\$ 0		

Since the Registers of Deeds' Supplemental Pension Fund is a cost-sharing multiple employer plan, the amounts collected in accordance with the Statutes are suitable for use in the financial statements of the employers as the annual required contribution (ARC) even though they may differ in total from the amounts shown above.

4. Additional information as of December 31, 2009 follows.

Valuation date	12/31/09		
Actuarial cost method	Entry age		
Amortization method	Level dollar closed		
Remaining amortization period	N/A*		
Asset valuation method	20% of market value plus 80% of expected actuarial value (not greater than 120% of market value and not less than 80% of market value)		
Actuarial assumptions:			
Investment rate of return**	5.75%		
Projected salary increases***	4.25% – 7.75%		
** Includes inflation of *** Includes inflation and productivity of	3.00% 3.50%		
Cost-of-living adjustments	N/A		

If the annual required employer contribution (ARC) is based on 30 year amortization of the unfunded accrued liability, the ARC is less than \$0, which is not allowed under GASB 25/27. Therefore, the accrued liability contribution has been set such that the total employer ARC equals \$0.



SCHEDULE A

RESULTS OF THE VALUATION AS OF DECEMBER 31, 2009

1.	Actuarial liabilities	
	Present value of prospective benefits payable in respect of: a. Present beneficiaries and terminated vested members b. Present active members c. Total actuarial liabilities	14,269,287 11,515,029 25,784,316
2.	Assets of the System	38,913,032
3.	Present value of future contributions (1)(c) – (2)	(13,128,716)
4.	Present value of future normal contributions by employers	3,944,722
5.	Present value of unfunded accrued liability contributions by employers (3) – (4)	(17,073,438)



SCHEDULE B

DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS FOR THE YEAR ENDING DECEMBER 31, 2009

1.	Actuarial Value of Assets as of December 31, 2008	\$ 37,212,564
2.	2009 Net Cash Flow a. Contributions b. Disbursements c. Net Cash Flow: (a) - (b)	 778,685 1,531,401 (752,716)
3.	Expected Investment Return: [(1) x .0725] + [(2)c x .03625]	2,670,625
4.	Expected Actuarial Value of Assets as of December 31, 2009: (1) + (2)c + (3)	39,130,473
5.	Market Value of Assets as of December 31, 2009	38,043,269
6.	Excess of Market Value over Expected Actuarial Value of Assets: (5) - (4)	(1,087,204)
7.	20% Adjustment towards Market Value: (6) x .20	(217,441)
8.	Preliminary Actuarial Value of Assets as of December 31, 2009: (4) + (7)	38,913,032
9.	Final Actuarial Value of Assets as of December 31, 2009: [(8) not less than 80% of (5) and not greater than 120% of (5)]	38,913,032
10.	Rate of investment return on actuarial value	6.66%
11.	Rate of investment return on market value	6.73%



SCHEDULE C

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

Assumptions are based on the experience investigation for LGERS prepared as of December 31, 2009 and adopted by the Board of Trustees on October 21, 2010.

INTEREST RATE: 5.75% per annum, compounded annually.

INFLATION: Both general and wage inflation are assumed to be 3.00% per annum.

PRODUCTIVITY INCREASE: 0.50% per annum.

SEPARATIONS FROM ACTIVE SERVICE: Representative values of the assumed rates of separation from active service are as follows:

,	ANNUAL RATES OF WITHDRAWAL			
Service	<u>Male</u>	<u>Female</u>		
0	.3000	.3000		
1	.1725	.2000		
2	.1450	.1600		
3	.1200	.1300		
4	.1000	.1250		

	ANNUAL RATES OF						
	Witho	drawal					
<u>Age</u>	and V	<u>'esting*</u>	Base M	Base Mortality**		Disability	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	
25	.0600	.0800	.0004	.0002	.0004	.0005	
30	.0600	.0700	.0006	.0003	.0010	.0009	
35	.0600	.0700	.0009	.0005	.0025	.0015	
40	.0400	.0500	.0012	.0007	.0045	.0030	
45	.0400	.0400	.0017	.0011	.0055	.0040	
50	.0400	.0400	.0024	.0017	.0080	.0048	
55	.0400	.0400	.0036	.0025	.0100	.0065	
60	.0400	.0400	.0059	.0039	.0100	.0085	
65			.0086	.0058			
69			.0109	.0073			

^{*} These rates apply only after five years of membership in the system.



^{**} Base mortality rates as of December 31, 2003.

RETIREMENTS: Representative values of the assumed rates of retirement from active service are as follows:

MALES

				Service			
Age	5	10	15	20	25	30	35
50				0.0500	0.0700	0.3000	0.3000
55				0.0400	0.1000	0.2500	0.1750
60	0.0800	0.0800	0.0800	0.0800	0.2750	0.4000	0.2500
65	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000	0.4000
70	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

FEMALES

200				Service			
Age	5	10	15	20	25	30	35
50				0.0700	0.0500	0.2500	0.2500
55				0.0500	0.1000	0.3250	0.1750
60	0.0900	0.0900	0.0900	0.0900	0.3000	0.4000	0.2750
65	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500
70	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500	0.2500
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

SALARY INCREASES: Representative values of the assumed annual rates of future salary increase are as follows:

Service	Annual Rate of Salary Increase
0	7.75%
5	6.50
10	5.45
15	5.20
20	5.00
25	5.00
30	5.00
35	5.00
40	4.50
45	4.25
50	4.25

DEATHS AFTER RETIREMENT: Representative values of the assumed post-retirement mortality rates as of December 31, 2003 prior to any mortality improvements are as follows:

Annual Rate of Death after Retirement

	Healthy	Retirees		ciaries of Members	Disabled	I Retirees	
Age	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	
55	.0064	.0035	.0061	.0044	.0277	.0176	
60	.0099	.0062	.0090	.0077	.0342	.0229	
65	.0165	.0104	.0149	.0125	.0407	.0296	
70	.0273	.0167	.0246	.0207	.0483	.0401	
75	.0469	.0281	.0422	.0341	.0596	.0558	
80	.0805	.0459	.0720	.0563	.0775	.0771	

MORTALITY IMPROVEMENTS: Representative values of the assumed mortality improvement rates (applied to pre-retirement mortality rate for active members and post-retirement mortality rates for healthy retirees and beneficiaries of deceased members) after retirements are as follows:

<u>Age</u>	Male <u>Projection Scale</u>	Female <u>Projection Scale</u>
25	0.010	0.014
30	0.005	0.010
35	0.005	0.011
40	0.008	0.015
45	0.013	0.016
50	0.018	0.017
55	0.019	0.008
60	0.016	0.005
65	0.014	0.005
70	0.015	0.005
75	0.014	0.008
80	0.010	0.007

DEATHS AFTER RETIREMENT (NON-DISABLED): According to the RP-2000 Mortality tables for retirees. These tables are set forward two years for male employees and unadjusted for female employees. These tables are also set forward one year for male beneficiaries of deceased members and set forward two years for female beneficiaries of deceased members. The base retiree RP-2000 tables have no rates prior to age 50. The active employee rates of RP-2000 are used for ages less than 50 prior to any adjustments for setbacks.

DEATH AFTER DISABILITY: According to the RP-2000 Mortality tables for disabled annuitants set back six years for males and set forward one year for females.



DEATHS PRIOR TO RETIREMENT: According to the RP-2000 Mortality tables for active employees. These tables are set forward two years for male employees and unadjusted for female employees. The base RP-2000 tables for active employees have no rates after age 70. A blend of active rates and retired rates are used from ages 70 to 80 prior to any set back and adjustments.

MORTALITY PROJECTION (NON-DISABLED): All mortality rates are projected from December 31, 2003 using Scale AA.

TIMING OF ASSUMPTIONS: All withdrawals, deaths, disabilities, retirements and salary increases are assumed to occur July 1 of each year.

ADMINISTRATIVE EXPENSES: Assumed to be 0.15% of the market value of assets at the beginning of each calendar year.

REPORTED COMPENSATION: Calendar year compensation as furnished by the system's office.

VALUATION COMPENSATION: Reported compensation adjusted to reflect the assumed rate of pay as of the valuation date.

VALUATION METHOD: Entry age normal cost method.

ASSET VALUATION METHOD: Actuarial value, as developed in Schedule B. The actuarial value of assets recognizes a portion of the difference between the market value of assets and the expected actuarial value of assets, based on the assumed valuation rate of return. The amount recognized each year is 20% of the difference between market value and expected actuarial value. The actuarial value of assets is not allowed to be greater than 120% of the market value of assets or less than 80% of the market value of assets.



SCHEDULE D

SUMMARY OF MAIN BENEFIT PROVISIONS

The Registers of Deeds' Supplemental Pension Fund was established October 1, 1987 for all county registers of deeds who are retired from the Local Governmental Employees' Retirement System or an equivalent locally sponsored plan.

BENEFITS

Service Retirement Allowance

Conditions for Allowance Retirement from the Local Governmental Employees' Retirement

System or equivalent locally sponsored plan with 10 or more

years of service as a register of deeds.

Amount of Allowance Benefit payable for the life of the member only, equal to 75% of a

registers of deeds equivalent annual salary immediately preceding retirement computed on the latest monthly base rate.

Maximum benefit is \$1,500 per month.

Deferred Vested Retirement Allowance

Conditions for Allowance Separation from service after completing at least 10 years of

service as a register of deeds.

Amount of Allowance Service Retirement Allowance described above commencing

upon retirement with the Local Governmental Retirement

System.

CONTRIBUTIONS

Employer Contributions 1.5% of the monthly receipts collected pursuant to Article 1 of

Chapter 161 of the General Statutes.

Employee Contributions None.



SCHEDULE E

TABLE 1

THE NUMBER AND AVERAGE REPORTED COMPENSATION OF ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE AS OF DECEMBER 31, 2009

SCHEDULE E

TABLE 2

THE DISTRIBUTION OF THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF BENEFICIARIES BY AGE AS OF DECEMBER 31, 2009

		Men			Women	
Age	Number		Amount	Number		Amount
50				1	\$	18,000
51				1		18,000
53				2		36,000
54				1		18,000
55				1		18,000
56	1		18,000			
57	3		54,000	2		36,000
58				1		18,000
59	100			1		18,000
60	1		18,000	2 2 2 3		36,000
61				2		36,000
62	1		18,000	2		36,000
63	1		18,000	3		54,000
64				5		90,000
65				3		54,000
66	- 2			1		18,000
67	1		18,000	1		18,000
68			40.000	1		18,000
69	1		18,000	3		52,650
70 71				4		72,000
71				1		18,000
73 74	4		40.000	3		54,000
74 75	1 1		18,000	2		36,000
76	1		18,000	1		18,000
76 77						18,000
78				2 2 2 3		36,000 36,000
79				2		36,000
80				2		54,000
81				2		34,902
83				1		18,000
84				1		18,000
85				4		70,902
86	2		36,000	1		16,398
87	1		18,000	1		18,000
88			,	1		18,000
89	1		7,650	·		. 5,550
90			,	1		18,000
91				2		36,000
94				1		7,812
Total	15	\$	259,650	69	\$	1,226,664