



**October 26, 2017**

Registers of Deeds' Supplemental Pension Fund  
Principal Results of Actuarial Valuation  
as of December 31, 2016

**Board of Trustees Meeting  
David Driscoll and Mike Ribble**

# Registers of Deeds' Supplemental Pension Fund

## Principal Results of December 31, 2016 Valuation

Valuation Results as of	12/31/2016	12/31/2015
Active Members		
Number	100	100
Reported Compensation	\$ 5,810,850	\$ 6,343,941
Valuation Compensation**	\$ 6,540,811	\$ 6,586,044
Retired Members and Survivors of Deceased Members Currently Receiving Benefits		
Number	103	96
Annual Allowances	\$ 1,852,650	\$ 1,726,650
Assets		
Actuarial Value (AVA)	\$ 48,875,624	\$ 48,302,937
Market Value	\$ 48,233,622	\$ 46,975,034
Actuarial Accrued Liability (AAL)	\$ 31,627,960	\$ 30,980,364
Unfunded Accrued Liability (AAL-AVA)	\$ (17,247,664)	\$ (17,322,573)
Funded Ratio (AVA/AAL)***	154.5%	155.9%

\*\* Reported compensation adjusted to reflect the assumed rate of pay increase prior to the valuation date

\*\*\* The Funded Ratio on a Market Value of Assets basis is 152.5% at December 31, 2016

# Registers of Deeds' Supplemental Pension Fund Principal Results of December 31, 2016 Valuation

Contributions for Fiscal Year Ending	6/30/2019	6/30/2018
Actuarially Determined Employer Contribution:		
Normal Cost	\$ 921,347	\$ 914,794
Accrued Liability	<u>(921,347)</u>	<u>(914,794)</u>
Total	\$ 0	\$ 0
Liquidation Period	N/A*	N/A*

- \* If the actuarially determined employer contribution (ADEC) is based on 30 year amortization of the unfunded accrued liability, the ADEC is less than \$0, which is not a permissible result. Therefore, the accrued liability contribution has been set such that the total employer ADEC equals \$0.

Note: Actual contributions to support the Fund are equal to 1.5% of the monthly receipts collected pursuant to Article 1 of Chapter 161 of the General Statutes (about \$854,000 for calendar year 2016).

# Certification



The assumptions, methods, and plan provisions used in the results presented in this presentation were provided in October 2017 in the “Report on the Annual Valuation of the Registers of Deeds’ Supplemental Pension Fund prepared as of December 31, 2016.”

The results were prepared under the direction of Michael Ribble and David Driscoll who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. These results have been prepared in accordance with all applicable Actuarial Standards of Practice, and we are available to answer questions about them.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law.

Michael A. Ribble, FSA, EA, MAAA  
Principal, Consulting Actuary

David Driscoll, FSA, EA, MAAA, FCA  
Principal, Consulting Actuary

# Registers of Deeds' Supplemental Pension Fund

Report on the Annual Valuation  
Prepared as of December 31, 2016

October 2017

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Document Version: 1.0 (November 2016).

October 12, 2017

Board of Trustees  
North Carolina Local Governmental  
Employees' Retirement System  
3200 Atlantic Avenue  
Raleigh, NC 27604

Members of the Board:

We submit herewith our report on the actuarial valuation of the Registers of Deeds' Supplemental Pension Fund (referred to as the "Fund"), prepared as of December 31, 2016. The report has been prepared in accordance with North Carolina General Statute 161-50.

The primary purpose of the valuation report is to determine the required employer contribution rates, to describe the current financial condition of the Fund, and to analyze changes in such condition. In addition, the report provides information that the Office of the State Controller (OSC) requires for its Comprehensive Annual Financial Report (CAFR) and it summarizes census data. Use of this report for any other purposes or by anyone other than OSC and its auditors, or North Carolina Retirement Systems Division and Department of State Treasurer Staff may not be appropriate and may result in mistaken conclusions because of failure to understand applicable assumptions, methods, or inapplicability of the report for that purpose. The attached pages should not be provided without a copy of this cover letter. Because of the risk of misinterpretation of actuarial results, you should ask Conduent to review any statement you wish to make on the results contained in this report. Conduent will not accept any liability for any such statement made without prior review.

The valuation is based upon membership data and financial information as furnished by the Retirement Systems Division and the Financial Operations Division and as summarized in this report. Although reviewed for reasonableness and consistency with the prior valuation, these elements have not been audited by Conduent and we cannot certify as to the accuracy and completeness of the data supplied. The valuation is also based on benefit and contribution provisions as presented in this report. If you have reason to believe that the plan provisions are incorrectly described, that important plan provisions relevant to this valuation are not described, or that conditions have changed since the calculations were made, you should contact the authors of this actuarial report prior to relying on this information.

The valuation is further based on the actuarial valuation assumptions, approved by the Board of Trustees, as presented in this report. We believe that these assumptions are appropriate and reasonable and also comply with the requirements of GASB Statement No. 67. We prepared this valuation in accordance with the requirements of this standard and in accordance with all applicable ASOPs.

The latest assumptions were adopted for use beginning with the December 31, 2015 actuarial valuation, based on the experience study prepared as of December 31, 2014 and adopted by the Board of Trustees on April 21, 2016. The economic assumptions with respect to investment yield, salary increase and inflation have been based upon a review of the existing portfolio structure as well as recent and anticipated experience.

Where presented, references to “funded ratio” and “unfunded accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities. In various places in the report the results also show funded ratios and unfunded liabilities based upon varying sets of assumptions as well as market values of assets as that is required for certain disclosure information required per accounting rules or statutes. Where this has been done it has been clearly indicated.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, Conduent performed no analysis of the potential range of such future differences, except for some limited analysis in financial projections or required disclosure information.

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.

Respectfully submitted,



Michael A. Ribble, FSA, EA, MAAA  
Principal, Consulting Actuary



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## Section 1: Summary of Principal Results

1. This report, prepared as of December 31, 2016, presents the results of the 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 1: Summary of Principal Results**

Valuation Results as of	12/31/2016	12/31/2015
Active Members		
Number	100	100
Reported Compensation	\$ 5,810,850	\$ 6,343,941
Valuation Compensation**	\$ 6,540,811	\$ 6,586,044
Retired Members and Survivors of Deceased Members Currently Receiving Benefits		
Number	103	96
Annual Allowances	\$ 1,852,650	\$ 1,726,650
Assets		
Actuarial Value (AVA)	\$ 48,875,624	\$ 48,302,937
Market Value	\$ 48,233,622	\$ 46,975,034
Actuarial Accrued Liability (AAL)	\$ 31,627,960	\$ 30,980,364
Unfunded Accrued Liability (AAL-AVA)	\$ (17,247,664)	\$ (17,322,573)
Funded Ratio (AVA/AAL)***	154.5%	155.9%
Contributions for Fiscal Year Ending	6/30/2019	6/30/2018
Actuarially Determined Employer Contribution:		
Normal Cost	\$ 921,347	\$ 914,794
Accrued Liability	<u>(921,347)</u>	<u>(914,794)</u>
Total	\$ 0	\$ 0
Liquidation Period	N/A*	N/A*

\* If the actuarially determined employer contribution (ADEC) is based on 30 year amortization of the unfunded accrued liability, the ADEC is less than \$0, which is not a permissible result. Therefore, the accrued liability contribution has been set such that the total employer ADEC equals \$0.

\*\* Reported compensation adjusted to reflect the assumed rate of pay increase prior to the valuation date.

\*\*\* The Funded Ratio on a Market Value of Assets basis is 152.5% at December 31, 2016.

## Section 1: Summary of Principal Results

2. Tables summarizing the membership of the system as of the valuation date are shown in Section 2.
3. An allocation of investments by category is shown in Section 3.
4. Comments on the valuation results are provided in Section 4.
5. Comments on the experience and actuarial gains/losses during the valuation year are provided in Section 5.
6. Accounting information to be disclosed in the financial statements of the System and the employer is provided in Section 6.
7. Appendix 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, 2016.
8. Appendix B of this report presents the development of the actuarial value of assets.
9. Appendix C of this report outlines the full set of actuarial assumptions and methods employed.
10. Appendix D gives a summary of the benefit and contribution provisions of the system.
11. Appendix E provides the projection of cash flows used to determine the discount rate under GASB Statement No. 67.
12. Appendix F provides detailed tabulations of the membership of the system as of the valuation date.

## Section 2: 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, 2016 upon which the valuation was based.

**Table 2: Active Member Data**

Group	Member Count	Average Age	Average Service	Reported Compensation
Males	24	54.63	13.56	\$ 1,545,824
Females	<u>76</u>	<u>54.37</u>	<u>19.44</u>	<u>4,265,026</u>
Total	100	54.43	18.03	\$ 5,810,850

**Table 3: Data for Members Currently Receiving Benefits**

Group	Member Count	Average Age	Annual Retirement Allowances
Males	14	73.38	\$ 252,000
Females	<u>89</u>	<u>70.75</u>	<u>1,600,650</u>
Total	103	71.11	\$ 1,852,650

## Section 3: Asset Allocation

The following table shows an allocation of investments by category for the Register of Deeds' Supplemental Pension Fund as of December 31, 2016.

**Table 4: Allocation of Investments by Category for the Register of Deeds' Supplemental Pension Fund as of December 31, 2016**

Cash and Receivables	0.4%
Fixed Income (LTIF)	99.6%
Public Equity	0.0%
Other*	<u>0.0%</u>
Total	100.0%

\* Real Estate, Alternatives, Inflation and Credit.

## Section 4: Comments on Valuation

Appendix 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, 2016.

The results of the valuation show that the Fund has total prospective liabilities of \$38,357,133 of which \$22,479,286 is for the prospective benefits payable on account of retired members currently receiving benefits and \$15,877,847 is for the prospective benefits payable on account of present active members. Against these liabilities, the Fund has present assets of \$48,875,624 leaving a balance of \$(10,518,491) as the present value of contributions to be made in the future.

The employer's contributions consist of normal contributions and accrued liability contributions. The valuation indicates that employer normal contributions totaling \$921,347 are required to provide the benefits of the Fund for the average new member and include the amount required for administrative expenses.

Prospective employer normal contributions have a present value of \$6,729,173. When this amount is subtracted from \$(10,518,491) which is the present value of total contributions, the result is an unfunded actuarial accrued liability of \$(17,247,664).

## Section 5: Comments on Experience and Gains/Losses

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

**Table 5: Reconciliation of Change in Unfunded Accrued Liability Since the Prior Valuation**  
(in millions)

Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2015	\$ (17.3)
Normal Cost during 2016	0.8
Reduction due to Actual Contributions during 2016	(0.9)
Interest on UAAL, Normal Cost, and Contributions	(0.6)
Asset (Gain)/Loss	0.3
Actuarial Accrued Liability (Gain)/Loss	0.5
Impact of Assumption Changes	<u>0.0</u>
Unfunded Actuarial Accrued Liability (UAAL) as of 12/31/2016	\$ (17.2)

## Section 6: Accounting Information

The section contains the accounting information for Governmental Accounting Standards Board (GASB) Statement No. 67 for fiscal year ending June 30, 2017 based on a valuation date of December 31, 2016.

Please note GASB Statement No. 67 (Financial Reporting for Pension Plans) is applicable for fiscal years ending 2014 and later.

The June 30, 2017 total pension liability presented in this section was determined by an actuarial valuation as of December 31, 2016, based on the assumptions, methods and plan provisions described in this report. The actuarial cost method used to develop the total pension liability is the Entry Age Normal Cost method, as required by GASB Statement No. 67.

GASB Statement No. 67 set forth certain items of information to be disclosed in the financial statements of the Plan. The tables below provide a distribution of the number of employees by type of membership.

**Table 6: Number of Active and Retired Participants  
as of December 31, 2016**

Group	Number
Retired members and survivors of deceased members currently receiving benefits	103
Terminated members and survivors of deceased members entitled to benefits but not yet receiving benefits	0
Active participants	<u>100</u>
Total	203



## Section 6: Accounting Information

GASB Statement No. 67 set forth certain items of information to be disclosed in the financial statements of the Plan. The tables below provide the schedule of changes in Net Pension Liability (Asset).

**Table 7: Schedule of Changes in Net Pension Liability (Asset)**

Calculation as of	June 30, 2017
<b>Total Pension Liability</b>	
Service Cost	\$ 860,000
Interest	1,164,000
Changes of Benefit Terms	0
Difference between Expected and Actual Experience	440,000
Change of Assumptions	0
Benefit Payments, including Refund of Member Contributions	(1,793,000)
Net Change in Total Pension Liability	\$ 671,000
Total Pension Liability - Beginning of Year	\$ 31,072,000
Total Pension Liability - End of Year	\$ 31,743,000
<b>Plan Fiduciary Net Position</b>	
Employer Contributions	\$ 869,000
Member Contributions	0
Net Investment Income	(13,000)
Benefit Payments, including Refund of Member Contributions	(1,793,000)
Administrative Expenses	(19,000)
Other	0
Net Change in Fiduciary Net Position	\$ (956,000)
Plan Fiduciary Net Position - Beginning of Year	\$ 49,768,000
Plan Fiduciary Net Position - End of Year	\$ 48,812,000

**Table 8: Net Pension Liability (Asset)**

Calculation as of	June 30, 2017	June 30, 2016
Total Pension Liability	\$ 31,743,000	\$ 31,072,000
Plan Fiduciary Net Position	48,812,000	49,768,000
Net Pension Liability (Asset)	\$ (17,069,000)	\$ (18,696,000)
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	153.77%	160.17%

## Section 6: Accounting Information

The table below is the sensitivity of the net pension liability to changes in the discount rate.

**Table 9: Sensitivity of the Net Pension Liability (Asset) at June 30, 2017 to Changes in the Discount Rate**

	1% Decrease	Current	1% Increase
Discount Rate	2.75%	3.75%	4.75%
Net Pension Liability (Asset)	(13,416,000)	(17,069,000)	(20,141,000)

The discount rate used to measure the total pension liability was 3.75%. The projection of cash flows used to determine the discount rate assumed that System contributions will continue to follow the current funding policy. Based on those assumptions, the System's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Please see Appendix E for additional detail.

The table below provides the methods and assumptions used to calculate the actuarially determined contribution rate.

**Table 10: Additional Information for GASB Statement No. 67**

Valuation Date	12/31/2016
Actuarial Cost Method	Entry Age
Amortization Method	Level dollar closed
Amortization Period	N/A*
Asset Valuation Method	Asset returns in excess of or less than the expected return on market value of assets reflected over a five-year period (not greater than 120% of market value and not less than 80% of market value)
Actuarial Assumptions	
Investment Rate of Return**	3.75%
Projected Salary Increases***	3.50% - 7.75%
** Includes Inflation of	3.00%
*** Includes Inflation of and productivity of	3.50%
Cost-of-living Adjustments	N/A

- \* If the actuarially determined employer contribution (ADEC) is based on 30 year amortization of the unfunded accrued liability, the ADEC is less than \$0, which is not a permissible result. Therefore, the accrued liability contribution has been set such that the total employer ADEC equals \$0.

## Appendix A: Results of the Valuation

Valuation Results as of	12/31/2016
1. Present Value of Future Benefits	
a. Members Currently Receiving Benefits	\$ 22,479,286
b. Active Members	<u>15,877,847</u>
c. Total Actuarial Liabilities	\$ 38,357,133
2. Actuarial Value of Assets	\$ 48,875,624
3. Present Value of Future Contributions (1c) - (2)	\$ (10,518,491)
4. Present Value of Future Normal Contributions by Employers	<u>6,729,173</u>
5. Present Value of Unfunded Accrued Liability Contributions by Employers (3) - (4)	\$ (17,247,664)

## Appendix B: Development of Actuarial Value of Assets

Asset Data as of	12/31/2016
Beginning of Year Market Value of Assets	\$ 46,975,034
Contributions	853,599
Benefit Payments	<u>(1,781,581)</u>
Net Cash Flow	(927,982)
Expected Investment Return	1,744,164
Expected End of Year Market Value of Assets	47,791,216
End of Year Market Value of Assets	48,233,622
Excess of Market Value over Expected Market Value of Assets	442,406
80% of 2016 Asset Gain/(Loss)	353,925
60% of 2015 Asset Gain/(Loss)	(995,927)
40% of 2014 Asset Gain/(Loss)	N/A
20% of 2013 Asset Gain/(Loss)	<u>N/A</u>
Total Deferred Asset Gain/(Loss)	(642,002)
Preliminary End of Year Actuarial Value of Assets	48,875,624
Final End of Year Actuarial Value of Assets (not less than 80% and not greater than 120% of Market Value)	48,875,624
Estimated Net Investment Return on Actuarial Value	3.14%
Estimated Net Investment Return on Market Value	4.70%

**Commentary:** The actuarial value of assets smooths investment gains/losses resulting in less volatility in the employer contribution. The asset valuation method recognizes asset returns in excess of or less than the expected return on the market value of assets over a five-year period.

The continued deferral of losses resulted in an actuarial value of asset return for calendar year 2016 of 3.14% and a recognized actuarial asset loss of \$293,000 during 2016.

## Appendix C: Actuarial Assumptions and Methods

Assumptions are based on the experience investigation prepared as of December 31, 2014 and adopted by the Board of Trustees on April 21, 2016 for use beginning with the December 31, 2015 annual actuarial valuation.

**Interest Rate:** 3.75% per annum, compounded annually.

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

**Real Wage Growth:** 0.50% per annum.

**Separations From Active Service:** Representative values of the assumed rates of separation from active service are as follows:

<u>Service</u>	<u>Annual Rate of Withdrawal</u>	
	<u>Male</u>	<u>Female</u>
0	.1850	.2050
1	.1550	.1750
2	.1300	.1500
3	.1050	.1250
4	.0850	.1050

<u>Age</u>	<u>Annual Rates of</u>					
	<u>Withdrawal and Vesting*</u>		<u>Base Mortality**</u>		<u>Disability</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
25	.0750	.1000	.0005	.0002	.0004	.0005
30	.0600	.0900	.0005	.0002	.0005	.0005
35	.0450	.0650	.0005	.0003	.0005	.0005
40	.0400	.0500	.0006	.0004	.0030	.0020
45	.0400	.0450	.0010	.0007	.0040	.0030
50	.0400	.0450	.0017	.0011	.0060	.0035
55	.0400	.0450	.0028	.0017	.0080	.0060
60	.0400	.0450	.0047	.0024	.0080	.0060
65			.0083	.0037		
69			.0125	.0057		

\* These rates apply only after five years of membership in the system.

\*\* Base mortality rates as of 2014.

## Appendix C: Actuarial Assumptions and Methods

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

**Males**

Age	Service						
	5	10	15	20	25	30	35
50				0.0300	0.0700	0.2750	0.1500
55				0.0500	0.1000	0.2500	0.1500
60	0.1000	0.1000	0.1000	0.1000	0.2750	0.3000	0.2500
65	0.3000	0.3000	0.3000	0.3000	0.3500	0.3500	0.3500
70	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000	0.2000
75	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000	1.0000

**Females**

Age	Service						
	5	10	15	20	25	30	35
50				0.0450	0.0600	0.3000	0.2000
55				0.0600	0.0850	0.3000	0.2000
60	0.1100	0.1100	0.1100	0.1100	0.3000	0.3500	0.2500
65	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500	0.3500
70	0.1500	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	6.00
10	4.95
15	4.20
20	3.75
25	3.50
30	3.50
35	3.50
40	3.50
45	3.50
50	3.50

## Appendix C: Actuarial Assumptions and Methods

**Deaths After Retirement:** Representative values of the assumed post-retirement mortality rates as of 2014 prior to any mortality improvements are as follows:

<b>Annual Rate of Death after Retirement</b>				
<u>Age</u>	<u>Retirees (Healthy at Retirement)</u>		<u>Retirees (Disabled at Retirement)</u>	
	<u>Male</u>	<u>Female</u>	<u>Male</u>	<u>Female</u>
55	.0066	.0029	.0241	.0143
60	.0089	.0041	.0274	.0168
65	.0127	.0064	.0326	.0207
70	.0193	.0102	.0416	.0279
75	.0309	.0165	.0559	.0406
80	.0604	.0404	.0789	.0604

**Deaths After Retirement (Healthy Members at Retirement):** Mortality rates are based on the RP-2014 Total Data Set for Healthy Annuitants Mortality Table. Rates for male members are multiplied by 115% for ages 50-78 and by 135% for ages greater than 78. Rates for female members are multiplied by 79% for ages 50-78 and by 116% for ages greater than 78. The RP-2014 annuitant tables have no rates prior to age 50. The RP-2014 Total Data Set Employee Mortality Table (with no adjustments) is used for ages less than 50.

**Death After Retirement (Disabled Members at Retirement):** Mortality rates are based on the RP-2014 Total Data Set for Disabled Annuitants Mortality Table. Rates for male members are multiplied by 103% for all ages. Rates for female members are multiplied by 99% for all ages.

**Deaths Prior to Retirement:** Mortality rates are based on the RP-2014 Total Data Set Employee Mortality Table.

**Mortality Projection (Non-Disabled):** All mortality rates are projected from 2014 using generational improvement with Scale MP-2015.

**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.

**Actuarial Cost Method:** Entry age normal cost method.

## Appendix C: Actuarial Assumptions and Methods

**Asset Valuation Method:** Actuarial value, as developed in Appendix B. The actuarial value of assets is based upon a smoothed market value method. Under this method, asset returns in excess of or less than the expected return on market value of assets will be reflected in the actuarial value of assets over a five-year period. The calculation of the Actuarial Value of Assets is based on the following formula:

$$MV - 80\% \times G/(L)_1 - 60\% \times G/(L)_2 - 40\% \times G/(L)_3 - 20\% \times G/(L)_4$$

MV = the market value of assets as of the valuation date

$G/(L)_i$  = the asset gain or (loss) for the i-th year preceding the valuation date

**Changes Since Prior Valuation:** None.



## Appendix D: Summary of Main Plan 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.
<b>Changes Since Prior Valuation</b>	None.

## Appendix E: GASB 67 Fiduciary Net Position Projection

**Table E-1: Projection of Fiduciary Net Positions**  
(in thousands)

Calendar Year	Beginning Fiduciary Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	Ending Fiduciary Position
2017	\$ 48,234	\$ 0	\$ 0	\$ 1,903	\$ 74	1,772	\$ 48,029
2018	48,029	0	0	1,901	73	1,765	47,820
2019	47,820	0	0	1,917	73	1,755	47,585
2020	47,585	0	0	1,943	73	1,747	47,316
2021	47,316	0	0	1,986	72	1,736	46,994
2022	46,994	0	0	2,008	72	1,724	46,638
2023	46,638	0	0	2,041	71	1,710	46,236
2024	46,236	0	0	2,074	71	1,694	45,785
2025	45,785	0	0	2,115	70	1,676	45,276
2026	45,276	0	0	2,172	69	1,657	44,692
2027	44,692	0	0	2,188	68	1,634	44,070
2028	44,070	0	0	2,195	67	1,611	43,419
2029	43,419	0	0	2,200	66	1,586	42,739
2030	42,739	0	0	2,189	65	1,562	42,047
2031	42,047	0	0	2,185	64	1,534	41,332
2032	41,332	0	0	2,157	63	1,509	40,621
2033	40,621	0	0	2,123	62	1,482	39,918
2034	39,918	0	0	2,076	61	1,458	39,239
2035	39,239	0	0	2,020	60	1,432	38,591
2036	38,591	0	0	1,956	59	1,410	37,986
2037	37,986	0	0	1,888	58	1,388	37,428
2038	37,428	0	0	1,822	57	1,369	36,918
2039	36,918	0	0	1,746	56	1,351	36,467
2040	36,467	0	0	1,668	56	1,336	36,079
2041	36,079	0	0	1,589	55	1,322	35,757
2042	35,757	0	0	1,510	55	1,313	35,505
2043	35,505	0	0	1,434	54	1,303	35,320
2044	35,320	0	0	1,353	54	1,299	35,212
2045	35,212	0	0	1,272	54	1,296	35,182
2046	35,182	0	0	1,192	54	1,296	35,232
2047	35,232	0	0	1,114	54	1,300	35,364
2048	35,364	0	0	1,038	54	1,306	35,578
2049	35,578	0	0	964	54	1,315	35,875
2050	35,875	0	0	892	55	1,327	36,255
2051	36,255	0	0	824	55	1,343	36,719
2052	36,719	0	0	758	56	1,362	37,267
2053	37,267	0	0	695	57	1,383	37,898
2054	37,898	0	0	636	58	1,409	38,613
2055	38,613	0	0	579	59	1,436	39,411
2056	39,411	0	0	526	60	1,466	40,291
2057	40,291	0	0	476	62	1,502	41,255
2058	41,255	0	0	429	63	1,537	42,300
2059	42,300	0	0	385	65	1,578	43,428
2060	43,428	0	0	345	66	1,621	44,638
2061	44,638	0	0	307	68	1,667	45,930
2062	45,930	0	0	272	70	1,717	47,305
2063	47,305	0	0	239	72	1,767	48,761
2064	48,761	0	0	209	75	1,824	50,301
2065	50,301	0	0	182	77	1,881	51,923
2066	51,923	0	0	158	79	1,943	53,629

## Appendix E: GASB 67 Fiduciary Net Position Projection

**Table E-1: Projection of Fiduciary Net Positions (continued)**  
(in thousands)

Calendar Year	Beginning Fiduciary Position	Member Contributions	Employer Contributions	Benefit Payments	Administrative Expenses	Investment Earnings	Ending Fiduciary Position
2067	\$ 53,629	\$ 0	\$ 0	\$ 135	\$ 82	2,007	\$ 55,419
2068	55,419	0	0	115	85	2,074	57,293
2069	57,293	0	0	97	88	2,145	59,253
2070	59,253	0	0	81	91	2,219	61,300
2071	61,300	0	0	68	94	2,296	63,434
2072	63,434	0	0	56	97	2,376	65,657
2073	65,657	0	0	46	100	2,460	67,971
2074	67,971	0	0	37	104	2,546	70,376
2075	70,376	0	0	29	108	2,637	72,876
2076	72,876	0	0	24	111	2,730	75,471
2077	75,471	0	0	19	115	2,828	78,165
2078	78,165	0	0	15	119	2,929	80,960
2079	80,960	0	0	11	124	3,034	83,859
2080	83,859	0	0	9	128	3,142	86,864
2081	86,864	0	0	6	133	3,255	89,980
2082	89,980	0	0	5	137	3,372	93,210
2083	93,210	0	0	4	142	3,493	96,557
2084	96,557	0	0	2	148	3,618	100,025
2085	100,025	0	0	2	153	3,748	103,618
2086	103,618	0	0	1	158	3,883	107,342
2087	107,342	0	0	1	164	4,022	111,199
2088	111,199	0	0	0	170	4,166	115,195

## Appendix E: GASB 67 Fiduciary Net Position Projection

**Table E-2: Actuarial Present Value of Projected Benefit Payments**  
(in thousands)

Calendar Year	Beginning Fiduciary Position	Benefit Payments	Funded Benefit Payments	Unfunded Benefit Payments	Present Value of Benefit Payments		
					Funded Payments at 3.75%	Unfunded Payments at 3.13%	Using Single Discount Rate of 3.75%
2017	\$ 48,234	\$ 1,903	\$ 1,903	\$ 0	\$ 1,868	\$ 0	\$ 1,868
2018	48,029	1,901	1,901	0	1,799	0	1,799
2019	47,820	1,917	1,917	0	1,748	0	1,748
2020	47,585	1,943	1,943	0	1,708	0	1,708
2021	47,316	1,986	1,986	0	1,683	0	1,683
2022	46,994	2,008	2,008	0	1,640	0	1,640
2023	46,638	2,041	2,041	0	1,607	0	1,607
2024	46,236	2,074	2,074	0	1,574	0	1,574
2025	45,785	2,115	2,115	0	1,547	0	1,547
2026	45,276	2,172	2,172	0	1,531	0	1,531
2027	44,692	2,188	2,188	0	1,487	0	1,487
2028	44,070	2,195	2,195	0	1,437	0	1,437
2029	43,419	2,200	2,200	0	1,389	0	1,389
2030	42,739	2,189	2,189	0	1,332	0	1,332
2031	42,047	2,185	2,185	0	1,281	0	1,281
2032	41,332	2,157	2,157	0	1,219	0	1,219
2033	40,621	2,123	2,123	0	1,157	0	1,157
2034	39,918	2,076	2,076	0	1,090	0	1,090
2035	39,239	2,020	2,020	0	1,022	0	1,022
2036	38,591	1,956	1,956	0	954	0	954
2037	37,986	1,888	1,888	0	888	0	888
2038	37,428	1,822	1,822	0	826	0	826
2039	36,918	1,746	1,746	0	763	0	763
2040	36,467	1,668	1,668	0	702	0	702
2041	36,079	1,589	1,589	0	645	0	645
2042	35,757	1,510	1,510	0	591	0	591
2043	35,505	1,434	1,434	0	541	0	541
2044	35,320	1,353	1,353	0	492	0	492
2045	35,212	1,272	1,272	0	445	0	445
2046	35,182	1,192	1,192	0	402	0	402
2047	35,232	1,114	1,114	0	362	0	362
2048	35,364	1,038	1,038	0	326	0	326
2049	35,578	964	964	0	291	0	291
2050	35,875	892	892	0	260	0	260
2051	36,255	824	824	0	231	0	231
2052	36,719	758	758	0	205	0	205
2053	37,267	695	695	0	181	0	181
2054	37,898	636	636	0	160	0	160
2055	38,613	579	579	0	140	0	140
2056	39,411	526	526	0	123	0	123
2057	40,291	476	476	0	107	0	107
2058	41,255	429	429	0	93	0	93
2059	42,300	385	385	0	81	0	81
2060	43,428	345	345	0	70	0	70
2061	44,638	307	307	0	60	0	60
2062	45,930	272	272	0	51	0	51
2063	47,305	239	239	0	43	0	43
2064	48,761	209	209	0	36	0	36
2065	50,301	182	182	0	31	0	31
2066	51,923	158	158	0	26	0	26

## Appendix E: GASB 67 Fiduciary Net Position Projection

**Table E-2: Actuarial Present Value of Projected Benefit Payments (continued)**  
(in thousands)

Calendar Year	Beginning Fiduciary Position	Benefit Payments	Funded Benefit Payments	Unfunded Benefit Payments	Present Value of Benefit Payments		
					Funded Payments at 3.75%	Unfunded Payments at 3.13%	Using Single Discount Rate of 3.75%
2067	\$ 53,629	\$ 135	\$ 135	\$ 0	\$ 21	\$ 0	\$ 21
2068	55,419	115	115	0	17	0	17
2069	57,293	97	97	0	14	0	14
2070	59,253	81	81	0	11	0	11
2071	61,300	68	68	0	9	0	9
2072	63,434	56	56	0	7	0	7
2073	65,657	46	46	0	6	0	6
2074	67,971	37	37	0	4	0	4
2075	70,376	29	29	0	3	0	3
2076	72,876	24	24	0	3	0	3
2077	75,471	19	19	0	2	0	2
2078	78,165	15	15	0	2	0	2
2079	80,960	11	11	0	1	0	1
2080	83,859	9	9	0	1	0	1
2081	86,864	6	6	0	1	0	1
2082	89,980	5	5	0	0	0	0
2083	93,210	4	4	0	0	0	0
2084	96,557	2	2	0	0	0	0
2085	100,025	2	2	0	0	0	0
2086	103,618	1	1	0	0	0	0
2087	107,342	1	1	0	0	0	0
2088	111,199	0	0	0	0	0	0

## Appendix F: Detailed Tabulations of the Data

**Table F-1: The Number and Average Reported Compensation of Active Members Distributed by Age and Service as of December 31, 2016**

Age	Years of Service										Total	
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 & Up		
Under 25	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0	0	0	0	0	0	0
	0	0	0	0	0	0	0	0	0	0	0	0
30 to 34	0	0	1	0	0	0	0	0	0	0	0	1
	0	0	89,761	0	0	0	0	0	0	0	0	89,761
35 to 39	1	1	0	1	1	0	0	0	0	0	0	4
	3,080	53,757	0	4,054	63,148	0	0	0	0	0	0	31,010
40 to 44	0	0	2	3	1	2	1	0	0	0	0	9
	0	0	55,086	41,375	5,250	66,686	62,325	0	0	0	0	48,360
45 to 49	0	1	3	5	1	5	1	1	0	0	0	17
	0	79,238	31,377	72,607	66,674	61,883	69,296	85,552	0	0	0	62,785
50 to 54	1	1	0	2	4	5	6	3	0	0	0	22
	27,164	41,930	0	48,104	59,179	54,566	68,908	62,186	0	0	0	57,948
55 to 59	1	2	1	4	2	1	3	3	1	0	0	18
	65,000	42,675	42,450	51,174	59,224	49,522	51,509	67,803	87,059	0	0	56,137
60 to 64	0	2	2	4	0	2	4	3	2	0	0	19
	0	65,705	67,699	75,100	0	55,444	60,637	66,539	52,822	0	0	64,521
65 to 69	0	2	2	1	1	0	0	1	0	0	0	7
	0	61,570	64,081	51,222	55,188	0	0	61,698	0	0	0	59,916
70 & Up	0	0	0	0	1	0	0	2	0	0	0	3
	0	0	0	0	60,118	0	0	51,862	0	0	0	54,614
Total	3	9	11	20	11	15	15	13	3	0	0	100
	31,748	57,203	54,552	57,187	55,049	58,402	62,810	64,658	64,234	0	0	58,109

## Appendix F: Detailed Tabulations of the Data

**Table F-2: The Number and Annual Retirement Allowances of Retired Members and Survivors of Deceased Members Distributed by Age as of December 31, 2016**

Age	Men		Women	
	Number	Allowances	Number	Allowances
53			1	\$ 18,000
55			1	18,000
57			1	18,000
58			3	54,000
59			2	36,000
60			4	72,000
61			3	54,000
62			1	18,000
63	1	\$ 18,000	3	54,000
64	3	54,000	4	72,000
65			3	54,000
66			2	36,000
67	1	18,000	8	144,000
68	1	18,000	5	90,000
69	1	18,000	4	72,000
70	1	18,000	4	72,000
71			6	108,000
72			6	108,000
74			2	36,000
75	1	18,000	1	18,000
76	1	18,000	4	70,650
77			3	54,000
78			3	54,000
80			2	36,000
81	1	18,000	1	18,000
82	1	18,000		
83			1	18,000
84			2	36,000
85			1	18,000
86			2	36,000

## Appendix F: Detailed Tabulations of the Data

**Table F-2: The Number and Annual Retirement Allowances of Retired Members and Survivors of Deceased Members Distributed by Age as of December 31, 2016 (continued)**

Age	Men		Women	
	Number	Allowances	Number	Allowances
87			2	\$ 36,000
91			1	18,000
92			1	18,000
93	2	\$ 36,000		
97			1	18,000
98			1	18,000
Total	14	\$ 252,000	89	\$ 1,600,650