

**REPORT ON THE SIXTY-EIGHTH ANNUAL VALUATION  
OF THE TEACHERS' AND STATE EMPLOYEES'  
RETIREMENT SYSTEM OF NORTH CAROLINA  
PREPARED AS OF DECEMBER 31, 2010**

September 30, 2011

Board of Trustees  
Teachers' and State Employees'  
Retirement System of North Carolina  
325 North Salisbury Street  
Raleigh, NC 27603

Members of the Board:

We submit herewith our report on the sixty-eighth annual valuation of the Teachers' and State Employees' Retirement System of North Carolina prepared as of December 31, 2010. The report has been prepared in accordance with North Carolina General Statute 135-6(o).

The Appropriations Act of 2011 sets contributions at 7.44% of payroll effective for the fiscal year ending June 30, 2012. The valuation has been prepared in accordance with the parameters of Statement Nos. 25 and 27 of the Governmental Accounting Standards Board. The annual required contribution (ARC) under GASB for the 2012-2013 fiscal year is 7.69% of payroll, which will liquidate the unfunded accrued liability within a 12-year period from July 1, 2012. On this basis, there is no preliminary reserve from undistributed gains.

The Appropriations Act of 2011 also changed the period over which the unfunded actuarial accrued liability is amortized from nine years to 12 years. The annual required contribution rate of 7.69% of payroll reflects this change.

Additionally, the State Pension Plan Solvency Reform Act (Session Law 2011-232) changed the benefit eligibility requirements for members hired on or after August 1, 2011. No members are affected as of December 31, 2010. Therefore, the annual required contribution rate of 7.69% of payroll is not impacted by this legislation.

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

The undersigned 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 we are available to answer questions about it.

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

Respectfully submitted,



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



Larry Langer, ASA, EA, MAAA  
Principal, Consulting Actuary

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**REPORT ON THE SIXTY-EIGHTH ANNUAL VALUATION OF THE  
TEACHERS' AND STATE EMPLOYEES' RETIREMENT SYSTEM OF NORTH CAROLINA  
PREPARED AS OF DECEMBER 31, 2010**

**SECTION I - SUMMARY OF PRINCIPAL RESULTS**

1. This report, prepared as of December 31, 2010, presents the results of the sixty-eighth actuarial valuation of the system. For convenience of reference, the principal results of the valuation and a comparison with the preceding year's results are summarized below.

**TABLE I  
SUMMARY OF PRINCIPAL RESULTS**

| VALUATION DATE  | 12/31/10             | 12/31/09             |
|---|----------------------|----------------------|
| Active members included in valuation  |                      |                      |
| Number  | 317,740              | 316,647              |
| Reported compensation   | \$ 13,053,830,873    | \$ 13,253,029,516    |
| Valuation compensation  | \$ 13,831,161,230    | \$ 13,940,920,882    |
| Beneficiaries   |                      |                      |
| Number  | 163,938              | 156,791              |
| Annual allowances   | \$ 3,334,806,219     | \$ 3,179,802,828     |
| Assets  |                      |                      |
| Actuarial value   | \$ 57,102,198,448    | \$ 55,818,099,117    |
| Market value  | 54,108,134,326       | 50,382,551,504       |
| Unfunded accrued liability  | \$ 2,773,867,483     | \$ 2,360,173,025     |
| <u>GASB 25/27 for Fiscal Year Ending</u>                                      | <b>June 30, 2013</b> | <b>June 30, 2012</b> |
| Annual required contribution (ARC)<br>of employer, as a percentage of payroll |                      |                      |
| Normal cost   | 5.12%                | 5.12%                |
| Accrued liability   | <u>2.57</u>          | <u>2.82</u>          |
| Total   | 7.69%                | 7.94%                |
| Impact of legislative changes   | <u>N/A</u>           | <u>(0.50)</u>        |
| Final ARC of employer   | N/A                  | 7.44%                |
| <u>Appropriations Act for Prior Fiscal Year</u>                               |                      |                      |
| Employer contribution rate, as a percentage of<br>payroll                     |                      |                      |
| Normal cost   | 5.12%                | 6.30%                |
| Accrued liability   | <u>2.32</u>          | <u>(1.37)</u>        |
| Total   | 7.44%                | 4.93%                |
| Reserve from undistributed gains/(losses)                                     | (0.25)%              | (2.51)%              |

The change in benefit eligibility requirements for members hired on or after August 1, 2011 is expected to decrease the annual required contribution rate for the fiscal year ending June 30, 2013 by approximately 0.01%.

2. The following table shows a reconciliation of the change in the annual required contribution, as a percentage of payroll, computed to be 7.94% based on the December 31, 2009 valuation and 7.69% based on the December 31, 2010 valuation.

**TABLE II  
RECONCILIATION OF CHANGE IN ANNUAL REQUIRED CONTRIBUTION**

|  |                |
|--|----------------|
| Prior Year's Preliminary ARC (based on 12/31/09 valuation)   | 7.94%          |
| Impact of Legislative Changes                                | <u>(0.50%)</u> |
| Prior Year's Final ARC                                       | 7.44%          |
| Change Due to Demographic Gain/Loss                          | (0.62%)        |
| Change Due to Investment Gain/Loss                           | 0.74%          |
| Change Due to Contributions Less Than ARC                    | <u>0.13%</u>   |
| Current Year's Preliminary ARC (based on 12/31/10 valuation) | 7.69%          |

3. Tables summarizing the membership of the system as of the valuation date are shown in Section II.
4. The valuation balance sheet showing the assets and liabilities of the retirement system as of the current and previous valuation dates is provided in Section III.
5. An allocation of investments by category is shown in Section IV.
6. Comments on the valuation results are provided in Section V.
7. Comments on the experience and actuarial gains during the valuation year are provided in Section VI.
8. Accounting information to be disclosed in the financial statements of the System and the employer is provided in Section VII.
9. Schedule A of this report presents the development of the actuarial value of assets.
10. Schedule B of this report presents the development of the amortization of the unfunded accrued liability.
11. Schedule C of this report outlines the full set of actuarial assumptions and methods employed.
12. Schedule D gives a summary of the benefit and contribution provisions of the system.
13. 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, 2010 upon which the valuation was based. Detailed tabulations of the data are provided in Schedule E.

TABLE III

**THE NUMBER AND REPORTED COMPENSATION OF ACTIVE MEMBERS  
INCLUDED IN THE VALUATION AS OF DECEMBER 31, 2010**

| <b>GROUP</b>             | <b>NUMBER</b> | <b>AVERAGE<br/>AGE</b> | <b>AVERAGE<br/>SERVICE</b> | <b>REPORTED<br/>COMPENSATION</b> |
|--------------------------|---------------|------------------------|----------------------------|----------------------------------|
| Classroom Teachers       | 151,384       | 43.19                  | 10.25                      | \$ 6,237,617,351                 |
| Other Education          | 49,944        | 48.71                  | 10.80                      | 1,855,193,920                    |
| General Employees        | 112,863       | 45.85                  | 10.15                      | 4,768,777,707                    |
| Law Enforcement Officers | <u>3,549</u>  | <u>40.07</u>           | <u>12.83</u>               | <u>192,241,895</u>               |
| Total                    | 317,740       | 44.97                  | 10.33                      | \$ 13,053,830,873                |

TABLE IV

**THE NUMBER AND VALUATION COMPENSATION OF DISABLED MEMBERS  
INCLUDED IN THE VALUATION AS OF DECEMBER 31, 2010**

| <b>GROUP</b>             | <b>NUMBER</b> | <b>AVERAGE<br/>AGE</b> | <b>AVERAGE<br/>SERVICE</b> | <b>VALUATION<br/>COMPENSATION</b> |
|--------------------------|---------------|------------------------|----------------------------|-----------------------------------|
| Classroom Teachers       | 952           | 53.22                  | 11.76                      | \$ 31,250,444                     |
| Other Education          | 327           | 54.76                  | 11.55                      | 8,211,039                         |
| General Employees        | 5,612         | 55.44                  | 11.24                      | 176,712,637                       |
| Law Enforcement Officers | <u>52</u>     | <u>49.14</u>           | <u>12.32</u>               | <u>2,228,673</u>                  |
| Total                    | 6,943         | 55.06                  | 11.33                      | \$ 218,402,793                    |

TABLE V

**THE NUMBER AND ACCUMULATED CONTRIBUTIONS OF TERMINATED  
VESTED MEMBERS INCLUDED IN THE VALUATION AS OF DECEMBER 31, 2010**

| <b>GROUP</b>             | <b>NUMBER</b> | <b>AVERAGE<br/>AGE</b> | <b>AVERAGE<br/>SERVICE</b> | <b>ACCUMULATED<br/>CONTRIBUTIONS</b> |
|--------------------------|---------------|------------------------|----------------------------|--------------------------------------|
| Classroom Teachers       | 23,142        | 38.74                  | 3.99                       | \$ 220,852,654                       |
| Other Education          | 5,129         | 44.47                  | 4.26                       | 49,370,362                           |
| General Employees        | 73,114        | 43.97                  | 4.15                       | 803,973,906                          |
| Law Enforcement Officers | <u>764</u>    | <u>40.94</u>           | <u>6.44</u>                | <u>14,815,653</u>                    |
| Total                    | 102,149       | 42.78                  | 4.14                       | \$ 1,089,012,575                     |

TABLE VI

**THE NUMBER AND ANNUAL RETIREMENT ALLOWANCES OF BENEFICIARIES  
AND SURVIVORS INCLUDED IN THE VALUATION AS OF DECEMBER 31, 2010**

| GROUP   | NUMBER         | AVERAGE<br>AGE | ANNUAL<br>RETIREMENT<br>ALLOWANCES |
|---|----------------|----------------|------------------------------------|
| <u>Beneficiaries Receiving Service Retirement Allowances</u>    |                |                |                                    |
| Classroom Teachers and<br>Other Education                       | 72,018         | 69.04          | \$ 1,806,069,249                   |
| General Employees   | 66,304         | 70.68          | 1,106,106,318                      |
| Law Enforcement Officers  | <u>2,206</u>   | <u>64.54</u>   | <u>66,646,783</u>                  |
| Total   | 140,528        | 69.74          | \$ 2,978,822,350                   |
| <u>Beneficiaries Receiving Disability Retirement Allowances</u> |                |                |                                    |
| Classroom Teachers and<br>Other Education                       | 3,951          | 66.25          | \$ 84,038,675                      |
| General Employees   | 6,605          | 67.47          | 99,455,968                         |
| Law Enforcement Officers  | <u>179</u>     | <u>65.46</u>   | <u>4,408,795</u>                   |
| Total   | 10,735         | 66.99          | \$ 187,903,438                     |
| <u>Benefits to Survivors of Deceased Beneficiaries</u>          |                |                |                                    |
| Classroom Teachers and<br>Other Education                       | 3,896          | 72.56          | \$ 66,384,423                      |
| General Employees   | 8,426          | 73.47          | 94,989,786                         |
| Law Enforcement Officers  | <u>353</u>     | <u>71.10</u>   | <u>6,706,223</u>                   |
| Total   | 12,675         | 73.12          | \$ 168,080,432                     |
| Grand Total   | <u>163,938</u> | <u>69.82</u>   | <u>\$ 3,334,806,220</u>            |

**SECTION III - VALUATION BALANCE SHEET**

The following valuation balance sheet shows the assets and liabilities of the retirement system as of the current valuation date of December 31, 2010 and, for comparison purposes, as of the prior valuation date of December 31, 2009. The items shown in the balance sheet are present values actuarially determined as of the relevant valuation date. The development of the actuarial value of assets is presented in Schedule A.

**TABLE VII**  
**VALUATION BALANCE SHEET**  
**SHOWING THE ASSETS AND LIABILITIES OF THE**  
**TEACHERS' AND STATE EMPLOYEES'**  
**RETIREMENT SYSTEM OF NORTH CAROLINA**

| <b>ASSETS</b>   | <b>DECEMBER 31, 2010</b> | <b>DECEMBER 31, 2009</b> |
|---|--------------------------|--------------------------|
| Current actuarial value of assets:  |                          |                          |
| Annuity Savings Fund  | \$ 10,374,986,307        | \$ 9,907,133,268         |
| Pension Accumulation Fund   | <u>46,727,212,141</u>    | <u>45,910,965,849</u>    |
| Total current assets  | \$ 57,102,198,448        | \$ 55,818,099,117        |
| Future member contributions to Annuity Savings Fund   | \$ 6,982,786,111         | \$ 7,067,975,174         |
| Prospective contributions to Pension Accumulation Fund:   |                          |                          |
| Normal contributions  | \$ 5,842,264,379         | \$ 5,913,539,229         |
| Unfunded accrued liability contributions  | 2,773,867,483            | 2,360,173,025            |
| Undistributed gain contributions  | <u>(269,831,467)</u>     | <u>(2,519,386,465)</u>   |
| Total prospective contributions   | \$ 8,346,300,395         | \$ 5,754,325,789         |
| Total Assets  | <u>\$ 72,431,284,954</u> | <u>\$ 68,640,400,080</u> |
| <b>LIABILITIES</b>  |                          |                          |
| Annuity Savings Fund:   |                          |                          |
| Past member contributions   | \$ 10,374,986,307        | \$ 9,907,133,268         |
| Future member contributions   | <u>6,982,786,111</u>     | <u>7,067,975,174</u>     |
| Total contributions to Annuity Savings Fund   | \$ 17,357,772,418        | \$ 16,975,108,442        |
| Pension Accumulation Fund:  |                          |                          |
| Benefits currently in payment   | \$ 30,098,133,293        | \$ 28,751,924,527        |
| Benefits to be paid to current active members   | 25,245,210,710           | 25,432,753,576           |
| Reserve for increases in retirement allowances effective July 1, 2011 (July 1, 2010 for December 31, 2009 figure) | 0                        | 0                        |
| Reserve from undistributed gains/(losses)   | <u>(269,831,467)</u>     | <u>(2,519,386,465)</u>   |
| Total benefits payable from Pension Accumulation Fund   | \$ 55,073,512,536        | \$ 51,665,291,638        |
| Total Liabilities   | <u>\$ 72,431,284,954</u> | <u>\$ 68,640,400,080</u> |



The valuation balance sheet gives the following information with respect to the funds of the system as of December 31, 2010.

#### Annuity Savings Fund

The Annuity Savings Fund is the fund to which contributions made by members together with interest are credited thereon. When a member retires, the amount of his accumulated contributions is transferred from the Annuity Savings Fund to the Pension Accumulation Fund. The assets credited to the Annuity Savings Fund on December 31, 2010, which represent the accumulated contributions of members to that date, amounted to \$10,374,986,307. The balance sheet also shows that the future contributions by members have a present value of \$6,982,786,111. The present value of both past and future contributions of members is therefore equal to \$17,357,772,418. The liabilities of this fund are also shown to be equal to \$17,357,772,418.

#### Pension Accumulation Fund

The Pension Accumulation Fund is the fund to which the contributions made by employers are credited and from which are paid all benefits on account of beneficiaries and their survivors.

The actuarial value of assets creditable to the Pension Accumulation Fund on December 31, 2010 amounted to \$46,727,212,141. The liabilities on account of active members amounted to \$25,245,210,710. In addition, the balance sheet indicates liabilities of \$30,098,133,293 on account of all benefits payable to beneficiaries and survivors as of December 31, 2010. The balance sheet also shows a reserve from undistributed gains/(losses) of \$(269,831,467). The total liabilities of the Pension Accumulation Fund, therefore, amounted to \$55,073,512,536. The difference between these liabilities and the current assets credited to this fund is \$8,346,300,395 which represents the present value of future contributions to be made by the employers. Of this amount, \$5,842,264,379 represents the present value of prospective normal contributions by the employers, \$2,773,867,483 represents the present value of prospective accrued liability contributions by employers and the balance of \$(269,831,467) represents the present value of prospective contributions on account of undistributed actuarial gains/(losses).

### SECTION IV – ASSET ALLOCATION

The following table shows an allocation of investments by category for the Annuity Savings Fund and Pension Accumulation Fund as of December 31, 2010.

**TABLE VIII**

**ALLOCATION OF INVESTMENTS BY CATEGORY  
FOR THE ANNUITY SAVINGS FUND AND  
PENSION ACCUMULATION FUND AS OF DECEMBER 31, 2010**

|                      |             |
|----------------------|-------------|
| Cash and Receivables | 0.4%        |
| Fixed Income (LTIF)  | 35.4        |
| Public Equity        | 51.2        |
| Other*               | <u>13.0</u> |
| Total                | 100.0%      |

\* Real Estate, Alternatives, Inflation and Credit.

### SECTION V - COMMENTS ON VALUATION

The retirement act provides that the contributions of employers shall consist of a normal contribution and an accrued liability contribution. G.S. 135-8(d)(2) of the retirement act provides that the normal contribution rate is to be determined as the uniform percentage of the earnable compensation of the average new entrant throughout his entire period of active service and is to be determined after each valuation. The valuation indicates that the uniform normal percentage contribution rate should be set at 5.12% of compensation.

The Appropriations Act of 2011 also changed the period over which the unfunded actuarial accrued liability is amortized from nine years to 12 years. Additionally, the State Pension Plan Solvency Reform Act (Session Law 2011-232) changed the benefit eligibility requirements for members hired on or after August 1, 2011. No members are affected as of December 31, 2010.

The present valuation indicates that if the employer contribution rate is set at 7.44% of payroll in accordance with the Appropriations Act of 2011, the accrued liability rate would be equal to 2.32% of payroll effective

July 1, 2011. The required employer contribution is 7.69% of payroll effective July 1, 2012, which will liquidate the unfunded accrued liability within a 12-year period from July 1, 2012.

### SECTION VI - COMMENTS ON EXPERIENCE AND GAINS

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

**TABLE IX**

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

|   |              |
|---|--------------|
| Unfunded accrued liability as of 12/31/09                             | \$ 2,360     |
| Normal cost during 2010   | 1,551        |
| Reduction due to actual contributions during 2010                     | (1,424)      |
| Interest on unfunded accrued liability, normal cost and contributions | 232          |
| Asset (gain)/loss   | 749          |
| Accrued liability (gain)/loss   | <u>(694)</u> |
| Unfunded accrued liability as of 12/31/10                             | \$ 2,774     |

The valuation results indicate that there is no preliminary reserve from undistributed gains. Each 1.0% increase in retirement allowances as of July 1, 2012 to beneficiaries on the retirement roll on July 1, 2011 and a prorated portion of each 1.0% increase as of July 1, 2011 for beneficiaries who retired after July 1, 2011 but before June 30, 2012 is equivalent to 0.33% of payroll. The cost of each 0.01% increase in the defined benefit formula with a corresponding increase in retirement allowances to all current benefit recipients is 0.39% of payroll.

**SECTION VII - ACCOUNTING INFORMATION**

1. 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, 2010**

| GROUP   | NUMBER         |
|---|----------------|
| Retired participants and beneficiaries currently receiving benefits                           | 163,938        |
| Terminated participants and beneficiaries entitled to benefits but not yet receiving benefits | 102,149        |
| Active participants*  | <u>324,683</u> |
| Total   | 590,770        |

\* Includes current recipients of DIP benefits.

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

**SCHEDULE OF FUNDING PROGRESS**

| Actuarial<br>Valuation<br>Date | Actuarial<br>Value of<br>Assets<br>(a) | Actuarial<br>Accrued<br>Liability (AAL)<br>Entry Age<br>(b) | Unfunded<br>AAL<br>(UAAL)<br>(b - a) | Funded<br>Ratio<br>(a / b) | Covered<br>Payroll<br>(c) | UAAL as a<br>Percentage of<br>Covered<br>Payroll<br>((b - a) / c) |
|--------------------------------|--|---|--------------------------------------|----------------------------|---------------------------|---|
| 12/31/05                       | \$49,670,182,206                       | \$46,624,667,789  | \$(3,045,514,417)                    | 106.5%                     | \$10,990,238,891          | (27.71)%  |
| 12/31/06                       | 52,420,807,724                         | 49,391,906,996  | (3,028,900,728)                      | 106.1                      | 11,711,385,640            | (25.86)   |
| 12/31/07                       | 55,283,120,813                         | 52,815,089,477  | (2,468,031,336)                      | 104.7                      | 12,701,016,741            | (19.43)   |
| 12/31/08                       | 55,127,658,183                         | 55,518,744,699  | 391,086,516                          | 99.3                       | 13,267,554,255            | 2.95  |
| 12/31/09                       | 55,818,099,117                         | 58,178,272,142  | 2,360,173,025                        | 95.9                       | 13,253,029,516            | 17.81   |
| 12/31/10                       | 57,102,198,448                         | 59,876,065,931  | 2,773,867,483                        | 95.4                       | 13,053,830,873            | 21.25   |

3. Following is a reconciliation of the preliminary employer annual required contribution rate to the final employer annual required contribution for fiscal year ending June 30, 2011.

|   | Fiscal Year Ending<br>June 30, 2011 |
|---|-------------------------------------|
| Preliminary Annual Required Contribution Rate |                                     |
| Normal Cost                                   | 6.30%                               |
| Accrued Liability                             | 0.41                                |
| Total   | <u>6.71%</u>                        |
| Impact of Legislative Changes                 | 0.00                                |
| Final Annual Required Contribution Rate       | 6.71%                               |
| Payroll                                       | <u>13,452,472,397</u>               |
| Annual Required Contribution                  | \$ 902,661,000                      |

4. Following is the calculation of the annual pension cost and net pension obligation for the fiscal year ending June 30, 2011.

Annual Pension Cost and Net Pension Obligation for Fiscal Year Ending 6/30/2011

|  |                     |
|--|---------------------|
| (a) Employer annual required contribution                        | \$ 902,661,000      |
| (b) Interest on net pension obligation                           | (2,625,000)         |
| (c) Adjustment to annual required contribution                   | <u>6,024,000</u>    |
| (d) Annual pension cost: (a) + (b) + (c)                         | \$ 906,060,000      |
| (e) Employer contributions made for fiscal year ending 6/30/2011 | <u>663,207,000</u>  |
| (f) Increase (decrease) in net pension obligation: (d) – (e)     | \$ 242,853,000      |
| (g) Net pension obligation beginning of fiscal year              | <u>(36,207,000)</u> |
| (h) Net pension obligation end of fiscal year: (f) + (g)         | \$ 206,646,000      |

**TREND INFORMATION**

| <u>Year Ending</u> | <u>Annual Pension Cost<br/>(APC)</u> | <u>Percentage of APC<br/>Contributed</u> | <u>Net Pension<br/>Obligation</u> |
|--------------------|--------------------------------------|--|-----------------------------------|
| June 30, 2009      | \$475,660,000                        | 99.3%                                    | \$(39,239,000)                    |
| June 30, 2010      | 486,237,000                          | 99.4                                     | (36,207,000)                      |
| June 30, 2011      | 906,060,000                          | 73.2                                     | 206,646,000                       |

5. The annual required contribution (ARC) of the employer as a percentage of payroll, determined in accordance with the parameters of GASB 25/27, is shown below. The accrued liability rate is based on the amortization schedule shown in Schedule B.

**2012/2013 FISCAL YEAR  
ANNUAL REQUIRED CONTRIBUTION (ARC)  
BASED ON THE VALUATION AS OF DECEMBER 31, 2010**

| ANNUAL REQUIRED CONTRIBUTION (ARC) | RATE        |
|------------------------------------|-------------|
| Normal cost                        | 5.12%       |
| Accrued liability                  | <u>2.57</u> |
| Total                              | 7.69%       |

6. Additional information as of December 31, 2010 follows.

|  |  |
|--|--|
| Valuation date                           | 12/31/10   |
| Actuarial cost method                    | Entry age  |
| Amortization method                      | Level dollar closed  |
| Amortization period                      | 12 years   |
| Asset valuation method                   | 20% of market value plus<br>80% of expected actuarial<br>value (not greater than 120%<br>of market value and not less<br>than 80% of market value) |
| Actuarial assumptions:                   |  |
| Investment rate of return*               | 7.25%  |
| Projected salary increases**             | 4.25% - 9.10%  |
| *Includes inflation of                   | 3.00%  |
| **Includes inflation and productivity of | 3.50%  |
| Cost-of-living adjustments               | N/A  |

SCHEDULE A**DEVELOPMENT OF ACTUARIAL VALUE OF ASSETS  
FOR THE YEAR ENDING DECEMBER 31, 2010**

|     |  |                      |
|-----|--|----------------------|
| 1.  | Actuarial Value of Assets as of December 31, 2009  | \$ 55,818,099,117    |
| 2.  | 2010 Net Cash Flow   |                      |
|     | a. Contributions   | 1,423,916,155        |
|     | b. Disbursements   | <u>3,367,652,535</u> |
|     | c. Net Cash Flow: (a) - (b)  | (1,943,736,380)      |
| 3.  | Expected Investment Return:<br>[(1) x .0725] + [(2)c x .03625]   | 3,976,351,742        |
| 4.  | Expected Actuarial Value of Assets as of<br>December 31, 2010:<br>(1) + (2)c + (3)   | 57,850,714,479       |
| 5.  | Market Value of Assets as of December 31, 2010   | 54,108,134,326       |
| 6.  | Excess of Market Value over Expected<br>Actuarial Value of Assets:<br>(5) - (4)  | (3,742,580,153)      |
| 7.  | 20% Adjustment towards Market Value:<br>(6) x .20  | (748,516,031)        |
| 8.  | Preliminary Actuarial Value of Assets as of<br>December 31, 2010:<br>(4) + (7)   | 57,102,198,448       |
| 9.  | Final Actuarial Value of Assets as of December 31, 2010 [(8)<br>not less than 80% of (5) and not greater than 120% of (5)] | 57,102,198,448       |
| 10. | Rate of investment return on actuarial value   | 5.89%                |
| 11. | Rate of investment return on market value  | 11.47%               |

**SCHEDULE B****AMORTIZATION SCHEDULE FOR  
UNFUNDED ACTUARIAL ACCRUED LIABILITY**

| <b>DATE<br/>ESTABLISHED</b>                     | <b>OUTSTANDING BALANCES</b> |                          | <b>ANNUAL<br/>PAYMENT</b> |
|---|-----------------------------|--------------------------|---------------------------|
|   | <b>INCEPTION</b>            | <b>DECEMBER 31, 2010</b> |                           |
| December 31, 2009                               | \$ 2,360,173,025            | \$ 2,531,285,569         | \$ 322,948,963            |
| December 31, 2010                               | 242,581,914                 | <u>242,581,914</u>       | <u>33,193,150</u>         |
| Total   |                             | \$ 2,773,867,483         | \$ 356,142,113            |
| Valuation Compensation                          |                             |                          | \$ 13,831,161,230         |
| Unfunded Accrued Liability<br>Contribution Rate |                             |                          | 2.57%                     |



**SCHEDULE C****STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS**

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

INTEREST RATE: 7.25% 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:

| <u>Service</u> | <b>ANNUAL RATES OF WITHDRAWAL</b>                |               |                               |               |                                     |               |
|----------------|--|---------------|-------------------------------|---------------|-------------------------------------|---------------|
|                | <u>General Employees and<br/>Other Education</u> |               | <u>Classroom<br/>Teachers</u> |               | <u>Law Enforcement<br/>Officers</u> |               |
|                | <u>Male</u>                                      | <u>Female</u> | <u>Male</u>                   | <u>Female</u> | <u>Male</u>                         | <u>Female</u> |
| 0              | .270   | .270          | .260                          | .220          | .180                                | .180          |
| 1              | .180   | .185          | .180                          | .170          | .090                                | .090          |
| 2              | .120   | .120          | .130                          | .130          | .070                                | .070          |
| 3              | .080   | .100          | .100                          | .100          | .070                                | .070          |
| 4              | .070   | .090          | .080                          | .080          | .060                                | .060          |

| <u>Age</u> | <b>GENERAL EMPLOYEES AND OTHER EDUCATION</b> |               |                         |               |                   |               |
|------------|--|---------------|-------------------------|---------------|-------------------|---------------|
|            | <u>Annual Rates of</u>                       |               |                         |               |                   |               |
|            | <u>Withdrawal<br/>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         | .0650  | .0900         | .0004                   | .0002         | .0001             | .0001         |
| 30         | .0650  | .0800         | .0005                   | .0003         | .0004             | .0004         |
| 35         | .0500  | .0600         | .0008                   | .0005         | .0010             | .0010         |
| 40         | .0400  | .0400         | .0011                   | .0008         | .0029             | .0018         |
| 45         | .0350  | .0400         | .0016                   | .0012         | .0049             | .0033         |
| 50         | .0350  | .0400         | .0023                   | .0018         | .0084             | .0050         |
| 55         | .0350  | .0400         | .0033                   | .0028         | .0144             | .0088         |
| 60         | .0350  | .0400         | .0054                   | .0043         | .0240             | .0138         |
| 65         |  |               | .0081                   | .0062         |                   |               |
| 69         |  |               | .0099                   | .0076         |                   |               |

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

\*\* Base mortality rates as of December 31, 2003.

**CLASSROOM TEACHERS**

Annual Rates of

| Age | Withdrawal<br>and Vesting* |        | Base Mortality** |        | Disability |        |
|-----|----------------------------|--------|------------------|--------|------------|--------|
|     | Male                       | Female | Male             | Female | Male       | Female |
| 25  | .0600                      | .0700  | .0004            | .0002  | .0001      | .0002  |
| 30  | .0550                      | .0600  | .0004            | .0003  | .0001      | .0003  |
| 35  | .0400                      | .0450  | .0007            | .0005  | .0003      | .0006  |
| 40  | .0350                      | .0300  | .0010            | .0007  | .0007      | .0010  |
| 45  | .0350                      | .0300  | .0014            | .0011  | .0014      | .0018  |
| 50  | .0350                      | .0300  | .0020            | .0017  | .0023      | .0032  |
| 55  | .0350                      | .0300  | .0028            | .0025  | .0047      | .0055  |
| 60  | .0350                      | .0300  | .0044            | .0039  | .0077      | .0102  |
| 65  |                            |        | .0070            | .0058  |            |        |
| 69  |                            |        | .0091            | .0073  |            |        |

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

\*\* Base mortality rates as of December 31, 2003.

**LAW ENFORCEMENT OFFICERS**

Annual Rates of

| Age | Withdrawal<br>and Vesting* |        | Base Mortality** |        | Disability |        |
|-----|----------------------------|--------|------------------|--------|------------|--------|
|     | Male                       | Female | Male             | Female | Male       | Female |
| 25  | .0400                      | .0400  | .0004            | .0002  | .0029      | .0003  |
| 30  | .0350                      | .0350  | .0004            | .0003  | .0036      | .0004  |
| 35  | .0350                      | .0350  | .0008            | .0005  | .0047      | .0005  |
| 40  | .0350                      | .0350  | .0011            | .0007  | .0061      | .0007  |
| 45  | .0350                      | .0350  | .0015            | .0011  | .0090      | .0010  |
| 50  | .0350                      | .0350  | .0021            | .0017  | .0151      | .0017  |
| 55  | .0350                      | .0350  | .0030            | .0025  |            |        |
| 60  | .0350                      | .0350  | .0049            | .0039  |            |        |
| 65  |                            |        | .0076            | .0058  |            |        |
| 69  |                            |        | .0095            | .0073  |            |        |

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

\*\* Base mortality rates as of December 31, 2003. In addition, 90% of all deaths in active service for law enforcement officers are assumed to be ordinary and 10% assumed to be accidental.

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

**GENERAL EMPLOYEES AND OTHER EDUCATION - MALES**

| Age | Service |        |        |        |        |        |        |
|-----|---------|--------|--------|--------|--------|--------|--------|
|     | 5       | 10     | 15     | 20     | 25     | 30     | 35     |
| 50  |         |        |        | 0.0370 | 0.1000 | 0.3500 | 0.3500 |
| 55  |         |        |        | 0.0550 | 0.1000 | 0.3000 | 0.2000 |
| 60  | 0.1000  | 0.1000 | 0.1000 | 0.1000 | 0.3500 | 0.3000 | 0.2250 |
| 65  | 0.3500  | 0.3500 | 0.3500 | 0.3500 | 0.3500 | 0.3500 | 0.3500 |
| 70  | 0.2250  | 0.2250 | 0.2250 | 0.2250 | 0.2250 | 0.2250 | 0.2250 |
| 75  | 1.0000  | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

**GENERAL EMPLOYEES AND OTHER EDUCATION - FEMALES**

| Age | Service |        |        |        |        |        |        |
|-----|---------|--------|--------|--------|--------|--------|--------|
|     | 5       | 10     | 15     | 20     | 25     | 30     | 35     |
| 50  |         |        |        | 0.0400 | 0.0350 | 0.3500 | 0.3500 |
| 55  |         |        |        | 0.0550 | 0.0900 | 0.3500 | 0.2250 |
| 60  | 0.1400  | 0.1400 | 0.1400 | 0.1400 | 0.4500 | 0.3500 | 0.2500 |
| 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 |

**CLASSROOM TEACHERS - MALES**

| Age | Service |        |        |        |        |        |        |
|-----|---------|--------|--------|--------|--------|--------|--------|
|     | 5       | 10     | 15     | 20     | 25     | 30     | 35     |
| 50  |         |        |        | 0.0300 | 0.0900 | 0.3000 | 0.3000 |
| 55  |         |        |        | 0.0450 | 0.0900 | 0.3750 | 0.3000 |
| 60  | 0.1200  | 0.1200 | 0.1200 | 0.1200 | 0.4000 | 0.3750 | 0.3000 |
| 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 |

**CLASSROOM TEACHERS - FEMALES**

| Age | Service |        |        |        |        |        |        |
|-----|---------|--------|--------|--------|--------|--------|--------|
|     | 5       | 10     | 15     | 20     | 25     | 30     | 35     |
| 50  |         |        |        | 0.0350 | 0.0900 | 0.3000 | 0.3000 |
| 55  |         |        |        | 0.0550 | 0.1000 | 0.4500 | 0.2750 |
| 60  | 0.1500  | 0.1500 | 0.1500 | 0.1500 | 0.5000 | 0.4500 | 0.2750 |
| 65  | 0.5000  | 0.5000 | 0.5000 | 0.5000 | 0.5000 | 0.5000 | 0.5000 |
| 70  | 0.2750  | 0.2750 | 0.2750 | 0.2750 | 0.2750 | 0.2750 | 0.2750 |
| 75  | 1.0000  | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 | 1.0000 |

**LAW ENFORCEMENT OFFICERS**

| Age | Service |        |        |        |        |        |        |
|-----|---------|--------|--------|--------|--------|--------|--------|
|     | 5       | 10     | 15     | 20     | 25     | 30     | 35     |
| 50  |         |        | 0.0600 | 0.0600 | 0.0600 | 0.5000 | 0.5000 |
| 55  | 0.3000  | 0.3000 | 0.3000 | 0.3000 | 0.3000 | 0.5000 | 0.5000 |
| 60  | 0.2500  | 0.2500 | 0.2500 | 0.2500 | 0.2500 | 0.5000 | 0.5000 |
| 65  | 0.4000  | 0.4000 | 0.4000 | 0.4000 | 0.4000 | 0.4000 | 0.4000 |
| 70  | 0.3000  | 0.3000 | 0.3000 | 0.3000 | 0.3000 | 0.3000 | 0.3000 |
| 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 salary increases are as follows:

Annual Rate of Salary Increase

| <u>Service</u> | <u>Classroom Teachers</u> | <u>General</u>                       |                                 |
|----------------|---------------------------|--------------------------------------|---------------------------------|
|                |                           | <u>Employees and Other Education</u> | <u>Law Enforcement Officers</u> |
| 0              | 7.55%                     | 5.50%                                | 9.10%                           |
| 5              | 6.55                      | 5.50                                 | 7.10                            |
| 10             | 5.70                      | 5.45                                 | 5.40                            |
| 15             | 5.45                      | 5.25                                 | 4.95                            |
| 20             | 5.25                      | 5.25                                 | 4.65                            |
| 25             | 5.25                      | 5.25                                 | 4.25                            |
| 30             | 5.25                      | 5.25                                 | 4.25                            |
| 35             | 5.25                      | 5.25                                 | 4.25                            |
| 40             | 4.75                      | 4.75                                 | 4.25                            |
| 45             | 4.25                      | 4.25                                 | 4.25                            |
| 50             | 4.25                      | 4.25                                 | 4.25                            |

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)

| <u>Age</u> | <u>Classroom Teachers</u> |               | <u>General Employees and Other Education</u> |               | <u>Law Enforcement Officers</u> |               |
|------------|---------------------------|---------------|--|---------------|---------------------------------|---------------|
|            | <u>Male</u>               | <u>Female</u> | <u>Male</u>                                  | <u>Female</u> | <u>Male</u>                     | <u>Female</u> |
| 55         | .0058                     | .0035         | .0061  | .0039         | .0059                           | .0035         |
| 60         | .0075                     | .0062         | .0090  | .0069         | .0082                           | .0062         |
| 65         | .0121                     | .0104         | .0149  | .0114         | .0134                           | .0104         |
| 70         | .0201                     | .0167         | .0246  | .0186         | .0222                           | .0167         |
| 75         | .0339                     | .0281         | .0422  | .0310         | .0378                           | .0281         |
| 80         | .0579                     | .0459         | .0720  | .0508         | .0644                           | .0459         |

Annual Rate of Death after Retirement  
(Beneficiaries of Deceased Members and Disabled Retirees)

| <u>Age</u> | <u>Male</u>                              | <u>Female</u>                            | <u>Male Disabled Retirees</u> | <u>Female Disabled Retirees</u> |
|------------|--|--|-------------------------------|---------------------------------|
|            | <u>Beneficiaries of Deceased Members</u> | <u>Beneficiaries of Deceased Members</u> |                               |                                 |
| 55         | .0061                                    | .0044                                    | .0277                         | .0176                           |
| 60         | .0090                                    | .0077                                    | .0342                         | .0229                           |
| 65         | .0149                                    | .0125                                    | .0407                         | .0296                           |
| 70         | .0246                                    | .0207                                    | .0483                         | .0401                           |
| 75         | .0422                                    | .0341                                    | .0596                         | .0558                           |
| 80         | .0720                                    | .0563                                    | .0775                         | .0771                           |

**MORTALITY IMPROVEMENTS:** Representative values of the assumed mortality improvement rates (applied to pre-retirement mortality rates for active members and post-retirement mortality rates for healthy retirees and beneficiaries of deceased members after such tables have been set back or set forward) are as follows:

| <u>Age</u> | <u>Male<br/>Projection Scale</u> | <u>Female<br/>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 back one year for male teachers, set forward one year for all general employees and unadjusted for female teachers and all law enforcement officers. 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 back one year for male teachers, set forward one year for all general employees and unadjusted for female teachers and all law enforcement officers. 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 on July 1 of each year.

**LEAVE CONVERSIONS:** Sick leave can be converted to increase creditable service and used to meet the eligibility requirements for retirement. Unused vacation leave can be converted to increase creditable service or compensation, but does not add to the eligibility service. The assumed impact of these conversions is shown in the table below.

|  | Classroom Teachers |         | General |         | Law Enforcement |         | Other Education |         |
|--|--------------------|---------|---------|---------|-----------------|---------|-----------------|---------|
|  | Males              | Females | Males   | Females | Males           | Females | Males           | Females |
| Increase in AFC                        | 2.25%              | 2.25%   | 2.25%   | 2.25%   | 1.50%           | 1.50%   | 3.50%           | 3.50%   |
| Increase in Creditable Service (years) |                    |         |         |         |                 |         |                 |         |
| Credited                               | 1.25               | 1.00    | 0.90    | 0.65    | 1.50            | 1.50    | 1.25            | 1.00    |
| Eligibility                            | 1.00               | 1.00    | 1.00    | 1.00    | 1.00            | 1.00    | 1.00            | 1.00    |

**LIABILITY FOR INACTIVE MEMBERS:** The data provided for inactive members does not contain all the elements to calculate the member's deferred benefit. The liability for these members is estimated to be 200% of the member's accumulated contributions. The actuary is collecting data so that future members' deferred benefits can be estimated.

**ADMINISTRATIVE EXPENSES:** 0.10% of payroll.

**MARRIAGE ASSUMPTION:** 100% married with the husband four years older than his wife.

**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. Entry age is established on an individual basis.

**ASSET VALUATION METHOD:** Actuarial value, as developed in Schedule A. 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 AND CONTRIBUTION PROVISIONS**

A summary of the main benefit provisions of the Retirement System and of the sources of revenue from which benefits are paid is presented in the following digest. Items in parentheses in the text are the provisions applicable to law enforcement officers.

Additionally, the State Pension Plan Solvency Reform Act (Session Law 2011-232) changed the benefit eligibility requirements for members hired on or after August 1, 2011. No members are affected by the change in eligibility requirements as of December 31, 2010 and such changes are not reflected in the benefit provisions described below.

"Average final compensation" as used in the summary means the average annual compensation during the four consecutive years of membership service which afford the highest such average. "Membership service" means service represented by regular contributions. "Creditable service" means membership service and may also include certain special purchased service.

**BENEFITS****Unreduced Retirement Allowance****Condition for Allowance**

An unreduced retirement allowance is payable to any member who retires from service after he has attained age 65 (55), or after age 60 and completion of 25 years of creditable service, or after completion of 30 years of creditable service.

Amount of Allowance 1.82% of his average final compensation multiplied by the number of years of his creditable service.

In no event will a member whose creditable service commenced on or before June 30, 1963 receive a smaller retirement allowance than he would have received under the benefit provisions of the system in effect on that date.

#### Reduced Retirement Allowance

Condition for Allowance A reduced retirement allowance is payable to any member who retires from service after he has attained age 60 and completed 5 years of membership service (age 55 and 5 years of creditable service), but prior to becoming eligible for the unreduced retirement allowance.

Amount of Allowance The member's reduced retirement allowance is equal to 1.82% of his average final compensation multiplied by the number of years of his creditable service at his date of retirement reduced by 1/4 of 1% for each month by which the member's age at retirement is less than age 65.

In no event will a member whose creditable service commenced on or before June 30, 1963 receive a smaller retirement allowance than he would have received under the benefit provisions of the system in effect on that date.

OR

Condition for Allowance A reduced retirement allowance is payable to any member who retires from service after he has attained age 50 and completed 20 (15) years of creditable service but prior to becoming eligible for a reduced or unreduced retirement allowance.

Amount of Allowance The member's reduced retirement allowance is equal to 1.82% of his average final compensation multiplied by the number of years of his creditable service at his date of retirement reduced by the lesser of:

(i) 5/12 (1/3) of 1% for each month by which his age is less than 60 (55), plus, if the member is not a law enforcement officer, 1/4 of 1% for each month by which his age is less than 65.

(ii) 5% times the difference between 30 years and his creditable service at retirement.

#### Deferred Retirement Allowance

Any member who separates from service prior to becoming eligible for an unreduced or reduced retirement allowance after completing 5 or more years of membership service and who leaves his total accumulated contributions in the system may receive a deferred retirement allowance,



beginning at age 60 (55), computed in the same way as a reduced retirement allowance, or, if the member has 20 or more years of service, at age 50 computed in the same way as a reduced service retirement allowance, on the basis of his creditable service and compensation to the date of separation.

#### Return of Contributions

Upon the withdrawal of a member without a retirement allowance and upon his request, his contributions are returned to him, together with accumulated regular interest thereon if he has at least 5 years of membership service.

Upon the death of a member before retirement, his contributions, together with the full accumulated regular interest thereon, are paid to his estate or to person(s) designated by the member unless the designated beneficiary, if eligible, elects the survivor's alternate benefit described below.

The current interest rate on member contributions is 4%.

#### Survivor's Alternate Benefit

Upon the death of a member in service who has attained age 60 (55) and has completed 5 years of membership (creditable) service or completed 20 years of creditable service, his designated beneficiary may elect to receive a benefit equal to that which would have been payable under the provisions of Option 2 had the member retired on the first day of the month following his death and elected such option, in lieu of the member's accumulated contributions, provided the member had not instructed the Board of Trustees in writing that he did not wish the alternate benefit to apply.

Members on short-term or long-term disability are eligible for this benefit.

#### Death After Retirement

Upon the death of a beneficiary who did not retire under an effective election of Option 2 or Option 3, an amount equal to the excess if any, of his accumulated contributions at retirement over the retirement allowance payments received is paid to a designated person or to the beneficiary's estate.

Upon the death of the survivor of a beneficiary who retired under an effective election of Option 2 or Option 3, an amount equal to the excess, if any, of the beneficiary's accumulated contributions at retirement over the total retirement allowance payments received is paid to such other person designated by the beneficiary or to the beneficiary's estate.

Upon the death of a beneficiary, a benefit may be provided by the Retirees' Contributory Death Benefit Plan.

Other Death Benefits

Upon the death of a member in service, other benefits may be provided by the Death Benefit Plan or Separate Insurance Benefit Plan for Law Enforcement Officers.

Optional Arrangements  
at Retirement

In lieu of the full retirement allowance, any member may elect to receive a reduced retirement allowance equal in value to the full allowance, with the provision that:

Option 1 - A member retiring prior to July 1, 1993, may elect that at his death within 10 years from his retirement date, an amount equal to his accumulated contributions at retirement, less 1/120 for each month he has received a retirement allowance, is paid to his estate, or to a person(s) designated by the member, or

Option 2 - At the death of the member his allowance shall be continued throughout the life of such other person as the member shall have designated at the time of his retirement, or

Option 3 - At the death of the member one-half of his allowance shall be continued throughout the life of such other person as the member shall have designated at the time of his retirement.

Option 4 - A member may elect to receive a retirement allowance in such amount that, together with his Social Security benefit, he will receive approximately the same income per annum before and after the earliest age at which he becomes eligible to receive the Social Security benefit.

Option 5 - A member retiring prior to July 1, 1993 may elect to receive a reduced retirement allowance under the provisions of Option 2 or Option 3 in conjunction with the provisions of Option 1.

Option 6 - A member may elect either Option 2 or Option 3 with the added provision that in the event the designated beneficiary predeceases the member, the retirement allowance payable to the member after the designated beneficiary's death shall be equal to the retirement allowance which would have been payable had the member not elected the option.

Post-Retirement Increases  
in Allowances

Future increases in allowances may be granted at the discretion of the State.

Service Reciprocity

For the purpose of determining eligibility for a deferred, reduced or unreduced service retirement allowance, the

membership and creditable service of a member shall include such prior service earned as a member of the Local Governmental Employees' Retirement System (LGERS), the Consolidated Judicial Retirement System (CJRS), or the Legislative Retirement System (LRS). In addition, if the member's accumulated contributions and reserves are transferred from the prior System to this System, the creditable service earned as a member of the prior System may be included for purposes of determining the amount of benefits payable under this System.

#### Military Service

For periods of active duty in the United States military may be counted as creditable service if the member was an employee upon entering the military and returned to employment within two years of discharge or for a period of 10 additional years.

#### Service Purchases

Additional creditable service may include service that the member purchased to restore a period of service for which the member (1) received a refund of contributions, (2) had a leave of absence for educational purposes, extended illness or parental or maternity reasons, (3) had full-time temporary or part-time local or State government employment, (4) was in a probationary or waiting period with a unit of the LGERS, (5) had a leave of absence under Workers' Compensation, (6) performed service with a unit of local government not covered by LGERS, (7) performed service with the federal government not covered by any other retirement system, (8) performed service with a public community service entity funded entirely with federal funds, (9) performed service as a member of the General Assembly, (10) performed service as a member of a charter school not participating in the system, (11) was employed by The University of North Carolina and participated in the Optional Retirement Program but not eligible to receive any benefits from that program, or (12) performed service which was omitted by reason of error.

#### Unused Sick Leave

Unused sick leave counts as creditable service at retirement. Sick leave which was converted from unused vacation leave is also creditable. One month of credit is allowed for each 20 days of unused sick leave, plus an additional month for any part of 20 days left over.

## CONTRIBUTIONS

### REGULAR CONTRIBUTIONS

By Members

Each member contributes 6% of his compensation.

By Employers

Employers make annual contributions consisting of a normal contribution and an accrued liability contribution. The normal contribution covers the liability on account of current service and is determined by the actuary after each valuation.

The accrued liability contribution covers the liability on account of service rendered before the establishment of the retirement system and the liability on account of increases in benefits for service rendered prior to the effective date of any amendment.

SCHEDULE D

TABLE 1

**THE NUMBER AND AVERAGE REPORTED COMPENSATION OF  
ACTIVE MEMBERS DISTRIBUTED BY AGE AND SERVICE  
AS OF DECEMBER 31, 2010**

| 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 | 3,001            | 3,959  | 80     | 0        | 0        | 0        | 0        | 0        | 0        | 0       | 7,040   |
|          | 12,142           | 27,852 | 27,203 | 0        | 0        | 0        | 0        | 0        | 0        | 0       | 21,148  |
| 25 to 29 | 2,968            | 17,351 | 7,874  | 57       | 0        | 0        | 0        | 0        | 0        | 0       | 28,250  |
|          | 11,321           | 32,074 | 35,748 | 31,529   | 0        | 0        | 0        | 0        | 0        | 0       | 30,917  |
| 30 to 34 | 1,739            | 11,071 | 15,514 | 4,928    | 34       | 0        | 0        | 0        | 0        | 0       | 33,286  |
|          | 11,114           | 34,009 | 39,704 | 43,303   | 38,020   | 0        | 0        | 0        | 0        | 0       | 36,847  |
| 35 to 39 | 1,541            | 9,602  | 11,059 | 11,450   | 3,458    | 27       | 0        | 0        | 0        | 0       | 37,137  |
|          | 10,987           | 34,965 | 39,807 | 45,893   | 48,830   | 43,327   | 0        | 0        | 0        | 0       | 40,078  |
| 40 to 44 | 1,516            | 9,950  | 11,448 | 9,393    | 9,064    | 2,907    | 69       | 0        | 0        | 0       | 44,347  |
|          | 10,422           | 34,546 | 38,788 | 43,778   | 50,726   | 51,870   | 47,531   | 0        | 0        | 0       | 41,235  |
| 45 to 49 | 1,240            | 8,624  | 10,644 | 8,886    | 6,233    | 6,884    | 3,048    | 51       | 0        | 0       | 45,610  |
|          | 9,948            | 34,156 | 37,677 | 40,472   | 47,375   | 53,873   | 55,681   | 48,632   | 0        | 0       | 41,787  |
| 50 to 54 | 966              | 7,276  | 9,894  | 8,896    | 6,731    | 5,642    | 6,137    | 1,881    | 26       | 0       | 47,449  |
|          | 10,353           | 35,606 | 38,495 | 40,875   | 45,444   | 51,574   | 59,068   | 59,532   | 58,559   | 0       | 43,972  |
| 55 to 59 | 700              | 5,828  | 8,327  | 7,237    | 6,189    | 5,790    | 4,267    | 2,726    | 675      | 11      | 41,750  |
|          | 10,393           | 38,598 | 39,813 | 42,375   | 46,142   | 51,154   | 58,438   | 65,587   | 67,871   | 62,417  | 46,151  |
| 60 to 64 | 281              | 3,341  | 5,646  | 4,487    | 3,843    | 3,508    | 2,241    | 1,230    | 660      | 130     | 25,367  |
|          | 11,459           | 40,390 | 41,843 | 43,815   | 47,979   | 51,575   | 59,740   | 65,750   | 74,216   | 71,977  | 47,676  |
| 65 to 69 | 71               | 752    | 1,486  | 1,109    | 809      | 634      | 395      | 250      | 157      | 99      | 5,762   |
|          | 10,729           | 38,735 | 41,783 | 43,852   | 50,907   | 56,776   | 61,388   | 68,952   | 89,811   | 96,587  | 49,104  |
| 70 & up  | 31               | 243    | 416    | 351      | 240      | 160      | 91       | 75       | 41       | 94      | 1,742   |
|          | 9,855            | 33,237 | 35,277 | 35,808   | 44,052   | 50,951   | 57,481   | 58,660   | 68,411   | 103,802 | 43,940  |
| Total    | 14,054           | 77,997 | 82,388 | 56,794   | 36,601   | 25,552   | 16,248   | 6,213    | 1,559    | 334     | 317,740 |
|          | 11,100           | 34,277 | 38,966 | 42,955   | 47,890   | 52,248   | 58,358   | 63,699   | 72,625   | 87,914  | 41,083  |

SCHEDULE D

TABLE 2

**THE NUMBER AND REPORTED COMPENSATION OF  
ACTIVE MEMBERS DISTRIBUTED BY AGE  
AS OF DECEMBER 31, 2010**

| Age | Men    |             | Women  |             |
|-----|--------|-------------|--------|-------------|
|     | Number | Amount      | Number | Amount      |
| 16  | 2      | \$ 24,330   |        |             |
| 18  | 1      | 1,862       | 1      | \$ 6,477    |
| 19  | 17     | 125,107     | 12     | 96,792      |
| 20  | 32     | 292,421     | 23     | 319,841     |
| 21  | 123    | 1,772,613   | 85     | 1,286,230   |
| 22  | 308    | 5,113,008   | 568    | 9,001,674   |
| 23  | 594    | 11,857,498  | 1,803  | 33,699,124  |
| 24  | 973    | 22,817,657  | 2,498  | 62,465,345  |
| 25  | 1,271  | 34,889,592  | 3,307  | 91,892,703  |
| 26  | 1,514  | 43,552,465  | 3,776  | 111,751,379 |
| 27  | 1,581  | 47,217,137  | 4,155  | 129,666,970 |
| 28  | 1,831  | 58,190,633  | 4,351  | 139,720,479 |
| 29  | 1,855  | 61,950,964  | 4,609  | 154,566,675 |
| 30  | 1,982  | 69,427,996  | 4,569  | 159,195,813 |
| 31  | 2,040  | 74,290,157  | 4,569  | 163,850,230 |
| 32  | 2,014  | 75,735,076  | 4,639  | 170,744,140 |
| 33  | 2,139  | 82,483,805  | 4,571  | 170,180,401 |
| 34  | 2,119  | 86,035,021  | 4,644  | 174,548,671 |
| 35  | 2,111  | 87,388,622  | 4,512  | 173,148,006 |
| 36  | 2,238  | 96,645,756  | 4,938  | 191,582,428 |
| 37  | 2,315  | 98,958,411  | 4,999  | 192,758,243 |
| 38  | 2,397  | 104,228,081 | 5,251  | 202,988,442 |
| 39  | 2,629  | 116,746,828 | 5,747  | 223,943,540 |
| 40  | 2,927  | 129,914,282 | 6,410  | 249,235,548 |
| 41  | 2,777  | 128,751,897 | 6,314  | 248,768,360 |
| 42  | 2,698  | 125,176,226 | 6,226  | 245,526,130 |
| 43  | 2,641  | 123,487,029 | 5,845  | 226,234,147 |
| 44  | 2,579  | 119,541,834 | 5,930  | 232,005,749 |
| 45  | 2,705  | 125,320,733 | 5,867  | 226,579,580 |
| 46  | 2,744  | 125,968,274 | 6,203  | 243,279,057 |
| 47  | 2,838  | 131,995,942 | 6,303  | 249,313,384 |
| 48  | 2,906  | 138,454,096 | 6,460  | 257,329,783 |
| 49  | 2,888  | 137,125,846 | 6,696  | 270,544,661 |
| 50  | 2,925  | 140,652,180 | 6,774  | 276,103,738 |
| 51  | 2,790  | 133,026,683 | 6,721  | 280,966,565 |
| 52  | 2,780  | 133,576,586 | 6,618  | 275,891,792 |
| 53  | 2,777  | 135,962,132 | 6,693  | 287,804,986 |
| 54  | 2,780  | 136,062,487 | 6,591  | 286,378,789 |
| 55  | 2,640  | 130,818,692 | 6,230  | 274,756,150 |
| 56  | 2,602  | 131,050,677 | 5,968  | 261,304,197 |
| 57  | 2,643  | 131,852,834 | 5,956  | 264,031,941 |

SCHEDULE D

TABLE 2

THE NUMBER AND REPORTED COMPENSATION OF  
ACTIVE MEMBERS DISTRIBUTED BY AGE  
AS OF DECEMBER 31, 2010

CONTINUED

| Age   | Number | Men |               | Women   |                  |
|-------|--------|-----|---------------|---------|------------------|
|       |        |     | Amount        | Number  | Amount           |
| 58    | 2,496  | \$  | 125,599,646   | 5,585   | \$ 250,280,139   |
| 59    | 2,442  |     | 125,448,106   | 5,188   | 231,666,819      |
| 60    | 2,317  |     | 116,501,565   | 4,712   | 213,946,703      |
| 61    | 2,027  |     | 102,289,046   | 3,977   | 176,524,488      |
| 62    | 1,782  |     | 94,367,990    | 3,270   | 146,771,478      |
| 63    | 1,402  |     | 78,660,981    | 2,499   | 112,401,879      |
| 64    | 1,253  |     | 70,895,380    | 2,128   | 97,042,986       |
| 65    | 724    |     | 41,948,576    | 1,175   | 52,795,510       |
| 66    | 622    |     | 34,920,686    | 828     | 36,588,124       |
| 67    | 426    |     | 23,684,710    | 604     | 26,592,839       |
| 68    | 379    |     | 21,710,887    | 462     | 18,860,470       |
| 69    | 262    |     | 14,406,069    | 280     | 11,431,070       |
| 70    | 211    |     | 11,244,521    | 211     | 7,556,515        |
| 71    | 178    |     | 8,994,272     | 159     | 6,738,276        |
| 72    | 130    |     | 6,268,277     | 112     | 4,336,265        |
| 73    | 89     |     | 3,963,913     | 91      | 3,114,037        |
| 74    | 70     |     | 3,972,403     | 77      | 3,004,767        |
| 75    | 50     |     | 2,112,309     | 50      | 1,977,430        |
| 76    | 39     |     | 2,353,985     | 56      | 1,798,341        |
| 77    | 41     |     | 1,894,684     | 22      | 696,051          |
| 78    | 28     |     | 1,092,880     | 24      | 739,396          |
| 79    | 26     |     | 1,157,158     | 10      | 356,514          |
| 80    | 13     |     | 931,442       | 11      | 321,423          |
| 81    | 10     |     | 456,605       | 3       | 78,774           |
| 82    | 7      |     | 360,149       | 1       | 77,936           |
| 83    | 5      |     | 370,266       | 3       | 116,576          |
| 84    |        |     |               | 3       | 104,604          |
| 85    |        |     |               | 3       | 69,587           |
| 86    | 3      |     | 63,006        |         |                  |
| 88    | 2      |     | 38,269        |         |                  |
| 89    | 1      |     | 52,181        | 1       | 27,776           |
| 92    | 1      |     | 94,991        |         |                  |
| 95    |        |     |               | 1       | 7,517            |
| Total | 98,762 | \$  | 4,434,338,423 | 218,978 | \$ 8,619,492,450 |

SCHEDULE D

TABLE 3

**THE NUMBER AND REPORTED COMPENSATION OF  
ACTIVE MEMBERS DISTRIBUTED BY SERVICE  
AS OF DECEMBER 31, 2010**

| Years<br>of<br>Service | Number | Men    |               | Women  |                |
|------------------------|--------|--------|---------------|--------|----------------|
|                        |        | Number | Amount        | Number | Amount         |
| 0                      | 4,476  |        | \$ 47,499,479 | 9,578  | \$ 108,498,556 |
| 1                      | 6,686  |        | 197,870,875   | 11,684 | 340,129,441    |
| 2                      | 4,893  |        | 196,122,546   | 9,684  | 330,301,341    |
| 3                      | 7,709  |        | 291,377,475   | 16,073 | 542,056,606    |
| 4                      | 6,467  |        | 260,387,332   | 14,801 | 515,247,337    |
| 5                      | 6,345  |        | 259,774,608   | 15,069 | 536,732,499    |
| 6                      | 5,549  |        | 231,642,938   | 12,684 | 463,716,130    |
| 7                      | 5,030  |        | 214,569,701   | 11,337 | 424,436,320    |
| 8                      | 4,364  |        | 192,429,306   | 9,800  | 381,187,230    |
| 9                      | 3,597  |        | 165,248,153   | 8,613  | 340,585,595    |
| 10                     | 3,740  |        | 173,535,479   | 9,296  | 369,489,517    |
| 11                     | 3,604  |        | 169,264,205   | 8,888  | 356,130,459    |
| 12                     | 3,382  |        | 162,899,947   | 8,307  | 338,095,081    |
| 13                     | 2,968  |        | 146,468,059   | 7,339  | 307,901,325    |
| 14                     | 2,738  |        | 136,382,867   | 6,532  | 279,434,318    |
| 15                     | 2,600  |        | 134,044,099   | 5,993  | 262,633,954    |
| 16                     | 2,384  |        | 123,038,908   | 5,416  | 244,729,491    |
| 17                     | 2,487  |        | 128,412,546   | 5,057  | 231,865,078    |
| 18                     | 1,991  |        | 109,671,203   | 4,605  | 216,857,846    |
| 19                     | 1,964  |        | 106,839,761   | 4,104  | 194,720,602    |
| 20                     | 1,526  |        | 86,999,042    | 3,405  | 167,828,702    |
| 21                     | 1,781  |        | 97,238,819    | 3,740  | 185,023,671    |
| 22                     | 1,627  |        | 89,335,021    | 3,778  | 186,603,824    |
| 23                     | 1,577  |        | 91,717,775    | 3,693  | 185,185,603    |
| 24                     | 1,404  |        | 85,606,609    | 3,021  | 159,511,476    |
| 25                     | 1,116  |        | 70,227,665    | 2,612  | 141,164,988    |
| 26                     | 1,285  |        | 80,768,871    | 2,575  | 139,699,502    |
| 27                     | 1,307  |        | 81,267,064    | 2,456  | 138,020,505    |
| 28                     | 941    |        | 61,197,311    | 1,760  | 101,360,256    |
| 29                     | 662    |        | 44,073,576    | 1,534  | 90,427,062     |
| 30                     | 467    |        | 32,508,297    | 1,225  | 71,397,960     |
| 31                     | 438    |        | 31,873,569    | 1,062  | 62,027,502     |
| 32                     | 381    |        | 28,954,553    | 911    | 54,008,393     |
| 33                     | 288    |        | 22,627,518    | 707    | 42,985,531     |
| 34                     | 247    |        | 18,559,147    | 487    | 30,816,779     |
| 35                     | 173    |        | 14,362,402    | 315    | 20,866,537     |
| 36                     | 135    |        | 10,963,964    | 247    | 17,823,899     |
| 37                     | 115    |        | 8,647,322     | 203    | 12,870,583     |
| 38                     | 84     |        | 6,958,347     | 137    | 9,492,897      |
| 39                     | 65     |        | 5,547,443     | 85     | 5,689,507      |



SCHEDULE D

TABLE 3

**THE NUMBER AND REPORTED COMPENSATION OF  
ACTIVE MEMBERS DISTRIBUTED BY SERVICE  
AS OF DECEMBER 31, 2010**

CONTINUED

| Years<br>of<br>Service | Number | Men |               | Women   |                  |
|------------------------|--------|-----|---------------|---------|------------------|
|                        |        |     | Amount        | Number  | Amount           |
| 40                     | 40     | \$  | 3,733,573     | 50      | \$ 4,044,354     |
| 41                     | 41     |     | 4,047,395     | 37      | 2,590,311        |
| 42                     | 20     |     | 1,988,381     | 27      | 2,131,547        |
| 43                     | 27     |     | 3,208,639     | 18      | 1,031,873        |
| 44                     | 11     |     | 1,046,760     | 10      | 691,814          |
| 45                     | 6      |     | 956,265       | 2       | 94,571           |
| 46                     | 5      |     | 544,975       | 5       | 381,004          |
| 47                     | 7      |     | 672,184       | 4       | 213,564          |
| 48                     | 5      |     | 577,267       | 5       | 395,258          |
| 49                     | 2      |     | 154,302       | 3       | 141,740          |
| 50                     | 2      |     | 341,185       | 1       | 47,791           |
| 51                     | 1      |     | 55,579        | 1       | 63,911           |
| 52                     | 1      |     | 57,374        |         |                  |
| 54                     |        |     |               | 1       | 40,879           |
| 55                     |        |     |               | 1       | 69,930           |
| 58                     | 1      |     | 40,742        |         |                  |
| Total                  | 98,762 | \$  | 4,434,338,423 | 218,978 | \$ 8,619,492,450 |

SCHEDULE D

TABLE 4

THE NUMBER AND VALUATION COMPENSATION OF  
 DISABLED MEMBERS DISTRIBUTED BY AGE  
 AS OF DECEMBER 31, 2010

| Age | Men    |           | Women  |           |
|-----|--------|-----------|--------|-----------|
|     | Number | Amount    | Number | Amount    |
| 22  |        |           | 1      | \$ 10,175 |
| 26  |        |           | 1      | 10,175    |
| 27  | 1      | \$ 12,795 | 3      | 69,279    |
| 28  |        |           | 6      | 160,319   |
| 29  |        |           | 7      | 192,754   |
| 30  | 2      | 87,192    |        |           |
| 31  | 2      | 60,776    | 7      | 233,606   |
| 32  | 3      | 92,081    | 9      | 291,791   |
| 33  | 3      | 57,466    | 10     | 234,982   |
| 34  | 3      | 83,667    | 16     | 456,245   |
| 35  | 9      | 281,045   | 24     | 725,601   |
| 36  | 11     | 380,392   | 21     | 602,607   |
| 37  | 11     | 352,685   | 9      | 206,583   |
| 38  | 10     | 357,058   | 29     | 898,807   |
| 39  | 15     | 407,686   | 36     | 1,069,661 |
| 40  | 11     | 277,969   | 48     | 1,465,393 |
| 41  | 19     | 543,496   | 60     | 1,903,372 |
| 42  | 27     | 850,568   | 46     | 1,367,675 |
| 43  | 39     | 1,230,544 | 73     | 2,329,342 |
| 44  | 37     | 1,000,374 | 69     | 1,999,760 |
| 45  | 49     | 1,610,090 | 65     | 1,828,722 |
| 46  | 51     | 1,586,064 | 98     | 3,053,789 |
| 47  | 55     | 1,876,101 | 110    | 3,117,638 |
| 48  | 70     | 2,396,635 | 107    | 3,530,323 |
| 49  | 72     | 2,207,703 | 124    | 3,848,177 |
| 50  | 66     | 2,268,305 | 164    | 4,684,832 |
| 51  | 83     | 2,788,927 | 157    | 4,897,101 |
| 52  | 80     | 2,607,088 | 181    | 5,374,181 |
| 53  | 103    | 3,391,731 | 197    | 6,353,826 |
| 54  | 115    | 3,834,519 | 215    | 6,411,262 |
| 55  | 103    | 3,383,380 | 226    | 6,900,354 |
| 56  | 109    | 3,653,456 | 258    | 8,072,463 |
| 57  | 118    | 3,974,652 | 267    | 8,578,948 |
| 58  | 127    | 4,163,162 | 244    | 7,606,306 |
| 59  | 141    | 4,739,496 | 288    | 9,081,277 |
| 60  | 142    | 4,480,570 | 280    | 8,941,723 |
| 61  | 125    | 3,979,039 | 251    | 7,337,948 |
| 62  | 144    | 4,600,209 | 218    | 6,577,407 |
| 63  | 143    | 5,016,840 | 243    | 7,520,863 |
| 64  | 130    | 4,649,604 | 224    | 6,908,524 |

SCHEDULE D

TABLE 4

THE NUMBER AND VALUATION COMPENSATION OF  
DISABLED MEMBERS DISTRIBUTED BY AGE  
AS OF DECEMBER 31, 2010

CONTINUED

| Age   | Number | Men    |               | Women  |                |
|-------|--------|--------|---------------|--------|----------------|
|       |        | Number | Amount        | Number | Amount         |
| 65    | 80     |        | \$ 2,640,253  | 107    | \$ 3,248,480   |
| 66    | 7      |        | 209,666       | 23     | 854,585        |
| 67    | 12     |        | 385,800       | 16     | 473,285        |
| 68    | 9      |        | 263,117       | 11     | 299,696        |
| 69    | 2      |        | 128,577       | 11     | 457,290        |
| 70    | 4      |        | 123,116       | 5      | 152,625        |
| 71    | 5      |        | 148,277       | 5      | 131,562        |
| 72    |        |        |               | 2      | 77,867         |
| 73    | 3      |        | 91,927        | 3      | 91,575         |
| 74    |        |        |               | 1      | 30,525         |
| 75    | 1      |        | 30,525        | 2      | 47,282         |
| 76    | 2      |        | 61,050        |        |                |
| 77    | 2      |        | 61,050        | 1      | 30,525         |
| 78    | 1      |        | 30,525        |        |                |
| 79    | 1      |        | 30,525        | 2      | 61,050         |
| 81    |        |        |               | 1      | 26,007         |
| 85    |        |        |               | 1      | 17,825         |
| 86    | 1      |        | 30,525        |        |                |
| 90    | 1      |        | 30,525        |        |                |
| Total | 2,360  |        | \$ 77,548,823 | 4,583  | \$ 140,853,970 |

SCHEDULE D

TABLE 5

**THE NUMBER AND ACCUMULATED CONTRIBUTIONS OF  
TERMINATED VESTED MEMBERS DISTRIBUTED BY AGE  
AS OF DECEMBER 31, 2010**

| Age | Men    |            | Women  |            |
|-----|--------|------------|--------|------------|
|     | Number | Amount     | Number | Amount     |
| 18  |        |            | 2      | \$ 461     |
| 19  |        |            | 2      | 566        |
| 20  | 3      | \$ 2,116   | 10     | 7,210      |
| 21  | 22     | 18,184     | 22     | 17,507     |
| 22  | 64     | 49,974     | 57     | 60,485     |
| 23  | 128    | 164,085    | 160    | 174,055    |
| 24  | 202    | 331,242    | 435    | 813,959    |
| 25  | 357    | 647,282    | 786    | 1,837,121  |
| 26  | 516    | 1,198,160  | 1,247  | 3,708,076  |
| 27  | 568    | 1,486,201  | 1,670  | 5,725,770  |
| 28  | 719    | 2,324,168  | 1,939  | 7,477,525  |
| 29  | 801    | 2,964,756  | 2,265  | 9,769,596  |
| 30  | 769    | 3,186,325  | 2,302  | 11,614,439 |
| 31  | 851    | 3,658,291  | 2,480  | 13,535,391 |
| 32  | 853    | 4,518,728  | 2,457  | 14,867,975 |
| 33  | 852    | 5,164,307  | 2,533  | 17,180,413 |
| 34  | 883    | 5,460,527  | 2,474  | 18,087,572 |
| 35  | 808    | 5,650,017  | 2,334  | 18,008,463 |
| 36  | 887    | 6,619,601  | 2,408  | 20,053,944 |
| 37  | 877    | 7,491,761  | 2,172  | 18,903,475 |
| 38  | 931    | 8,905,999  | 2,222  | 20,271,601 |
| 39  | 935    | 9,306,896  | 2,313  | 21,595,970 |
| 40  | 1,030  | 10,657,433 | 2,447  | 24,254,846 |
| 41  | 974    | 11,074,102 | 2,418  | 24,829,006 |
| 42  | 867    | 9,907,336  | 2,114  | 23,178,324 |
| 43  | 823    | 10,466,138 | 2,000  | 22,855,834 |
| 44  | 823    | 11,740,828 | 1,792  | 20,102,192 |
| 45  | 801    | 10,571,545 | 1,762  | 20,691,346 |
| 46  | 778    | 11,457,971 | 1,781  | 19,483,322 |
| 47  | 721    | 11,829,197 | 1,755  | 21,629,269 |
| 48  | 757    | 12,199,365 | 1,761  | 23,004,265 |
| 49  | 716    | 12,582,374 | 1,715  | 22,505,346 |
| 50  | 730    | 11,965,592 | 1,761  | 24,443,503 |
| 51  | 686    | 12,436,673 | 1,544  | 22,617,060 |
| 52  | 668    | 12,801,859 | 1,596  | 23,999,666 |
| 53  | 666    | 11,847,357 | 1,550  | 23,293,957 |
| 54  | 639    | 11,152,949 | 1,515  | 22,817,823 |
| 55  | 648    | 11,806,119 | 1,518  | 24,260,967 |
| 56  | 609    | 11,473,358 | 1,466  | 24,485,106 |
| 57  | 557    | 10,501,233 | 1,438  | 25,480,187 |

SCHEDULE D

TABLE 5

THE NUMBER AND ACCUMULATED CONTRIBUTIONS OF  
 TERMINATED VESTED MEMBERS DISTRIBUTED BY AGE  
 AS OF DECEMBER 31, 2010

CONTINUED

| Age   | Number | Men    |               | Women  |                |
|-------|--------|--------|---------------|--------|----------------|
|       |        | Number | Amount        | Number | Amount         |
| 58    | 590    |        | \$ 12,135,360 | 1,415  | \$ 25,312,037  |
| 59    | 610    |        | 13,553,526    | 1,325  | 24,628,393     |
| 60    | 500    |        | 10,245,505    | 1,139  | 20,813,970     |
| 61    | 387    |        | 7,894,136     | 870    | 14,264,501     |
| 62    | 391    |        | 6,926,800     | 674    | 11,272,872     |
| 63    | 328    |        | 5,640,572     | 560    | 8,678,646      |
| 64    | 259    |        | 4,667,533     | 483    | 7,246,003      |
| 65    | 759    |        | 3,117,735     | 649    | 4,459,771      |
| 66    | 159    |        | 1,409,267     | 201    | 2,128,575      |
| 67    | 112    |        | 955,624       | 176    | 1,732,795      |
| 68    | 87     |        | 1,048,315     | 120    | 1,272,397      |
| 69    | 75     |        | 725,385       | 103    | 1,041,815      |
| 70    | 52     |        | 797,805       | 63     | 708,702        |
| 71    | 33     |        | 307,132       | 40     | 532,259        |
| 72    | 24     |        | 430,369       | 34     | 390,959        |
| 73    | 20     |        | 134,012       | 23     | 268,108        |
| 74    | 13     |        | 61,246        | 19     | 152,938        |
| 75    | 14     |        | 88,964        | 20     | 208,329        |
| 76    | 13     |        | 82,189        | 15     | 163,159        |
| 77    | 7      |        | 23,579        | 7      | 89,757         |
| 78    | 4      |        | 40,252        | 4      | 6,090          |
| 79    | 5      |        | 2,683         | 2      | 4,682          |
| 80    | 2      |        | 9,291         | 1      | 5,270          |
| 81    | 2      |        | 11,118        | 2      | 207            |
| 82    | 3      |        | 13,408        | 2      | 1,753          |
| 83    | 1      |        | 0             | 1      | 22,936         |
| 84    | 1      |        | 14,034        | 1      | 2,395          |
| 89    |        |        |               | 1      | 37             |
| 101   |        |        |               | 1      | 69             |
| 103   | 1      |        | 761           | 1      | 572            |
| 104   |        |        |               | 3      | 2,335          |
| Total | 29,971 | \$     | 345,956,650   | 72,178 | \$ 743,055,925 |

SCHEDULE D

TABLE 6

**THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF BENEFICIARIES AND  
SURVIVORS BY AGE AS OF DECEMBER 31, 2010**

**SERVICE RETIREMENTS AND  
DEPENDENTS OF DECEASED BENEFICIARIES**

| Age | Men    |            | Women  |             |
|-----|--------|------------|--------|-------------|
|     | Number | Amount     | Number | Amount      |
| 25  | 1      | \$ 5,402   |        |             |
| 30  |        |            | 1      | \$ 1,032    |
| 38  |        |            | 1      | 31,302      |
| 41  |        |            | 1      | 25,814      |
| 43  |        |            | 2      | 17,471      |
| 44  |        |            | 1      | 6,068       |
| 45  |        |            | 1      | 7,851       |
| 46  | 2      | 64,922     |        |             |
| 47  | 6      | 120,697    | 4      | 67,524      |
| 48  | 11     | 358,969    | 8      | 167,074     |
| 49  | 34     | 901,911    | 17     | 409,961     |
| 50  | 84     | 2,339,703  | 64     | 1,493,448   |
| 51  | 175    | 4,654,263  | 181    | 4,007,732   |
| 52  | 246    | 7,269,401  | 302    | 7,234,153   |
| 53  | 313    | 8,854,919  | 547    | 15,174,773  |
| 54  | 436    | 13,150,261 | 885    | 25,322,808  |
| 55  | 512    | 15,542,231 | 1,183  | 35,191,552  |
| 56  | 708    | 22,136,954 | 1,551  | 47,157,456  |
| 57  | 829    | 25,722,391 | 1,978  | 60,869,890  |
| 58  | 979    | 31,450,189 | 2,334  | 72,885,673  |
| 59  | 1,109  | 36,267,244 | 2,506  | 80,076,000  |
| 60  | 1,246  | 39,901,891 | 2,819  | 85,164,070  |
| 61  | 1,561  | 47,840,440 | 3,495  | 93,496,757  |
| 62  | 1,870  | 52,351,639 | 4,104  | 95,440,565  |
| 63  | 2,293  | 54,816,701 | 4,897  | 96,366,568  |
| 64  | 2,812  | 67,646,526 | 5,606  | 110,142,824 |
| 65  | 2,069  | 47,806,410 | 4,130  | 76,256,427  |
| 66  | 2,167  | 49,065,861 | 4,227  | 76,677,315  |
| 67  | 2,172  | 48,901,219 | 4,401  | 80,123,167  |
| 68  | 2,274  | 52,357,825 | 4,598  | 82,271,232  |
| 69  | 1,945  | 43,901,755 | 3,851  | 67,360,891  |
| 70  | 1,833  | 41,275,892 | 3,658  | 62,878,422  |
| 71  | 1,708  | 38,888,206 | 3,390  | 57,510,700  |
| 72  | 1,719  | 38,466,232 | 3,126  | 52,324,303  |
| 73  | 1,605  | 35,509,225 | 3,085  | 50,280,035  |
| 74  | 1,494  | 34,053,050 | 2,863  | 45,991,018  |
| 75  | 1,490  | 33,889,205 | 2,831  | 44,816,148  |
| 76  | 1,352  | 29,816,898 | 2,827  | 44,613,253  |
| 77  | 1,310  | 29,625,963 | 2,412  | 36,918,014  |

SCHEDULE D

TABLE 6

**THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF BENEFICIARIES AND  
SURVIVORS BY AGE AS OF DECEMBER 31, 2010**

**SERVICE RETIREMENTS AND  
DEPENDENTS OF DECEASED BENEFICIARIES**

CONTINUED

| Age   | Men    |                  | Women   |                  |
|-------|--------|------------------|---------|------------------|
|       | Number | Amount           | Number  | Amount           |
| 78    | 1,188  | \$ 26,611,455    | 2,367   | \$ 36,645,448    |
| 79    | 1,143  | 26,001,942       | 2,364   | 35,102,825       |
| 80    | 1,111  | 25,811,915       | 2,272   | 34,375,138       |
| 81    | 1,038  | 23,731,148       | 2,070   | 31,007,061       |
| 82    | 862    | 19,231,458       | 2,019   | 29,366,844       |
| 83    | 793    | 17,618,037       | 1,881   | 26,500,000       |
| 84    | 686    | 15,001,962       | 1,764   | 24,300,409       |
| 85    | 603    | 12,874,594       | 1,612   | 21,569,454       |
| 86    | 530    | 10,692,660       | 1,475   | 18,651,261       |
| 87    | 447    | 9,091,861        | 1,312   | 16,485,308       |
| 88    | 389    | 7,208,890        | 1,180   | 15,691,962       |
| 89    | 305    | 7,106,567        | 1,137   | 14,235,237       |
| 90    | 298    | 5,655,692        | 1,007   | 12,510,012       |
| 91    | 194    | 3,239,111        | 852     | 10,176,236       |
| 92    | 156    | 2,565,816        | 686     | 8,196,647        |
| 93    | 110    | 1,625,860        | 569     | 6,522,115        |
| 94    | 82     | 1,257,577        | 466     | 5,175,969        |
| 95    | 67     | 1,039,304        | 388     | 4,348,212        |
| 96    | 47     | 605,552          | 336     | 3,704,227        |
| 97    | 47     | 615,727          | 253     | 2,776,326        |
| 98    | 35     | 432,110          | 180     | 1,807,694        |
| 99    | 21     | 223,040          | 138     | 1,492,212        |
| 100   | 14     | 119,301          | 103     | 964,567          |
| 101   | 10     | 118,422          | 91      | 859,377          |
| 102   | 13     | 103,342          | 67      | 668,383          |
| 103   | 9      | 46,597           | 37      | 357,191          |
| 104   | 10     | 70,233           | 42      | 351,657          |
| 105   | 5      | 37,167           | 20      | 192,886          |
| 106   | 7      | 36,084           | 18      | 175,924          |
| 107   | 8      | 44,151           | 17      | 140,939          |
| Total | 48,593 | \$ 1,173,771,970 | 104,610 | \$ 1,973,130,812 |

SCHEDULE D

TABLE 6

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF BENEFICIARIES AND  
SURVIVORS BY AGE AS OF DECEMBER 31, 2010

SERVICE RETIREMENTS AND  
DEPENDENTS OF DECEASED BENEFICIARIES

CONTINUED

|                | Men    |                | Women  |                |
|----------------|--------|----------------|--------|----------------|
|                | Number | Amount         | Number | Amount         |
| Maximum        | 15,220 | \$ 354,269,961 | 52,994 | \$ 966,685,915 |
| Cash Refund    | 1,720  | 40,415,372     | 6,719  | 97,594,789     |
| 100% J&S       | 7,500  | 175,810,811    | 3,146  | 46,059,368     |
| 50% J&S        | 3,185  | 89,898,158     | 2,256  | 41,418,842     |
| Soc Sec Level  | 8,427  | 220,772,758    | 19,874 | 479,127,229    |
| Odd Surv       | 14     | 543,107        | 9      | 169,662        |
| 100% J&S Popup | 6,211  | 152,642,832    | 4,468  | 86,157,806     |
| 50% J&S Popup  | 3,740  | 110,550,557    | 5,045  | 116,705,183    |
| Beneficiary    | 2,576  | 28,868,414     | 10,099 | 139,212,018    |



SCHEDULE D

TABLE 7

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF BENEFICIARIES AND  
SURVIVORS BY AGE AS OF DECEMBER 31, 2010

DISABILITY RETIREMENTS

| Age | Men    |           | Women  |           |
|-----|--------|-----------|--------|-----------|
|     | Number | Amount    | Number | Amount    |
| 20  |        |           | 1      | \$ 4,124  |
| 46  | 2      | \$ 23,556 |        |           |
| 47  | 3      | 55,278    | 1      | 14,815    |
| 48  | 1      | 14,662    | 2      | 18,217    |
| 49  | 6      | 114,741   | 8      | 128,511   |
| 50  | 5      | 89,824    | 15     | 241,940   |
| 51  | 6      | 129,754   | 11     | 162,368   |
| 52  | 21     | 464,416   | 25     | 432,698   |
| 53  | 37     | 870,480   | 35     | 793,843   |
| 54  | 38     | 865,517   | 57     | 1,273,895 |
| 55  | 53     | 1,169,186 | 100    | 2,196,826 |
| 56  | 76     | 1,663,008 | 138    | 3,136,332 |
| 57  | 75     | 1,764,128 | 177    | 4,108,062 |
| 58  | 97     | 2,276,643 | 259    | 6,201,345 |
| 59  | 117    | 2,803,806 | 303    | 7,110,109 |
| 60  | 128    | 3,099,153 | 361    | 7,969,367 |
| 61  | 164    | 3,578,374 | 331    | 7,194,638 |
| 62  | 172    | 3,953,762 | 389    | 8,330,796 |
| 63  | 211    | 4,525,365 | 370    | 7,410,911 |
| 64  | 217    | 4,731,138 | 401    | 7,946,818 |
| 65  | 191    | 3,412,135 | 369    | 6,239,482 |
| 66  | 222    | 3,559,070 | 452    | 6,972,769 |
| 67  | 235    | 3,670,159 | 433    | 6,305,245 |
| 68  | 221    | 3,667,912 | 426    | 6,584,760 |
| 69  | 148    | 2,440,640 | 347    | 5,046,631 |
| 70  | 176    | 2,471,296 | 286    | 3,751,782 |
| 71  | 167    | 2,540,235 | 222    | 2,917,404 |
| 72  | 97     | 1,188,168 | 242    | 3,004,486 |
| 73  | 115    | 1,533,730 | 223    | 2,928,849 |
| 74  | 68     | 1,042,894 | 123    | 1,636,788 |
| 75  | 67     | 1,128,475 | 105    | 1,285,763 |
| 76  | 63     | 928,394   | 75     | 1,110,027 |
| 77  | 43     | 708,647   | 81     | 1,087,989 |
| 78  | 37     | 701,298   | 69     | 811,424   |
| 79  | 37     | 527,410   | 64     | 834,311   |
| 80  | 37     | 543,855   | 58     | 721,097   |
| 81  | 29     | 446,892   | 62     | 776,611   |
| 82  | 21     | 327,906   | 69     | 726,088   |
| 83  | 26     | 364,864   | 52     | 556,044   |
| 84  | 23     | 286,343   | 67     | 697,522   |

SCHEDULE D

TABLE 7

THE DISTRIBUTION OF THE NUMBER AND ANNUAL  
RETIREMENT ALLOWANCES OF BENEFICIARIES AND  
SURVIVORS BY AGE AS OF DECEMBER 31, 2010

## DISABILITY RETIREMENTS

CONTINUED

| Age            | Number | Men    |               | Women  |                |
|----------------|--------|--------|---------------|--------|----------------|
|                |        | Number | Amount        | Number | Amount         |
| 85             | 29     |        | \$ 433,136    | 60     | \$ 663,792     |
| 86             | 23     |        | 351,646       | 51     | 333,482        |
| 87             | 16     |        | 299,136       | 53     | 491,276        |
| 88             | 22     |        | 368,876       | 47     | 486,274        |
| 89             | 8      |        | 143,563       | 30     | 339,918        |
| 90             | 9      |        | 163,558       | 23     | 285,701        |
| 91             | 4      |        | 105,935       | 26     | 200,168        |
| 92             | 6      |        | 118,397       | 14     | 163,597        |
| 93             | 5      |        | 76,391        | 14     | 199,976        |
| 94             | 1      |        | 1,797         | 11     | 80,599         |
| 95             | 1      |        | 3,349         | 9      | 151,040        |
| 96             |        |        |               | 3      | 29,175         |
| 97             | 1      |        | 1,484         | 6      | 31,608         |
| 101            |        |        |               | 1      | 11,532         |
| 105            |        |        |               | 1      | 14,231         |
| Total          | 3,577  |        | \$ 65,750,382 | 7,158  | \$ 122,153,056 |
| Maximum        | 1,996  |        | \$ 38,553,383 | 5,198  | \$ 90,325,808  |
| Cash Refund    | 177    |        | 3,112,861     | 554    | 7,410,384      |
| 100% J&S       | 425    |        | 5,418,486     | 268    | 3,095,315      |
| 50% J&S        | 244    |        | 4,441,335     | 168    | 2,652,826      |
| Soc Sec Level  | 154    |        | 4,127,347     | 417    | 9,685,712      |
| Odd Surv       |        |        |               | 2      | 32,454         |
| 100% J&S Popup | 319    |        | 4,824,568     | 252    | 3,559,582      |
| 50% J&S Popup  | 262    |        | 5,272,402     | 299    | 5,390,975      |