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PERS
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REPORT OF THE ANNUAL GASB STATEMENT NO. 68

REQUIRED INFORMATION FOR THE

MISSISSIPPI HIGHWAY SAFETY PATROL RETIREMENT SYSTEM

PREPARED AS OF JUNE 30, 2014





Cavanaugh Macdonald

CONSULTING, LLC

The experience and dedication you deserve

July 10, 2015

Board of Trustees
Public Employees' Retirement System of Mississippi
429 Mississippi Street
Jackson, MS 39201-1005

Ladies and Gentlemen:

Presented in this report is information to assist the State in meeting the requirements of the Governmental Accounting Standards Board (GASB) Statement No. 68 as a result of sponsoring the Mississippi Highway Safety Patrol Retirement System (System). The information is presented for the period ending June 30, 2015.

GASB Statement No. 68 establishes accounting and financial reporting requirements for governmental employers who provide pension benefits to their employees through a trust.

The annual actuarial valuation used as a basis for much of the information presented in this report was performed as of June 30, 2014. The valuation was based upon data, furnished by the Retirement System staff, concerning active, inactive and retired members along with pertinent financial information.

The actuarial calculations were performed by qualified actuaries according to generally accepted actuarial procedures and methods. The calculations are based on the current provisions of the System, and on actuarial assumptions that are, individually and in the aggregate, internally consistent and reasonably based on the actual experience of the System. In addition, the calculations were completed in compliance with the laws governing the System and, in our opinion, meet the requirements of GASB 68. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein.

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Public Employees' Retirement System of Mississippi

July 10, 2015

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These results are only for financial reporting and may not be appropriate for funding purposes or other types of analysis. Calculations for purposes other than satisfying the requirements of GASB 67 and GASB 68 may produce significantly different results. Future actuarial results may differ significantly from the current results presented in this report due to such factors as changes in plan experience or changes in economic or demographic assumptions.

Respectfully submitted,

A handwritten signature in blue ink, appearing to read 'Edward Macdonald'.

Edward A. Macdonald, ASA, FCA, MAAA
President

A handwritten signature in blue ink, appearing to read 'Edward J. Koebel'.

Edward J. Koebel, FCA, EA, MAAA
Principal and Consulting Actuary

A handwritten signature in blue ink, appearing to read 'Jonathan T. Craven'.

Jonathan T. Craven, ASA, EA, FCA, MAAA
Senior Actuary

EAM/EJK/JTC:kc



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**REPORT OF THE ANNUAL GASB STATEMENT NO. 68
REQUIRED INFORMATION FOR THE
STATE OF MISSISSIPPI
PREPARED AS OF JUNE 30, 2014**

SECTION I – SUMMARY OF PRINCIPAL RESULTS
(\$ IN THOUSANDS)

	2014
Valuation Date (VD):	June 30, 2014
Measurement Date (MD):	June 30, 2014
Reporting Date (RD):	June 30, 2015
Membership Data:	
Retirees and Survivors	720
Terminated Vested Employees	33
Inactive Nonvested Members	25
Active Members	<u>495</u>
Total	1,273
Single Equivalent Interest Rate (SEIR):	
Long-Term Expected Rate of Return	8.00%
Municipal Bond Index Rate-Not Used in SEIR	4.35%
Fiscal Year in which Plan's Fiduciary Net Position is projected to be depleted from future benefit payments for current members	N/A
Single Equivalent Interest Rate	8.00%
Net Pension Liability:	
Total Pension Liability (TPL)	\$ 445,822
Fiduciary Net Position (FNP)	<u>326,032</u>
Net Pension Liability (NPL = TPL – FNP)	\$ 119,790
FNP as a percentage of TPL	73.13%
Pension Expense:	\$10,387
Deferred Outflows of Resources:	\$2,063
Deferred Inflows of Resources:	\$23,279



SECTION II – INTRODUCTION

The Governmental Accounting Standards Board issued Statement No. 68 (GASB 68), “Accounting and Financial Reporting For Pensions”, in June 2012. GASB 68’s effective date is for plan years beginning after June 15, 2014. GASB Statement No. 71, “Pension Transition for Contributions Made Subsequent to the Measurement Date”, should be applied simultaneously with the provisions of GASB 68. The Supplemental Legislative Retirement Plan of Mississippi (Plan) is a single-employer defined benefit pension plan.

This report, prepared as of June 30, 2014 (the Measurement Date), presents information to assist the State in meeting the requirements of GASB 68 for the fiscal year ending June 30, 2015 (Reporting Date). Much of the material provided in this report is based on the data, assumptions and results of the annual actuarial valuation of the Mississippi Highway Safety Patrol Retirement System (System) as of June 30, 2014. The results of that funding valuation were detailed in a report dated October 21, 2014.

GASB 68 replaces GASB 27, and represents a significant departure from the requirements of that older statement. GASB 27 was issued as a funding friendly statement that required pension plans to report items consistent with the results of the plan’s actuarial valuations, as long as those valuations met certain parameters. GASB 68 basically divorces accounting and funding, creating disclosure and reporting requirements that may or may not be consistent with the basis used for funding the System. In fact, GASB 68 paragraph 159 states:

“The Board concluded that it is not within the scope of its activities to set standards that establish a specific method of financing pensions (that being a policy decision for government officials or other responsible authorities to make) or to regulate a government’s compliance with the financing policy or method it adopts. Accordingly, the Board established standards in this Statement within the context of accounting and financial reporting, not within the context of the funding of pensions.”

Two major changes in GASB 68 are the requirements to include a Net Pension Liability (NPL) on the plan sponsor’s balance sheet and to determine a Pension Expense (PE) that may bear little relationship to the funding requirements for the System. In fact it is possible for the NPL to actually be an asset in some years, as it is that the PE may be an income item. Because contributions are included in the NPL calculation, a separate expense will no longer be shown on the income statement for contributions made to the Plans as was required under GASB 27. Further the NPL must be determined utilizing the Entry Age Normal (EAN) actuarial funding method. The NPL is set equal to the Total Pension Liability (TPL) minus the System’s Fiduciary Net Position (FNP) (basically the market values of assets). The benefit provisions recognized in the calculation of the TPL are summarized in Schedule B.



Pension Expense includes amounts for service cost (the Normal Cost under EAN for the year), interest on the TPL, changes in benefit structure, amortization of increases/decreases in liability due to actuarial experience and actuarial assumption changes, and amortization of investment gains/losses. The actuarial experience and assumption change impacts are amortized over the average expected remaining service life of the System membership as of the measurement date, and investment gains/losses are amortized over five years. The development of the PE is shown in Section VI.

The unamortized portions of each year's experience, assumption changes and investment gains/losses are used to develop deferred inflows and outflows, which also must be included on the employer's financial statement. The development of these deferrals is presented in Section VII.

Among the assumptions needed for these calculations is a Single Equivalent Interest Rate (SEIR). To determine the SEIR, the FNP must be projected into the future for as long as there are anticipated benefit payments to the active and retired membership of the System on the measurement date. If the FNP is projected to not be depleted at any point in the future, the long term expected rate of return on plan investments expected to be used to finance the benefit payments may be used as the SEIR.

If, however, the FNP is projected to be depleted, The SEIR is determined as the single rate that will generate a present value of benefit payments equal to the sum of the present value determined by discounting all projected benefit payments through the date of depletion by the long term expected rate of return, and the present value determined by discounting those benefits after the date of depletion by a 20-year tax-exempt municipal bond (rating AA/Aa or higher) rate. The rate used, if necessary, for this purpose is the Bond Buyer General Obligation 20-year Municipal Bond Index published monthly by the Board of Governors of the Federal Reserve System. We have determined that a discount rate of 8.00 percent meets the requirements of GASB 68.

The sections that follow provide the results of all the necessary calculations, as well as additional disclosure items needed as Required Supplementary Information (RSI) or for required financial statement footnotes. The employer may also refer to the 2014 PERS Comprehensive Annual Financial Report on the PERS website, www.pers.ms.gov for calculations and note disclosure.



SECTION III – MEMBERSHIP DATA

Data regarding the membership of the System for use as a basis for the actuarial valuation and the GASB 68 requirements were furnished by the System office. The following table summarizes the membership of the system as of June 30, 2014.

Membership

	Number
Inactive Members or Beneficiaries Currently Receiving Benefits	720
Inactive Members Entitled To But Not Yet Receiving Benefits	58
Active Members	<u>495</u>
Total	1,273



SECTION IV – NOTES TO FINANCIAL STATEMENTS

The actuarial assumptions utilized in developing the TPL are outlined in Schedule A. The total pension liability was determined by an actuarial valuation as of June 30, 2014, using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3.5 percent
Salary increases	5.00 – 10.52 percent, including inflation
Investment rate of return	8.00 percent, net of pension plan investment expense, including inflation

Mortality rates were based on the RP-2000 Combined Mortality Table Projected with Scale AA to 2025, set forward two years for males.

The actuarial assumptions used in the June 30, 2014 valuation were based on the results of an actuarial experience study for the period July 1, 2008 to June 30, 2012. The experience report is dated June 12, 2013.

The long-term expected rate of return on pension plan investments was determined using a log-normal distribution analysis in which best-estimate ranges of expected future real rates of return (expected nominal returns, net of pension plan investment expense and the assumed rate of inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The target asset allocation and best estimates of arithmetic real rates of return for each major asset class are summarized in the following table:



Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
U.S. Broad	34.00%	5.20%
International Equity	19.00	5.00
Emerging Markets Equity	8.00	5.45
Fixed Income	20.00	0.25
Real Assets	10.00	4.00
Private Equity	8.00	6.15
Cash	<u>1.00</u>	(0.50)
Total	100.00%	

Discount Rate. The discount rate used to measure the total pension liability was 8.00 percent. The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate (7.25%) and that employer contributions will be made at the current employer contribution rate (37.00%). Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.



SECTION V – NET PENSION LIABILITY

As stated previously, the NPL is equal to the TPL minus the FNP. That result as of June 30, 2014 is presented in the table below, along with additional required figures (\$ thousands).

June 30, 2014	
Total Pension Liability	\$445,822
Fiduciary Net Position	<u>326,032</u>
Net Pension Liability	\$119,790
Ratio of Fiduciary Net Position to Total Pension Liability	73.13%
Covered employee payroll	\$25,554
Net Pension Liability as a percentage of covered employee payroll	468.77%

In addition to the results in the table above, the sensitivity of the net pension liability to changes in the discount rate must be disclosed. The following presents the net pension liability of the System, calculated using the discount rate of 8.00 percent, as well as what the System's net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (7.00 percent) or 1-percentage-point higher (9.00 percent) than the current rate (\$ thousands):

	1% Decrease (7.00%)	Current Discount Rate (8.00%)	1% Increase (9.00%)
System's net pension liability	\$172,521	\$119,790	\$75,853



The following table details the changes in the NPL from the beginning to the end of the measurement year.

CHANGES IN THE NET PENSION LIABILITY
(\$ in Thousands)

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Balances at June 30, 2013	<u>431,575</u>	<u>287,456</u>	<u>144,119</u>
Changes for the year:			
Service cost	6,461		6,461
Interest	33,396		33,396
Difference between expected and actual experience	2,652		2,652
Contributions - employer		13,500	(13,500)
Contributions - employee		1,963	(1,963)
Net investment income		51,575	(51,575)
Benefit payments, including refunds of employee contributions	(28,262)	(28,262)	0
Administrative expense		(200)	200
Other changes	<u>0</u>	<u>0</u>	<u>0</u>
Net changes	<u>14,247</u>	<u>38,576</u>	<u>(24,329)</u>
Balances at June 30, 2014	<u>445,822</u>	<u>326,032</u>	<u>119,790</u>



SECTION VI – PENSION EXPENSE

As noted earlier, the Pension Expense (PE) consists of a number of different items. GASB 68 refers to the first as Service Cost which is the Normal Cost using the Entry Age Normal actuarial funding method. The second item is interest on the beginning of year TPL and the cash flow during the year at the 8.00% rate of return in effect as of the previous Measurement Date.

The next three items refer to any change that occurred in the TPL under EAN due to benefit changes, actual experience or assumptions. Benefit changes, which are reflected immediately in PE can be positive, if there is a benefit improvement for existing System members, or negative if there is a benefit reduction. For the year ended June 30, 2014 there were no benefit changes to be recognized.

The next item to be recognized is the portion of current year changes in TPL due to Plan experience. The portion to recognize in the current year is determined by spreading the total change over the remaining service life of the entire System membership. For the year ended June 30, 2014, the remaining service life is 4.50.

The last item under changes in TPL is changes in actuarial assumptions. There were no changes in assumptions since the last Measurement Date. If there was a change in TPL due to changes in actuarial assumptions, recognition of the change would be spread over the remaining service life of the entire System membership just like Plan experience in the prior paragraph.

Member contributions for the year and projected earnings on the FNP, again at the rate used to calculate the liabilities are subtracted from the amount determined thus far. One-fifth of current-period differences between actual and projected earnings on the FNP are recognized in the pension expense.

The current year portions of previously determined experience, assumption and earnings amounts, recognized as deferred outflows and inflows (see Section VI) are included next. Finally administrative expenses and other miscellaneous items are included.

The calculation of the Pension Expense for the year ended June 30, 2014 is shown in the following table:



Pension Expense
For the Year Ended June 30, 2014
(\$ thousands)

Service Cost	\$6,461
Interest on the total pension liability	33,396
Current-period benefit changes	0
Expensed portion of current-period difference between expected and actual experience in the total pension liability	589
Expensed portion of current-period changes of assumptions	0
Member contributions	(1,963)
Projected earnings on plan investments	(22,476)
Expensed portion of current-period differences between actual and projected earnings on plan investments	(5,820)
Administrative expense	200
Other	0
Recognition of beginning deferred outflows of resources as pension expense	0
Recognition of beginning deferred inflows of resources as pension expense	<u>0</u>
Pension Expense	<u>\$10,387</u>



SECTION VII – DEFERRED OUTFLOWS/INFLOWS
(\$ Thousands)

Since certain expense items are amortized over closed periods each year, the deferred portions of these items must be tracked annually. If the amounts serve to reduce pension expense they are labeled deferred inflows. If they will increase pension expense they are labeled deferred outflows. As noted in the previous section, the amortization of these amounts is accomplished on a level dollar basis, with no interest included in the deferred amounts. Experience gains/losses and the impact of changes in actuarial assumptions, if any, are amortized over the average remaining service life of the active and inactive System members at the beginning of the fiscal year. Investment gains and losses are amortized over a fixed five year period.

The table below provides a summary of the deferred inflows and outflows as of June 30, 2014.

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$2,063	\$0
Changes of assumptions	0	0
Net difference between projected and actual earnings on plan investments	0	23,279
Employer contributions subsequent to the measurement date	see note	<u>0</u>
Total	<u>\$2,063</u>	<u>\$23,279</u>

NOTE: The deferred outflows of resources reported by the State should include contributions made by the State during its fiscal year that will be reflected in the net pension liability in the next measurement period.

Amortization periods for fiscal year 2015 are 4.5 years for the average expected remaining service life of members and 5.0 year for investment gains/losses. In order to properly report PE and deferred outflows/inflows of resources in future years, it will be necessary for employers to maintain schedules for amortizing deferred amounts.



Amounts reported as deferred outflows of resources related to pensions resulting from State contributions subsequent to the measurement date will be recognized as a reduction of the net pension liability in the year ended June 30, 2015. Other amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense.



SECTION VIII – REQUIRED SUPPLEMENTARY INFORMATION

There are several tables of Required Supplementary Information (RSI) that need to be included in the System’s financial statements. They are provided in Schedule C. In addition the following should be noted regarding the RSI.

Changes of assumptions. In 2013 and later, the expectation of retired life mortality was changed to the RP-2000 Mortality Tables rather than the 1994 Group Annuity Mortality Table, which was used prior to 2013. In 2013, withdrawal rates, pre-retirement mortality rates, disability rates and retirement rates were adjusted to more closely reflect actual experience. In 2013, assumed rates of salary increase were adjusted to more closely reflect actual and anticipated experience.

Method and assumptions used in calculations of actuarially determined contributions. The actuarially determined contribution rates in the schedule of employer contributions are calculated as of June 30, two years prior to the end of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine the most recent contribution rate reported in that schedule:

Actuarial cost method	Entry age
Amortization method	Level percentage of payroll, open
Remaining amortization period	30 years
Asset valuation method	5-year smoothed market
Price Inflation	3.50 percent
Salary increase	5.00 percent to 10.52 percent, including inflation
Investment rate of return	8.00 percent, net of pension plan investment expense, including inflation



SCHEDULE A

STATEMENT OF ACTUARIAL ASSUMPTIONS AND METHODS

INTEREST RATE: 8.00% per annum, compounded annually (net of investment expenses only).

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

Age	Withdrawal and Vesting*	Death	Disability		Service	Service Retirement*
			Non-Duty	Duty		
25	4.0%	.03%	.09%	.01%	5	5%
30	3.5	.04	.12	.02	10	5%
35	2.5	.05	.16	.04	15	5%
40	1.0	.07	.20	.07	20	10%
45	1.0	.11	.30	.06	25	15%
50	0.5	.16	.50	.05	30	25%
55	0.0	.21	.91	.02	35	25%

* The annual rate of service retirement is 100% at age 60.

It is assumed that a member will be granted 1¾ years of service credit for unused leave at termination of employment. In addition, it is assumed that, on average, ¼ year of service credit for peace-time military service will be granted to each member.

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

Age	Merit & Seniority	Annual Rates of	
		Base (Economy)	Increase Next Year
20	5.59%	4.25%	9.84%
25	2.32	4.25	6.57
30	1.50	4.25	5.75
35	1.50	4.25	5.75
40	1.50	4.25	5.75
45	1.00	4.25	5.25
50	0.50	4.25	4.75
55	0.50	4.25	4.75



PAYROLL GROWTH: 4.25% per annum, compounded annually.

PRICE INFLATION: 3.50% per annum, compounded annually.

ADMINISTRATIVE EXPENSES: 0.23% of payroll.

TIMING OF DECREMENT AND PAY INCREASES: Middle of Year.

DEATH AFTER RETIREMENT: The mortality table, for post-retirement mortality, used in evaluating allowances to be paid was the RP-2000 Combined Mortality Table Projected to 2025 by Scale AA (set forward 2 years for males). The RP-2000 Disabled Mortality Table (set back 3 years for males and set forward 2 years for females) was used for the period after disability retirement. This assumption is used to measure the probabilities of each benefit payment being made after retirement. Mortality improvement is anticipated under this assumption as recent mortality experience shows actual deaths 7% greater than expected under selected table.

ASSET VALUATION METHOD: Market Value of Assets.

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

VALUATION METHOD: The valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at retirement, disability or death. The calculations are based on the member's age, years of service, sex, compensation, expected future salary increases, and an assumed future interest earnings rate (currently 8.00%). The calculations consider the probability of a member's death or termination of employment prior to becoming eligible for a benefit and the probability of the member terminating with a service, disability, or survivor's benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members and survivors.



SCHEDULE B

SUMMARY OF MAIN BENEFIT AND CONTRIBUTION PROVISIONS

The following summary presents the main benefit and contribution provisions of the System in effect June 30, 2014, as interpreted in preparing the actuarial valuation.

DEFINITIONS

Average Compensation	Average annual covered earnings of an employee during the four highest consecutive years of service.
Covered Earnings	Gross salary not in excess of the maximum amount on which contributions were required.
Fiscal Year	Year commencing on July 1 and ending June 30.
Credited Service	Service while a contributing member plus additional service as described below.
Unused Sick and Vacation Leave	Service credit is provided at no charge to members for unused sick and vacation time that has accrued at the time of retirement.
Additional Service	Additional service credit may be granted for service prior to July 1, 1958, active duty military service, and retroactive service



The maximum covered earnings for employers and employees over the years are as follows:

EMPLOYER AND EMPLOYEE RATES OF CONTRIBUTION
AND MAXIMUM COVERED EARNINGS

Fiscal Date From	Fiscal Date To	Employer Rate	Maximum Covered Earnings*	Employee Rate	Maximum Covered Earnings*
7/1/1958	6/30/1968	13.33%		5.00%	
7/1/1968	6/30/1971	15.33		5.00	
7/1/1971	6/30/1973	18.59		5.00	
7/1/1973	6/30/1975	20.77		5.00	
7/1/1975	6/30/1978	24.65		5.00	
7/1/1978	6/30/1980	26.16		6.00	
7/1/1980	6/30/1989	26.16		6.50	
7/1/1989	6/30/1990	27.97		6.50	
7/1/1990	6/30/2003	26.16		6.50	
7/1/2003	6/30/2006	28.16		6.50	
7/1/2006	6/30/2008	30.30		6.50	
7/1/2008	12/31/2011	30.30		7.25	
1/1/2012	6/30/2012	35.21		7.25	
7/1/2012	6/30/2015	37.00		7.25	

*Maximum covered earnings equal wages paid, not to exceed wages paid to the Commissioner of the Department of Public Safety (currently \$146,850).

Effective July 1, 2014, additional contributions from SB 2659 and HB 1015 are estimated to be \$3,400,000 combined.



BENEFITS

Superannuation Retirement

Condition for Retirement

- (a) A retirement allowance is payable to any member who retires and has attained age 55 and completed at least five years of membership service, or has attained age 45 and completed at least 20 years of creditable service, or has completed 25 years of creditable service regardless of age.

Any member who has attained age 63 shall be retired forthwith. Effective July 1, 2011, the Commissioner of Public Safety is authorized to allow a member who has attained age 63 to continue in active service. Such continued service may be authorized annually until the member attains age 65.

- (b) Any member who withdraws from service prior to his or her attainment of age 55 but after having completed five or more years of creditable service is entitled to receive, in lieu of a refund of his or her accumulated contributions, a retirement allowance commencing at age 55.

Amount of Allowance

The annual retirement allowance payable to a retired member is equal to:

1. A member's annuity which is the actuarial equivalent of the member's accumulated contributions at the time of his or her retirement, plus
An employer's annuity which, together with the member's annuity, is equal to 2-1/2% of his or her average compensation for each year of membership service, plus
2. prior service annuity equal to 2-1/2% of average compensation for each year of prior service.

The aggregate amounts of (2) and (3) above shall not exceed 100% of average compensation, regardless of service, for retirements on or after January 1, 2000; 85% for retirements prior to January 1, 2000.

The minimum allowance for both service and disability retirement based on the following table for each year of creditable service, reduced if necessary as indicated below.



Service	Monthly Benefit
Less than 10 years	\$250
10-15 years	\$300
15 or more years	\$500

The annual retirement allowance payable to a member who retires under condition (a) above prior to age 55 is computed in accordance with the above formula except that the employer's annuity and prior service annuity are reduced 3% for each year of age below age 55, or 3% for each year of service below 25 years of creditable service, whichever is less.

Disability Retirement

Condition for Retirement

A retirement allowance is payable to any member who is not eligible for a service retirement benefit but who becomes totally and permanently disabled, either physically or mentally, regardless of creditable service, if the disability is due to causes in the performance of duty. If the disability is not in the performance of duty, the member must have completed at least 5 years of membership service to be eligible for retirement.

Amount of Allowance

The annual disability retirement allowance payable is equal to the greater of 50% of his or her average salary for the 2 years immediately preceding retirement, or a retirement allowance as calculated under the provisions for superannuation retirement.

Death Prior to Retirement

Upon the death of a highway patrolman who is eligible for service retirement, family benefits are payable equal to those which would have been payable had he been retired on his or her date of death.

Upon the death of a highway patrolman either in the line of duty or as a result of an accident occurring in the line of duty, the following benefits are payable:

- a) a benefit to the spouse equal to one-half the member's average compensation.
- b) a benefit to a dependent child payable to age 19 (23 if a full-time student) equal to one-fourth of the member's average compensation for one child or one-half for two or more children.



Death After Retirement

Upon the death of a highway patrolman who has retired for service or disability and who has not elected any other optional form of benefit, his widow or her widower is eligible for a benefit equal to 50% of his or her retirement allowance and each child (but not more than 2) who has not attained age 19 (23 if a full-time student) is eligible for a benefit equal to 25% of his or her retirement allowance. The benefit to the widow is payable for life and to children until they attain age 19 (23 if a full-time student) or for life if they are totally and permanently disabled.

Refund of Contributions

Upon a member's termination of employment for any reason before retirement, his or her accumulated contributions, together with regular interest thereon, are refunded. Upon the death of a member who is not eligible for any other death benefit, his or her accumulated contributions, together with regular interest thereon, are paid to his or her beneficiary.

Interest is currently credited to the member's account at 3.50% per annum.

Normal Form of Benefit

The normal form of benefit is an allowance payable during the life of the member. Upon death the benefits described above are payable.

Optional Benefits

A member upon retirement may elect to receive his allowance in one of the following forms which are computed to be actuarially equivalent to the applicable retirement allowance.

Option 1. Reduced allowance with the provision that if the pensioner dies before he receives the value of the member's annuity as it was at the time of retirement, the balance shall be paid to his or her beneficiary.

Option 2. Upon his or her death, his or her reduced retirement allowance shall be continued throughout the life of, and paid to, his or her beneficiary.

Option 3. Upon his or her death, 50% of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary and the other 50% of his or her reduced retirement allowance to some other designated beneficiary.

Option 4. Upon his or her death, 75% of his or her reduced retirement allowance shall be continued



throughout the life of, and paid to, a designated beneficiary.

Option 4A. Upon his or her death, 50% of his or her reduced retirement allowance shall be continued throughout the life of, and paid to, a designated beneficiary.

Option 4B. A reduced retirement allowance shall be continued throughout the life of the pensioner, but with the further guarantee of payment to the pensioner or his or her beneficiary for a specified number of years certain.

Option 4C. A member may elect any option with the added provision that the member shall receive, so far as possible, the same total amount annually (considering both HSPRS and Social Security benefits) before and after the earliest age at which the member becomes eligible for a Social Security benefit. This option was only available to those who retired prior to July 1, 2004.

A member who elects Option 2, Option 4, or Option 4A, at retirement may revert to the normal form of benefit if the designated beneficiary predeceases the retired member or if the retired member divorces the designated beneficiary. A member who elects the normal form of benefit or Option 1 at retirement may select Option 2, Option 4, or Option 4A to provide beneficiary protection to a new spouse if married after retirement.

A member who qualifies for an unreduced retirement allowance may select a partial lump-sum option at retirement. Under this option, the retiree has the option of taking a partial lump-sum distribution equal to either 12, 24, or 36 times the base maximum monthly benefit. With each lump-sum amount, the base maximum monthly benefit will be actuarially reduced. A member selecting this option may also select any of the regular options except Option 1, the prorated single-life annuity, and Option 4-C, the Social Security leveling provision. The benefit is then calculated using the new reduced maximum benefit as a starting point in applying the appropriate option factors for the reduction.

Post-Retirement Adjustments In Allowances

The allowances of retired members are adjusted annually by an amount equal to (a) 3% of the annual retirement allowance for each full fiscal year of retirement prior to the year in which the member reaches age 60*, plus (b) 3% compounded for each year thereafter beginning with the fiscal year in which the member turns age 60*.



A prorated portion of the annual adjustment will be paid to the member, beneficiary, or estate of any member or beneficiary who is receiving the annual adjustment in a lump sum, but whose benefits are terminated between July 1 and December 1.

Those members who retired on or before July 1, 1999 received an ad hoc benefit increase in the amount of \$3.50 per month per each full fiscal year of retirement through June 30, 1999 plus \$1.00 per month for each year of credited service. The benefits were increased on July 1, 1999.

*this age will be reduced in five phases to age 55 if the actuary certifies that reducing the age will not result in the amortization period of the unfunded accrued liability exceeding 20 years.

CONTRIBUTIONS

Members contribute 7.25% of compensation and the employer contributes 37.00% of compensation. Funds from SB 2659 and HB 1015 are also provided.

SCHEDULE C



REQUIRED SUPPLEMENTARY INFORMATION

**SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY
(\$ in Thousands)**

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total pension liability										
Service cost	\$6,461									
Interest	33,396									
Changes of benefit terms	0									
Difference between expected and actual experience	2,652									
Changes of assumptions	0									
Benefit payments	(28,220)									
Refund of Contributions	(42)									
Net change in total pension liability	\$14,247									
Total pension liability – beginning	\$431,575									
Total pension liability – ending (a)	\$445,822									
Plan fiduciary net position										
Contributions – employer	\$13,500									
Contributions – member	1,963									
Net investment income	51,575									
Benefit payments	(28,220)									
Administrative expense	(200)									
Refund of Contributions	(42)									
Other	0									
Net change in plan fiduciary net position	\$38,576									
Plan fiduciary net position – beginning	\$287,456									
Plan fiduciary net position – ending (b)	\$326,032									
Net pension liability – ending (a) – (b)	\$119,790									



SCHEDULE OF THE NET PENSION LIABILITY
(\$ in Thousands)

	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
Total pension liability	\$445,822									
Plan fiduciary net position	<u>326,032</u>									
Net pension liability	<u>\$119,790</u>									
Plan fiduciary net position as a percentage of the total pension liability	73.13%									
Covered-employee payroll	\$25,554									
Net pension liability as a percentage of covered-employee payroll	468.77%									



SCHEDULE OF EMPLOYER CONTRIBUTIONS
(\$ in Thousands)

	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Statutorily required employer contribution										
Contributions in relation to statutorily required contribution										
Annual contribution deficiency (excess)										
Covered-employee payroll										
Actual contributions as a percentage of covered-employee payroll										