

# Highway Patrol Retirement System

## Comprehensive Annual Financial Report



A Component Unit of the State of Ohio  
Year ended December 31, 2014

Mark R. Atkeson, Executive Director  
1900 Polaris Parkway, Suite 201  
Columbus, Ohio 43240-4037

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# Table of Contents

	Page
<b>INTRODUCTORY SECTION</b>	
Certificate of Achievement .....	6
Board of Trustees and Senior Staff .....	7
Organizational Chart .....	8
Consultants and Investment Managers .....	9
Legislative Summary .....	10
Letter of Transmittal .....	11
 <b>FINANCIAL SECTION</b>	
Independent Auditor's Report .....	16
Management's Discussion and Analysis .....	19
Basic Financial Statements	
Statement of Fiduciary Net Position .....	24
Statement of Changes in Fiduciary Net Position .....	25
Notes to the Financial Statements .....	26
Required Supplementary Schedules	
Schedule of Changes in Net Pension Liability and Related Ratios .....	44
Schedule of Employer Contributions - Pension .....	45
Schedule of Investment Returns .....	45
Schedule of Employer Contributions and Other Contributing Entities - OPEB .....	45
Scheduling of Funding Progress – OPEB .....	46
Notes to the Trend Data .....	46
Notes to Required Supplementary Schedules .....	47
Supplementary Information	
Schedule of Administrative Expenses .....	48
Schedule of Investment Expenses .....	49
Payments to Consultants .....	49
Independent Auditors' Report on Internal Control and Compliance .....	50
 <b>INVESTMENT SECTION</b>	
Investment Overview .....	54
Investment Summary .....	55
Asset Allocation .....	55
Ten-Year Investment Comparison .....	55
Report on Investment Activity .....	56
Schedule of Investment Results .....	57
Total Fund Rates of Return vs. Policy Benchmark .....	57
Investment Portfolio .....	58
Summary Schedule of Investment Manager Fees .....	61
Summary Schedule of Broker Fees .....	62
Investment Objectives, Policies, and Guidelines .....	63
 <b>ACTUARIAL SECTION</b>	
Actuary's Letter .....	86
Statement of Actuarial Assumptions and Methods .....	89
Short-Term Solvency Test .....	91
Active Member Valuation Data .....	91
Retirees and Beneficiaries Added to and Removed from Rolls .....	92
Analysis of Financial Experience .....	92
Summary of Plan Provisions .....	93
 <b>STATISTICAL SECTION</b>	
Introduction .....	100
Changes in Fiduciary Net Position – Pension, 2005-2014 .....	101
Changes in Fiduciary Net Position – OPEB, 2005-2014 .....	101
Benefit Deductions from Net Position by Type – Pension, 2005-2014 .....	102
Benefit Deductions from Net Position by Type – OPEB, 2005-2014 .....	102
Principal Participating Employer, 2005-2014 .....	102
Benefit Recipients by Type of Benefit, December 31, 2014 .....	103
Average Benefit Payments, 2005-2014 .....	104
Mission and Vision Statement .....	105

**Disclaimer:**

**This audit report is subject to review and acceptance by the Auditor of State's office, and the requirements of Ohio Revised Code § 117.25 are not met until the Auditor of State certifies this report. This process takes approximately two weeks and reports are subject to change if the Auditor of State determines that modification of a report is necessary to comply with required accounting or auditing standards or OMB Circular A-133.**



# **Introductory Section**



Government Finance Officers Association

Certificate of  
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**Highway Patrol Retirement System**  
**Ohio**

For its Comprehensive Annual  
Financial Report  
for the Fiscal Year Ended

**December 31, 2013**

Executive Director/CEO

## Introductory Section

### Board of Trustees and Senior Staff



Capt. Cory D. Davies  
*Employee Trustee/Chair*



Capt. Carl Roark  
*Employee Trustee /  
Vice-Chair*



S/Lt. Heidi A. Marshall  
*Employee Trustee*



Sgt. Jeremy B. Mendenhall  
*Employee Trustee*



Lt. Andre T. Swinerton  
*Employee Trustee*



Col. Paul A. Pride  
*Statutory Member*



Maj. (ret.) Darryl L. Anderson  
*Retiree Trustee*



Lt. (ret.) Larry A. Davis  
*Retiree Trustee*



Maj. (ret.) JP Allen  
*Governor's Investment Expert  
Appointee*



Kenneth C. Boyer  
*Treasurer of State's Investment  
Designee*



Joseph H. Thomas  
*General Assembly's Investment  
Expert Appointee*



Maj. (ret.) Mark R. Atkeson  
*Executive Director*

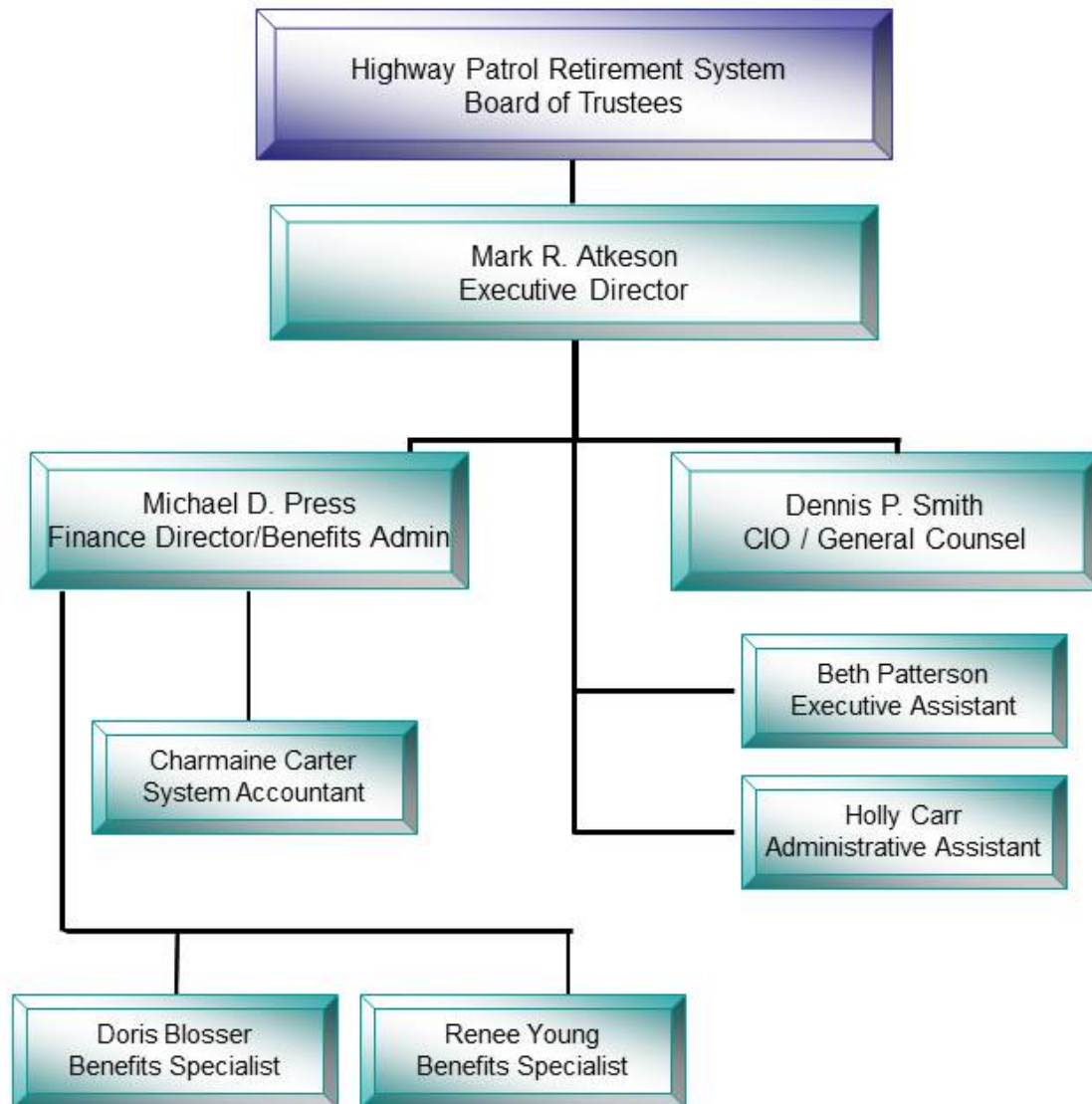


Dennis P. Smith  
*Chief Investment Officer*



Michael D. Press  
*Finance Director / Benefits Administrator*

## Highway Patrol Retirement System Organizational Chart



See page 9 for a list of consultants and investment managers.



## Introductory Section

### Consultants and Investment Managers

#### Consultants

**Medical Advisor**  
David A. Tanner, DO  
Columbus, Ohio

**Actuary**  
Gabriel, Roeder, Smith, & Co.  
Southfield, Michigan

**Investment Consultant**  
Hartland  
Cleveland, Ohio

#### Investment Managers

Ancora Advisors  
Cleveland, Ohio  
*Micro Cap Equity*

Blue Point Capital Partners  
Cleveland, Ohio  
*Private Equity*

Credit Investments Group  
New York, New York  
*High Yield Fixed Income*

DePrince, Race & Zollo  
Winter Park, Florida  
*Large Cap Value Equity*

Dimensional Fund Advisors  
Austin, Texas  
*Small Cap Blend Equity &  
International Equity*

Driehaus Capital Management  
Chicago, Illinois  
*International Small Cap Growth Equity*

Evanston Capital Management  
Evanston, Illinois  
*Fund of Hedge Funds*

Feingold O'Keeffe Capital  
Boston, Massachusetts  
*Distressed Debt*

Forest Investment Associates  
Atlanta, Georgia  
*Timber*

Grosvenor Capital Management  
New York, New York  
*Private Equity*

HarbourVest Partners  
Boston, Massachusetts  
*Private Equity*

Johnson Institutional Management  
Cincinnati, Ohio  
*Core/Short-Term Fixed Income*

J.P. Morgan Asset Management  
New York, New York  
*Intermediate-Term Fixed Income*

Kayne Anderson Capital Advisors  
Los Angeles, California  
*Energy/Mezzanine & Private Equity*

Long Wharf Real Estate Partners  
Boston, Massachusetts  
*High Yield Fixed Income*

LSV Asset Management  
Chicago, Illinois  
*Large Cap Value Equity*

Manning & Napier Advisors  
Dublin, Ohio  
*International Equity*

Oaktree Capital Management  
New York, New York  
*Real Estate*

OFI Trust Company  
New York, New York  
*Emerging Markets*

Pantheon Ventures  
San Francisco, California  
*Private Equity*

Pinnacle Asset Management  
New York, New York  
*Fund of Hedge Funds*

Pyramis Global Advisors  
Smithfield, Rhode Island  
*Real Estate*

Seix Investment Advisors  
Upper Saddle River, New Jersey  
*Distressed Debt*

The Vanguard Group  
Wayne, Pennsylvania  
*Money Market, Domestic Large Cap  
Blend, Mid Cap & International Equity*

Wellington Management Co.  
Boston, Massachusetts  
*Fixed Income & Large Cap Growth  
Equity*

Westfield Capital Management  
Boston, Massachusetts  
*Small Cap Growth Equity*

William Blair & Company  
Chicago, Illinois  
*International Equity*

## Introductory Section

### Legislative Summary

---

The Ohio Legislature passed Substitute Senate Bill 345 in late 2012 with effective dates of most components of the law occurring in 2013:

- The percentage of active member contribution, which ranges between 10% - 14%, will be determined by the Board as deemed necessary to comply with the actuarial valuation requirements of ORC 5505.121. (Effective date June 24, 2013)
- The annual cost of living adjustment (COLA) applied to eligible retirees, which ranges between 0% - 3%, will be determined by the Board as deemed necessary to comply with the actuarial valuation requirements of ORC 5505.121. (Effective date January 7, 2013)
- Increase COLA eligibility age from 53 to 60. (Effective date January 7, 2013)
- Increase Final Average Salary (FAS) calculation period from 3 to 5 years for members retiring after 2014. (Effective date January 1, 2015)

The legislation is now fully implemented, and, with the Board's actions, the solvency of HPRS has greatly increased. In October 2014, the Board voted to set the employee contribution rate at 12.5% of payroll and set the cost of living adjustment (COLA) for retirees at 1.25% beginning in 2015. This action kept the HPRS pension fund in compliance with the 30-year amortization requirement. In addition, the Board was able to improve the solvency of the health care fund by increasing the amount of employer contributions dedicated to health care from 3.65% to 4.30% of payroll effective January 2014.

In 2014, the United States Congress took no meaningful action to improve the financial solvency of the Social Security System, Medicare, and Medicaid. The majority of HPRS retirees qualify for Social Security benefits due to employment other than with the Highway Patrol, and qualify for Medicare Part A or B, or both. Cutbacks to Medicare will place additional pressure on HPRS health care benefits.

The Patient Protection and Affordable Care Act (PPACA) will have an impact on HPRS health care funding. The extent of the impact is not completely known at this time, but fees associated with the PPACA commencing in 2014 will negatively affect HPRS's health care funding.



June 18, 2015

## **Letter of Transmittal**

Members of the Board of Trustees:

We are pleased to present you the *Comprehensive Annual Financial Report* for the Highway Patrol Retirement System (HPRS) for the period ended December 31, 2014. This report is intended to provide financial, investment, actuarial, and statistical information in a single publication. Working with each HPRS staff member and various consultants employed by HPRS, HPRS management takes full responsibility for the accuracy and completeness of this report. The data presented in this report demonstrates the careful stewardship of the system's assets to enable the Board to provide excellent pension and health care benefits to our members.

The HPRS was created by the Ohio Legislature in 1941 to provide pension benefits to the sworn officers and communications personnel of the Ohio State Highway Patrol (OSHP). Prior to this action of the Legislature, active duty members of the OSHP contributed to the Ohio Public Employees Retirement System. Currently, only sworn officers, cadets in training to become sworn officers, and communications personnel hired prior to November 2, 1989 are permitted to be contributing members of the HPRS. In 1974, the Legislature authorized the HPRS to offer health care benefits to retired members, if excess funds are available.

In addition to pension benefits, the HPRS provides disability benefits to active duty members, disabled both on and off duty. Survivor and death benefits and health care coverage is provided for benefit recipients and eligible dependents. A full description of benefits provided by the HPRS can be found in the *Plan Summary* portion of the Actuarial Section.

### **Major Plan Initiatives and Changes in 2014**

The most significant changes in 2014 centered on Board actions related to health care. In 2013, the Board elected to increase health care premiums for HPRS's non-Medicare population, effective January 1, 2014. A restructuring of premiums for the non-Medicare population was approved in mid-2014 to be effective in 2015. These changes extended the solvency of the health care fund from 2024 to 2026. In August of 2014, the Board adopted a retiree health employer contribution rate of 4.30%. The Board elected to increase 2015 health care premiums for Medicare-eligible members and initiated a phase-out of the monthly Medicare B reimbursement. These additional changes further extended the health care fund solvency period to 2028.

In 2014, the employee contribution rate was increased from 10% to 11.5% of payroll. COLA for eligible beneficiaries was set at 1.5%. For 2015, the employee contribution rate was increased to

12.5% and COLA was set at 1.25%. These changes were necessary for HPRS to remain compliant with the actuarial requirements of the Ohio Revised Code and to help shore up the stressed health care fund.

In June of 2014, HPRS sold its real estate located at 6500 Busch Boulevard. HPRS relocated the offices from 6161 Busch Boulevard, Columbus, Ohio to 1900 Polaris Parkway, Columbus, Ohio, on April 3, 2015. The 6161 Busch Boulevard property is currently listed for sale.

## **Investments**

The primary objective of the State Highway Patrol Retirement System is to provide eligible members and beneficiaries with scheduled pension benefits. It is very important the Board develop and implement an investment strategy that provides the funds necessary to maintain the security and safety of the plan. With benefit recipients living longer, health care costs rising at a rate of many times the actual rate of inflation and financial downturns, such as the recession of 2008, the investment strategy must be monitored and adjusted constantly.

Consistent with prudent standards for preservation of capital and maintenance of liquidity, the goal of the fund is to earn the highest possible rate of return consistent with HPRS's tolerance for risk as determined periodically by the Board in its role as a fiduciary. This objective should ensure adequate funds to meet scheduled benefits. Diversification of assets will ensure that adverse or unexpected results from a security class will not have a detrimental impact on the entire portfolio.

The U.S. economy continued to grow in 2014 despite a negative first quarter; real GDP increased in 2014 by 2.4% for the year, up from 1.9% in 2013. Contrary to popular expectations, interest rates moved lower in the United States in 2014, at least on the long-end of the yield curve. HPRS's assets increased 6.8% (gross of fees except for Alternatives, which was net of fees) finishing the year with a net position of \$848,610,417.

Interest rates and government intervention, both in the U.S. and abroad, will continue to affect our investment returns and where we can find opportunities in this still unusual market. During 2014, the Board made some very important moves within the fixed income portfolio to lessen the impact of rising interest rates. The Board also looked very closely at investment managers and made changes when required both to increase gains and lessen unnecessary volatility. Because of all these efforts, the HPRS portfolio is in a strong position to continue to navigate these unique and still uncertain times ahead.

A more detailed report on investment operations and performance can be found in the *Management's Discussion and Analysis* section, beginning on page 19, and the Investment Section, beginning on page 54.

## **Internal Controls**

The management of HPRS has implemented and is responsible for a system of internal accounting controls, designed to provide reasonable assurance of the safeguarding of assets and the reliability of financial records. Once again in 2014, the Summit County Internal Audit Department was retained to perform internal auditing services, specifically the assessment of fringe benefits, asset inventory, expenditures, payroll, board meetings, and ORC compliance.

Although several recommendations for improvement were given, no material weaknesses were identified. Additional functional areas will be audited in 2015.

The internal accounting controls in place are adequate to meet the purpose for which they were intended and are reviewed annually by an external auditor. The financial statements, supporting schedules, and statistical tables are presented fairly in all material respects. For the past many years, the external auditors appointed by the Auditor of State have noted in their reports that the internal controls of the HPRS parallel best practices of public pension plans and are in full compliance with nationally accepted accounting standards.

### **Funding**

The funding of pension and health care benefits of the HPRS comes from a combination of employer and employee contributions and investment returns. Ohio law requires public pension plans to be able to amortize pension obligations within a 30-year period. A national standard of funding status is benchmarked at 80%. At the close of 2009, the HPRS was not able to amortize pension liabilities in 30 years or less. The funding status percentage dropped from 80.9% at the end of 2007 to 59.5% at the end of 2011. Due to changes that were enacted by the Board in 2013 and 2014, the amortization period no longer exceeds the 30-year limit. The funding status for the period ended December 31, 2013 was 69.8%. With favorable investment returns, we expect our funding status to continue to improve over time.

### **Awards**

The Government Finance Officers Association of the United States and Canada (GFOA) awarded a Certificate of Achievement for Excellence in Financial Reporting to the Highway Patrol Retirement System for its comprehensive annual financial report for the fiscal year ended December 31, 2013. In order to be awarded a Certificate of Achievement, a government must publish an easily readable and efficiently organized comprehensive annual financial report. This report must satisfy both generally accepted accounting principles and applicable legal requirements. A Certificate of Achievement is valid for a period of one year only. We believe our current comprehensive annual financial report continues to meet the Certificate of Achievement program's requirements, and we are submitting it to the GFOA to determine its eligibility for another certificate.

### **Professional Services**

To aid in efficient and effective management, professional services are provided to the HPRS by consultants appointed by the Board. Gabriel, Roeder, Smith & Company of Southfield, Michigan, provides actuarial services. The investment advisor to the Board is Hartland of Cleveland, Ohio. Under contract with the Auditor of State of Ohio, Schneider Downs & Co., Inc., of Columbus, Ohio, audited the financial records of the system. The Summit County Internal Audit Department of Akron, Ohio, was retained to perform internal auditing services.

### **Acknowledgements**

The preparation of this report reflects the combined efforts of the system's staff under the direction of the Board of Trustees. It is intended to provide complete and reliable information as a basis for making management decisions, a means for determining compliance with legal

provisions and a means for determining responsible stewardship over the assets contributed by the members and their employer, the State of Ohio.

Upon publication of this report at [www.ohprs.org](http://www.ohprs.org), HPRS will notify interested parties of its availability, including all State Highway Patrol facilities, professional consultants, investment managers, ranking members of the appropriate Ohio House and Senate committees, the Ohio Retirement Study Council, and the Office of Budget Management.

Submitted for your review,



Mark R. Atkeson  
Executive Director



Michael D. Press  
Finance Director



# **Financial Section**



Big Thinking. Personal Focus.

## INDEPENDENT AUDITORS' REPORT

Board of Trustees  
Ohio State Highway Patrol Retirement System  
Columbus, Ohio

### ***Report on the Financial Statements***

We have audited the accompanying financial statements of The Ohio State Highway Patrol Retirement System (HPRS), which comprise the statement of fiduciary net position as of December 31, 2014, and the related statement of changes in fiduciary net position for the year ended December 31, 2014, and related notes to the financial statements as listed in the table of contents.

### ***Management's Responsibility for the Financial Statements***

Management is responsible for the preparation and fair presentation of these financial statements in accordance with accounting principles generally accepted in the United States of America; this includes the design, implementation, and maintenance of internal control relevant to the preparation and fair presentation of financial statements that are free from material misstatement, whether due to fraud or error.

### ***Auditors' Responsibility***

Our responsibility is to express an opinion on these financial statements based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards*, issued by the Comptroller General of the United States. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the financial statements are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the financial statements. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the financial statements, whether due to fraud or error. In making those risk assessments, the auditor considers internal control relevant to the entity's preparation and fair presentation of the financial statements in order to design audit procedures that are appropriate in the circumstances, but not for the purpose of expressing an opinion on the effectiveness of the entity's internal control. Accordingly, we express no such opinion. An audit also includes evaluating the appropriateness of accounting policies used and the reasonableness of significant accounting estimates made by management, as well as evaluating the overall presentation of the financial statements.

We believe that the audit evidence we have obtained is sufficient and appropriate to provide a basis for our audit opinion.



## ***Opinion***

In our opinion, the financial statements referred to above present fairly, in all material respects, the fiduciary net position of the Ohio State Highway Patrol Retirement System as of December 31, 2014, and the change in fiduciary net position for the year then ended in conformity with accounting principles generally accepted in the United States of America.

## ***Emphasis of Matter***

### *Adoption of New Accounting Standards*

As discussed in Note 1 to the financial statements, in 2014 the HPRS adopted new accounting guidance, Statement No. 67 of the Governmental Accounting Standards Board, Financial Reporting for Pension Plans-an Amendment of GASB Statement No. 25 (GASB 67). The financial statements for the year ended December 31, 2013, were restated due to the implementation of GASB 67. Our opinion is not modified with respect to this matter.

## ***Other Matters***

### *Required Supplementary Information*

Accounting principles generally accepted in the United States of America require this presentation to include management's discussion and analysis and required supplementary schedules, as listed in the table of contents, to supplement the basic financial statements. Such information, although not a part of the basic financial statements, is required by the Governmental Accounting Standards Board, who considers it to be an essential part of financial reporting for placing the basic financial statements in an appropriate operational, economic, or historical context. We have applied certain limited procedures to the required supplementary information in accordance with auditing standards generally accepted in the United States of America, which consisted of inquiries of management about the methods of preparing the information and comparing the information for consistency with management's responses to our inquiries, the basic financial statements, and other knowledge we obtained during our audit of the basic financial statements. We do not express an opinion or provide any assurance on the information because the limited procedures do not provide us with sufficient evidence to express an opinion or provide any other assurance.

### *Additional Information*

Our audit was conducted for the purpose of forming an opinion on the basic financial statements taken as a whole. The additional information, including the schedules of administrative expenses, investment expenses, and payments to consultants, as listed in the table of contents, are presented for the purposes of additional analysis and are not required part of the basic financial statements. The additional information is the responsibility of management and was derived from and relates directly to the underlying accounting and other records used to prepare the basic financial statements. Such information has been subjected to the auditing procedures applied in the audit of the basic financial statements and certain additional procedures, including comparing and reconciling such information directly to the underlying accounting and other records used to prepare the basic financial statements or the basic financial statements themselves, and other additional procedures in accordance with auditing standards generally accepted in the United States of America. In our opinion, the additional information is fairly stated, in all material respects, in relation to the basic financial statements as a whole.

### *Other Information*

The introductory, investments, actuarial and statistical sections, as listed in the table of contents have not been subjected to the auditing procedures applied in the audit of the basic financial statements, and accordingly, we do not express an opinion or provide any assurance on them.

***Other Reporting Required by Government Auditing Standards***

In accordance with *Government Auditing Standards*, we have also issued our report dated June 25, 2015, on our consideration of the HPRS's internal control over financial reporting and on our tests of its compliance with certain provisions of laws, regulations, contracts, and grant agreements and other matters. The purpose of that report is to describe the scope of our testing of internal control over financial reporting and compliance and the results of that testing, and not to provide an opinion on internal control over financial reporting or on compliance. That report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the HPRS's internal control over financial reporting and compliance.

*Schneider Downs & Co., Inc.*

Columbus, Ohio  
June 25, 2015

#### Financial Highlights

- At December 31, 2014, the assets of HPRS exceeded liabilities by \$848,610,417. All of the assets are held in trust for pension and health care benefits and are available to meet HPRS's ongoing obligations to plan participants and their beneficiaries.
- During 2014, HPRS's fiduciary net position increased by \$11,887,638, or 1.4%.
- HPRS's funding objective is to meet long-term benefit obligations through contributions and investment income. At December 31, 2013, the date of the most recent actuarial valuation, HPRS assets equaled 69.8% of the present value of pension obligations.
- Additions to fiduciary net position for the year were \$92,804,381, which includes member and employer contributions of \$37,288,240 and investment gains of \$51,639,209.
- Deductions from fiduciary net position increased 5.7% over the prior year. Of this amount, pension benefits increased by 5.7%, health care expenses increased by 2.6% and administrative expenses increased by 13.0%.

#### Overview of the Financial Statements

The financial statements consist of the following components:

1. Statement of Fiduciary Net Position
2. Statement of Changes in Fiduciary Net Position
3. Notes to the Financial Statements

This report also contains other supplementary information in addition to the basic financial statements themselves.

The Statement of Fiduciary Net Position provides a snapshot of account balances at year-end, indicating the assets available for future payments to benefit recipients, less any current liabilities of the system. The Statement of Changes in Fiduciary Net Position provides a summary of current year additions and deductions to the plan.

The Statement of Fiduciary Net Position and the Statement of Changes in Fiduciary Net Position report information about HPRS's activities and financial position. These statements reflect the full accrual basis of accounting, which is similar to the accounting method used by most private sector companies. All of the current year's revenues and expenses are taken into account regardless of when cash is received or paid. All investment gains and losses are shown at trade date rather than settlement date. Investments are shown at fair value, reflecting both realized and unrealized gains and losses. Each capital asset is depreciated over its expected useful life.

The difference between HPRS assets and liabilities is reported on these statements as the Net Position – Restricted for Pension and Post-Employment Health Care Benefits. Over time, increases and decreases in HPRS's net position are one indicator of whether the fund's financial health is improving or deteriorating. Other factors, such as market conditions, should be considered in measuring HPRS's overall health (see HPRS's financial statements on pages 24-25 of this report).

## Financial Section

### Management's Discussion and Analysis

The Notes to the Financial Statements provide additional information that is essential to a full understanding of the data provided in the financial statements (see the *Notes to the Financial Statements* on pages 26-43 of this report).

#### Other Information

In addition to the financial statements and accompanying notes, this report presents certain required supplementary information concerning HPRS's progress in funding its obligations to provide pension benefits to members (see the *Required Supplementary Schedules* on pages 44-47 of this report).

The schedules of administrative expenses, investment expenses, and payments to consultants are presented immediately following the required supplementary information.

#### HPRS Activities

##### Additions to Fiduciary Net Position

Employer and member contributions, as well as income from investments, provide reserves needed to finance retirement benefits and health care. In 2014, total contributions and positive investment returns resulted in additions of \$92.8 million. Employer contributions increased by 0.3% and member contributions increased by 17.1%.

##### Additions to Fiduciary Net Position

(in thousands)

	2014	2013	\$ Change	% Change
Net appreciation in fair value of investments	\$38,057	\$118,632	(\$80,575)	(67.9)
Interest and dividend income	19,641	20,503	(862)	(4.2)
Real estate operating income, net	69	118	(49)	(41.5)
Investment expenses	(6,128)	(5,682)	(446)	7.8
Employer contributions	26,651	26,566	85	0.3
Member contributions	10,637	9,083	1,554	17.1
Transfers from other Ohio systems	587	1,354	(767)	(56.6)
Health care premiums	1,756	1,571	185	11.8
Retiree Drug Subsidy	647	447	200	44.7
Prescription Drug Rebates	887	612	275	44.9
Medicare D Refunds	-	2	(2)	(100.0)
Total additions	\$92,804	\$173,206	(\$80,402)	(46.4)

The *Investment Section* of this report summarizes the result of investment activity for the year ended December 31, 2014.

**Deductions from Fiduciary Net Position**

HPRS was created to provide retirement, disability, and survivor benefits to qualified members and their beneficiaries. The costs of these programs include benefit payments by the plan, refunded contributions, and the administrative costs of the system. In 2014, total deductions from the fiduciary net position increased 5.7%, health care expenses increased by 2.6%, and administrative expenses increased by 13.0%. Refunds of member contributions increased by 130.9% and transfers of contributions to other Ohio retirement systems decreased by 64.5%.

<b>Deductions from Fiduciary Net Position</b>				
<i>(in thousands)</i>				
	<b>2014</b>	<b>2013</b>		
		<b>(Restated)</b>	<b>\$ Change</b>	<b>% Change</b>
Pension benefits	\$57,441	\$54,368	3,073	5.7
DROP benefits	5,888	6,019	(131)	(2.2)
Refunds of member contributions	2,177	943	1,234	130.9
Health care expenses	14,056	13,704	352	2.6
Administrative expenses	1,188	1,051	137	13.0
Transfers to other Ohio systems	166	467	(301)	(64.5)
Total deductions	<u>\$80,916</u>	<u>\$76,552</u>	<u>\$4,364</u>	<u>5.7</u>

**Changes in Fiduciary Net Position**

In 2014, the Net Position – Restricted for Pension and Post-Employment Health Care Benefits increased by \$11,887,638, or 1.4%. Investment income attributable to the increase in fair values of investments equaled \$38,057,102. All of the assets are available to meet HPRS's ongoing obligations to plan participants and their beneficiaries.

<b>Changes in Fiduciary Net Position</b>		
<i>(in thousands)</i>		
	<b>2014</b>	<b>2013</b>
		<b>(Restated)</b>
Beginning balance	\$836,723	\$717,868
Ending balance	848,610	836,723
Total change	<u>\$11,887</u>	<u>\$118,855</u>
% change	<u>1.4%</u>	<u>16.6%</u>

**Capital Assets**

As of December 31, 2014, HPRS's investment in capital assets totaled \$57,880 (net of accumulated depreciation), an increase of \$35,454 or 158.1% from December 31, 2013. This investment in capital assets includes office equipment, software, and furniture for administrative use. The increase in HPRS's net investment in capital assets for the current year was wholly attributable to the acquisition of office furniture.

## Financial Section

### Management's Discussion and Analysis

#### Total Assets

In 2014, total assets increased by \$13,277,145, or 1.6%. The change in total assets was largely attributable to increases in the fair value of investments.

<b>Assets</b> (in thousands)				
	<u>2014</u>	<u>2013</u>	<u>\$ Change</u>	<u>% Change</u>
Cash and short-term investments	\$12,107	\$12,036	\$71	0.6
Receivables	5,382	2,954	2,428	82.2
Investments, at fair value	835,663	824,879	10,784	1.3
Prepaid assets	11	53	(42)	(79.2)
Other assets	58	22	36	163.6
Total assets	<u>\$853,221</u>	<u>\$839,944</u>	<u>\$13,277</u>	1.6

#### Total Liabilities

Total liabilities increased by \$1,389,507, or 43.1%.

<b>Liabilities</b> (in thousands)				
	<u>2014</u>	<u>2013</u> <u>(Restated)</u>	<u>\$ Change</u>	<u>% Change</u>
Current liabilities	<u>\$4,611</u>	<u>\$3,221</u>	<u>\$1,390</u>	43.1

#### New Accounting Standard for Reporting of Pension Liability

For pension plans that are administered through trusts or equivalent arrangements, Governmental Accounting Standards Board (GASB) Statement No. 67, "Financial Reporting for Pension Plans," replaces the requirements of GASB Statement No. 25. GASB 67 represents a significant departure from the requirements of GASB 25, as the new Statement divorces accounting and funding. GASB 67 focuses on plan financial reporting and changes HPRS's financial statements by requiring additional disclosures, actuarial calculations and schedules. It also requires a different methodology to measure the liability for plan benefits. HPRS is required to report a new pension obligation called the net pension liability (NPL) instead of the previously required unfunded actuarially accrued liability (UAAL). As discussed in the notes to the financial statements, certain financial information for 2013 has been restated due to the implementation of GASB 67.

The UAAL mirrored the unfunded actuarial obligation calculated by HPRS's actuary for funding purposes and represented the excess of the actuarial accrued liability (AAL) over the actuarial value of assets. Under GASB 67, the UAAL has been replaced by the NPL, which represents the excess of the total pension liability (TPL) over fiduciary net position. A side-by-side comparison of the two calculations is as follows:

**Management's Discussion and Analysis**

**Current Year**

Total Pension Liability (TPL)

Less: Fiduciary Net Position

Net Pension Liability (NPL)

**Prior Year**

Actuarial Accrued Liability (AAL)

Less: Actuarial Value of Assets (AVA)

Unfunded Actuarially Accrued Liability (UAAL)

There are considerable differences between the two numbers. Conceptually, the UAAL is the actuary's measure of the additional amount of assets needed to pay all benefits earned to date by current plan members, while the new NPL is an accrual calculation that reflects future benefits earned by plan members through the employment-exchange process in excess of the plan's fiduciary net position.

For actuarial funding purposes, HPRS employs a four-year smoothing of assets and 20% corridor for gains and losses as an additional limit on market fluctuations. In contrast, the NPL is much more volatile because there is no smoothing of investment gains and losses. These schedules will be developed as we go forward, and ultimately, ten years of data will be displayed in the annual report.

**Requests for Information**

This financial report is designed to provide retirees, members, trustees, investment managers, and the public with a general overview of HPRS's finances and to show accountability for the money it receives. Questions concerning any of the information provided in this report or requests for additional financial information can be requested from:

Michael Press, Finance Director  
State Highway Patrol Retirement System  
1900 Polaris Parkway, Suite 201, Columbus, OH 43240-4037  
P: 614-431-0781  
E: mpress@ohprs.org

**Statement of Fiduciary Net Position**

December 31, 2014

	Pension	Post-Employment Health Care	Total
<b>Assets</b>			
Cash and short-term investments	\$10,515,128	\$1,592,100	\$12,107,228
Receivables			
Employer contributions receivable	1,105,499	214,185	1,319,684
Member contributions receivable	978,732	-	978,732
Accrued investment income	2,678,355	405,531	3,083,886
Total receivables	4,762,586	619,716	5,382,302
Investments, at fair value			
Domestic equity	273,293,249	39,973,751	313,267,000
International equity	137,202,686	20,074,372	157,277,058
Fixed income	147,669,135	21,605,737	169,274,872
Real estate	29,862,824	4,369,284	34,232,108
Private equity	75,457,848	11,040,374	86,498,222
Hedge funds	65,526,285	9,587,269	75,113,554
Total investments	729,012,027	106,650,787	835,662,814
<b>Other Assets</b>			
Prepaid expenses	9,719	1,471	11,190
Property and equipment, net	50,269	7,611	57,880
Total other assets	59,988	9,082	69,070
Total assets	744,349,729	108,871,685	853,221,414
<b>Liabilities</b>			
Accounts payable	605,207	91,635	696,842
Accrued payroll liabilities	178,524	27,030	205,554
Accrued pension liabilities	2,873,174	-	2,873,174
Accrued health care liabilities	-	799,798	799,798
Other liabilities	30,944	4,685	35,629
Total liabilities	3,687,849	923,148	4,610,997
<b>Net position – restricted for pension and post-employment health care benefits</b>	<b>\$740,661,880</b>	<b>\$107,948,537</b>	<b>\$848,610,417</b>

See the accompanying Notes to the Financial Statements, pages 26-43.



## Financial Section

### Statement of Changes in Fiduciary Net Position

Year ended December 31, 2014

	Pension	Post-Employment Health Care	Total
<b>Additions</b>			
Contributions			
Employer	\$ 22,325,421	\$ 4,325,434	\$ 26,650,855
Member	10,637,385	-	10,637,385
Transfers from other systems	586,929	-	586,929
Other income			
Health care premiums	-	1,756,117	1,756,117
Retiree drug subsidy	-	647,225	647,225
Prescription drug rebates	-	886,661	886,661
Total contributions	<u>33,549,735</u>	<u>7,615,437</u>	<u>41,165,172</u>
Investment activity			
Net appreciation in fair value			
of investments	33,052,596	5,004,506	38,057,102
Interest and dividend income	17,058,262	2,582,800	19,641,062
Real estate operating income, net	59,966	9,079	69,045
	<u>50,170,824</u>	<u>7,596,385</u>	<u>57,767,209</u>
Less: investment expenses	(5,322,168)	(805,832)	(6,128,000)
Net income from investment activity	<u>44,848,656</u>	<u>6,790,553</u>	<u>51,639,209</u>
Total additions	<u>78,398,391</u>	<u>14,405,990</u>	<u>92,804,381</u>
<b>Deductions</b>			
Pension benefits	57,441,498	-	57,441,498
DROP benefits	5,888,294	-	5,888,294
Refunds of member contributions	2,177,476	-	2,177,476
Health care expenses	-	14,055,881	14,055,881
Administrative expenses	1,031,473	156,176	1,187,649
Transfers to other systems	165,945	-	165,945
Total deductions	<u>66,704,686</u>	<u>14,212,057</u>	<u>80,916,743</u>
Change in fiduciary net position	11,693,705	193,933	11,887,638
<b>Net position – restricted for pension and post-employment health care benefits</b>			
Balance, December 31, 2013, as restated	<u>728,968,175</u>	<u>107,754,604</u>	<u>836,722,779</u>
Balance, December 31, 2014	<u>\$740,661,880</u>	<u>\$107,948,537</u>	<u>\$ 848,610,417</u>

See the accompanying Notes to the Financial Statements, pages 26-43.

**Note 1 Summary of Significant Accounting Policies**

**Basis of Accounting**

HPRS financial statements are prepared using the accrual basis of accounting, under which expenses are recorded when incurred and revenues are recorded when earned and measurable. Member and employer contributions are recognized in the period in which the contributions are due. Benefits and refunds are recognized when due and payable in accordance with the terms of the plan. Investment purchases and sales are recorded at the trade date. Administrative expenses are financed by investment income. The financial statements are in conformity with provisions of the Governmental Accounting Standards Board Statement No. 67, *Financial Reporting for Pension Plans – an Amendment of GASB Statement No. 25* (GASB 67).

The accounting and reporting policies of HPRS conform to generally accepted accounting principles in the United States of America (GAAP). The preparation of financial statements in conformity with GAAP requires management to make estimates and assumptions that affect the reported assets and liabilities, disclosure of contingent assets and liabilities, and the reported revenues and expenses during the accounting period. Actual results could differ from these estimates.

GASB requires that plan assets be split between pension benefits and health care. To meet this requirement, plan assets and liabilities not specifically identifiable to a plan were proportionately allocated to the pension and post-employment health care plans.

**Investment Accounting**

Income on all investments is recognized on the accrual basis. Gains and losses on sales and exchanges, recognized at the trade date, are determined using the average cost of equity securities sold, and for all other investments, the specific cost of securities sold.

All investments are reported at fair value, which is the amount that the plan could reasonably expect to receive in a current sale between a willing buyer and a willing seller, other than in a forced or liquidation sale.

Securities traded on a national exchange are valued at the last reported sales price at the current exchange rate. Fair values of real estate and private equity investments are based on information provided by the fund's managers or by independent appraisals.

Net appreciation (or depreciation) in fair value of investments is determined by calculating the change in the fair value between the beginning of the year and the end of the year, less purchases at cost, plus sales at fair value. Investment expenses consist of expenses directly related to HPRS investment operations, as well as an allocation of certain administrative expenses.

#### **Use of Estimates**

In preparing financial statements in conformity with GAAP, the management of HPRS makes estimates and assumptions that affect (1) the reported amounts of assets and liabilities, (2) disclosures of contingent assets and liabilities, and (3) the amount of revenues and expenses during the reporting period. Actual results could differ from those estimates and assumptions. Certain investment assets, including private equity and real estate, use estimates in reporting fair value in the financial statements. These estimates are subject to uncertainty in the near term, which could result in changes in the values reported for those assets in the Statement of Fiduciary Net Position.

#### **Capital Assets**

When acquired, an item of property or equipment in excess of \$5,000 is capitalized at cost. An improvement in excess of \$5,000 that extends the useful life of an asset is capitalized. An expenditure for maintenance or repair of an asset is expensed as incurred. Depreciation is computed using the straight-line method over the useful life of each asset (typically, between three and ten years).

#### **Accrued Health Care Liabilities**

Accrued health care liabilities are based upon estimates furnished by the claims administrators. These estimates have been developed from prior claims experience.

In general, costs of member health care benefits are recognized as claims are incurred and premiums are paid. Health care benefit expenses of \$14,055,881 for 2014 are shown on the accompanying Statement of Changes in Fiduciary Net Position.

#### **Contributions and Benefits**

Based on statutory requirements, employer and employee contributions are recognized when due. In accordance with the terms of the plan, benefits and refunds are recognized when due and payable.

#### **Federal Income Tax Status**

HPRS is a qualified entity under Section 501(a) of the Internal Revenue Code and is, therefore, exempt from federal income taxes.

#### **Changes in Accounting Principles**

In June 2012, GASB issued GASB 67. GASB 67 addresses reporting by pension plans that administer benefits for governments and outlines basic framework for the separately issued financial reports of defined benefit pension plans, and details note disclosure requirements for defined benefit and defined contribution pension plans. The system adopted GASB 67 effective January 1, 2014. The adoption changed various reporting terminology, footnote disclosures, and required supplementary information. The pronouncement also required a restatement of prior years' liabilities, as in accordance with GASB 67, only deferred option liabilities that are due and currently payable should be shown as a liability. In prior years, the system had reflected all deferred option balances as a liability. As a result of this change, the 2013 net position was restated to remove the Deferred Retirement Option Plan

(DROP) liability. This resulted in a net increase in fiduciary net position from \$813,952,605 reported at December 31, 2013, to \$836,722,779, increasing the fiduciary net position by \$22,770,174. For the current year, and going forward, the DROP account will be discussed in the notes to the financial statements and will not impact the financial statements.

GASB issued Statement No. 68, *Accounting and Financial Reporting for Pensions – an amendment of GASB Statement No. 27*. This statement is effective for reporting periods beginning after June 15, 2014. This statement significantly changes accounting and financial reporting for government employers (and non-employer contributing entities) that provide pension benefits through a qualifying trust – requiring a “net pension liability” on the statement of net position. Under Statement No. 68, the pension liability is determined considering various factors, including cost of living increases, future salary increases, and future service credits. The impact on the net pension liability of differences between expected and actual investment returns will be recognized in pension expense over a closed, five-year period. This statement also enhances note disclosures and required supplementary information. The requirements of GASB 68 will be reflected in the system’s 2015 financial report.

GASB issued Statement No. 69, *Government Combinations and Disposals of Government Operations*. This statement is effective for reporting periods beginning after December 15, 2013. This statement requires disclosures to be made about government combinations and disposals of government operations to enable financial statement users to evaluate the nature and financial effects of these transactions. Management has determined this statement does not impact HPRS.

GASB issued Statement No. 70, *Accounting and Financial Reporting for Nonexchange Financial Guarantees*, which specifies the information required to be disclosed by governments that extend nonexchange financial guarantees. This statement is effective for reporting periods beginning after June 15, 2013. Management has determined this statement does not impact HPRS.

GASB issued Statement No. 71, *Pension Transition for Contributions Made Subsequent to Measurement Date – an amendment of GASB Statement No. 68*. This statement should be applied simultaneously with the provisions of Statement No. 68. This statement amends paragraph 137 of Statement No. 68 to require that, at transition, a government recognize a beginning deferred outflow of resources for its pension contributions, if any, made subsequent to the measurement date at the beginning net pension liability. The requirements of GASB 71 will be reflected in the system’s 2015 financial report.

GASB issued Statement No. 72, *Fair Value Measurement and Application*, which provides guidance for determining a fair value measurement for financial reporting purposes. This statement is effective for reporting periods beginning after June 15, 2015. Management is currently evaluating this statement and its impact to HPRS financial statements.

**Note 2 Plan Description**

**Organization**

HPRS is a single-employer retirement system for employees of the Ohio State Highway Patrol, including officers with arrest authority, cadets in training at the Highway Patrol Training Academy, and members of the radio division who were hired prior to November 2, 1989. HPRS was created by Ohio Revised Code Chapter 5505 and is administered by a Board of Trustees consisting of five active members, two retired members, three appointed members, and one ex-officio member. The Board appoints an executive director, chief investment officer, actuary, investment consultant, medical advisor, and internal auditor.

HPRS administers both a defined benefit pension plan and a post-employment health care plan, which is considered to be an “other post-employment benefit,” or OPEB. Financial information for pensions and OPEB are presented separately in the financial statements. HPRS, a separate financial reporting entity in accordance with criteria established by GASB Statement No. 39 (an amendment to No. 14), is a component unit of the State of Ohio. HPRS does not have financial accountability over any other entities.

**Membership**

HPRS membership consisted of the following at the end of 2013 and 2014:

<b>Membership Data</b>		
Year ended December 31		
	<u>2014</u>	<u>2013</u>
<b>Pension &amp; OPEB Benefits</b>		
Retirees & other benefit recipients	1,557	1,523
Deferred retirees	10	14
<b>Active members</b>		
15 or more years of service	741	727
Less than 15 years of service	881	886

**Benefits**

Members are eligible for pension and health care benefits upon reaching both an age and a service requirement with the Ohio State Highway Patrol. The pension benefit is a percentage of the member's final average salary, which is defined as the average of the member's three highest salaried years. For 20 or more years of service, the percentage is determined by multiplying 2.5% times the first 20 years of service, plus 2.25% for the next 5 years of service, plus 2.0% for each year in excess of 25 years of service. A member's pension may not exceed 79.25% of the final average salary. Retirement with reduced benefits is available upon reaching age 48 with 20 years of service credit. Retirement with full benefits is available upon reaching age 48 with 25 years of service credit, or age 52 with 20 years of service credit. In addition to pension and health care benefits, HPRS also provides for disability and survivor benefits.

In 2006, HPRS implemented DROP. In general, a member who is eligible to retire with an unreduced pension benefit may enter the DROP. The member will continue to work for the Ohio State Highway Patrol. A DROP member does not accumulate additional pension service credit; however, instead of receiving a monthly pension benefit, the member accrues that benefit in a tax-deferred account until employment with the Ohio State Highway Patrol is terminated. The 2014 DROP activity is discussed in Note 9.

Former members with at least 15 years of service but less than 20 years of service are eligible for a pension upon reaching age 55. The percentage of final average salary is determined by multiplying 1.5% by the number of years of service credit. These members, though eligible to receive a pension, are not eligible for health care benefits.

**Contributions**

The Ohio Revised Code requires contributions by both active members and the Ohio State Highway Patrol. Both the member and employer contribution rates were established by the Ohio General Assembly. Legislative action occurred in 2012 and became effective in 2013. The HPRS Board was granted the authority to adjust employee contributions between a range of 10.0%-14.0% of payroll.

In 2014, the member contribution rate was 11.5% of payroll, and the employer contribution rate was 26.5%.

Based on the December 31, 2012 actuarial valuation, the Board allocated the employer contribution rate to pension benefits effective January 1, 2013 and OPEB as follows:

<b>Pension</b>	<b>OPEB</b>	<b>Total</b>
22.85%	3.65%	26.50%

Based on the December 31, 2013 actuarial valuation, the Board allocated the employer contribution rate to pension benefits effective January 1, 2014 and OPEB as follows:

<b>Pension</b>	<b>OPEB</b>	<b>Total</b>
22.20%	4.30%	26.50%

In August 2013, the Board exercised the new authority granted by Legislature and voted to set the employee contribution rate at 11.5% and the COLA for retirees at 1.5% beginning in 2014, and 12.5% and 1.25%, respectively, for 2015. These changes brought HPRS into compliance with the 30-year amortization requirement.

Upon request of a member who terminates employment with the Ohio State Highway Patrol, member contributions are refunded. If a member dies while active in the

service of the Ohio State Highway Patrol, member contributions are refunded to the member's beneficiary, provided that no survivor benefits are payable.

A member with credited service in Ohio Public Employees Retirement System (OPERS), School Employees Retirement System (SERS), State Teachers Retirement System (STRS), Ohio Police & Fire Pension Fund (OP&F), or Cincinnati Retirement System (CRS) may transfer that service credit to HPRS. Similarly, a member with credited service in HPRS may transfer that service to OPERS, SERS, STRS, OP&F, or CRS.

**Funded Status and Funding Progress**

**OPEB (other post-employment benefits)**

The funded status of the OPEB plan at the most recent actuarial valuation, December 31, 2013, is as follows:

<b>OPEB Funded Status</b>	
December 31, 2013	
Actuarially Accrued Liability	\$438,561,694
Valuation Assets	102,083,923
Unfunded Actuarially Accrued Liability	<u>\$336,477,771</u>
Assets as a % of AAL	23.3%
Active Member Payroll	\$98,519,844
UAAL as a % of Active Member Payroll	341.5%

OPEB Funding Status presents multi-year trend information about whether the actuarial values of plan assets are increasing or decreasing relative to the actuarial accrued liability for benefits over time. These schedules are presented in the *Required Supplementary Schedules* section.

**Actuarial Assumptions and Methods**

An entry age normal actuarial cost method of valuation is used in determining benefit liabilities and normal cost. Differences between assumed experience and actual experience (“actuarial gains and losses”) become part of actuarially accrued liabilities. Unfunded actuarially accrued liabilities are amortized to produce payments (principal and interest) that are a level percent of payroll contributions.

The health care coverage provided by HPRS is considered to be an OPEB as described in GASB Statement 45. Health care benefits are not guaranteed and are subject to change at any time. The OPEB valuation is based on the substantive plan as it is currently presented to plan members, including the historical pattern of cost-sharing between the plan and benefit recipients. The actuarial methods and assumptions do not explicitly incorporate the potential effects of legal or contractual funding limitations on the pattern of cost sharing in the future. The actuarially

determined amounts for the OPEB plan are subject to continual revision as results are compared to past expectations and new estimates are made about the future. The actuarial calculations of the OPEB plan reflect a long-term perspective.

The asset valuation method fully recognizes assumed investment income each year. Differences between actual and expected investment income are phased in over a closed four-year period.

Other actuarial assumptions and methods are as follows:

- projected investment return of 8.0% for pension assets and 5.0% for OPEB assets, compounded annually, net of health care and administration expenses,
- projected salary increases of 4.0%, compounded annually, attributable to inflation,
- projected price inflation of 3.0%, compounded annually,
- additional projected salary increases attributable to seniority and merit, ranging from 0.3% to 10.0% per year, depending on service,
- post-employment mortality life expectancies of members based on RP-2000 Combined Healthy Male and Female Tables projected to 2020 using Projection Scale AA,
- probabilities of early withdrawal from active service based on actual plan experience,
- for disability retirement, impaired longevity is based on the RP-2000 Combined Healthy Male and Female Tables, set forward five years,
- 50% of disability retirements is assumed to be duty-related and 50% is assumed to be non-duty-related,
- health care inflation of 4.0%, compounded annually, plus an additional declining percentage ranging from 5.0% - 0.5% until 2024,
- OPEB recipients are eligible for Medicare at age 65 or at the time of a social security disability,
- employer contributions are assumed to be received in equal installments throughout the year, and
- maximum contribution rates have not been considered in the projection of actuarially accrued liabilities for OPEB benefits.

**Note 3 Net Position**

Chapter 5505 of the Revised Code requires that various funds be established to account for contributions, reserves, income, and expenses.

The Employees' Savings Fund was created to accumulate the contributions deducted from the salaries of members, less any refunds of member contributions. Upon retirement, a member's contributions are transferred to the Pension Reserve Fund.



## Financial Section

### Notes to the Financial Statements

The Employer's Accumulation Fund is the fund in which the state's contributions to HPRS are accumulated. Included in this fund are the reserves allocated to the payment of other post-employment benefits (OPEB).

The Pension Reserve Fund is the fund from which all pensions are paid to members who retire on or after January 1, 1966.

The Survivors' Benefit Fund is the fund from which survivor benefits are paid to qualifying beneficiaries.

The Income Fund is used to accumulate all interest, dividends, distributions, and other income from deposits and investments. Gifts, bequests to the system, transfers, and any other income are also credited to the Income Fund.

The Expense Fund provides for the payment of administrative expenses with the necessary money allocated to it from the Income Fund.

At December 31, 2014, the fiduciary net position was allocated to the various funds as follows:

<b>Fiduciary Net Position</b>	
December 31, 2014	
Employees' Savings Fund	\$120,189,446
Employer's Accumulation Fund	101,278,753
Pension Reserve fund	588,404,790
Survivors' Benefit Fund	38,737,428
Income Fund	-
Expense Fund	-
Total	<u>\$848,610,417</u>

#### **Note 4 Property and Equipment**

The following is a summary of equipment, at cost, less accumulated depreciation, at December 31, 2014:

<b>Capital Assets - Equipment</b>	
December 31, 2014	
Cost, 12/31/2013	\$131,356
(+) Additions	-
(-) Retirements	-
Cost, 12/31/2014	\$131,356
Accumulated depreciation, 12/31/2013	\$108,931
(+) Additions	8,114
(-) Retirements	-
Accumulated depreciation, 12/31/2014	\$117,045
Book value, 12/31/2014	\$14,311

The following is a summary of furniture, at cost, less accumulated depreciation, at December 31, 2014:

<b>Capital Assets - Furniture</b>	
December 31, 2014	
Cost, 12/31/2013	\$5,050
(+) Additions	44,426
(-) Retirements	-
Cost, 12/31/2014	\$49,476
Accumulated depreciation, 12/31/2013	\$5,050
(+) Additions	857
(-) Retirements	-
Accumulated depreciation, 12/31/2014	\$5,907
Book value, 12/31/2014	\$43,569

**Note 5 Deposits and Investment Risk**

**Investments**

Ohio Revised Code Section 5505.06 grants “full power” to the Retirement Board to invest the system’s assets pursuant to a prudent person standard. This standard provides that “the board and other fiduciaries shall discharge their duties with respect to the funds solely in the interest of the participants and beneficiaries; for the exclusive purpose of providing benefits to participants and their beneficiaries and defraying reasonable expenses of administering the system; with care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims; and by diversifying the investments of the system so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so.”

<b>Total Investments at Fair Value</b>	
December 31, 2014	
Domestic equity	\$313,267,000
International equity	157,277,058
Fixed income	169,274,872
Real estate	34,232,108
Private equity	86,498,222
Hedge funds	75,113,554
Total investments	\$835,662,814

All investments, both domestic and international, are registered in the name of HPRS.

**Deposits**

HPRS cash balances consist of an operating cash account held at PNC Bank, cash on deposit with the State Highway Patrol Federal Credit Union, and excess investment cash held by the custodian, PNC Bank. Cash balances are either interest-bearing or invested in highly liquid debt instruments with an original maturity of three months or less. At December 31, 2014, the carrying value of all deposits was \$12,107,228 (including money market funds of \$7,102,042), as compared to bank balances of \$5,024,991. The difference in the carrying amount and the bank balances is caused by outstanding warrants and deposits in transit.

**Concentration of Credit Risk**

Concentration of credit risk is the risk of inability to recover the value of deposits, investments, or collateral securities in the possession of an outside party.

Investment managers are expected to maintain diversified portfolios by sector and issuer. Pursuant to its investment policy, and excluding U.S. government securities, HPRS has no more than 10% of the fixed income portfolio invested in the securities of any one issuer, and no more than 5% in any one issue.

**Credit Risk**

Credit risk is the risk that an issuer or counterparty to an investment will be unable to fulfill its obligations. HPRS does not have a policy to limit credit risk.

HPRS exposure to credit risk on fixed income securities, based on S&P Quality Ratings, is as follows:

<b>S&amp;P Quality Ratings</b>	
December 31, 2014	
AAA	\$62,788,680
AA	14,672,161
A	10,840,422
BBB	18,831,634
BB	14,045,439
B	27,717,106
CCC	5,356,409
Unrated	15,023,021
Total Investments	\$169,274,872

**Foreign Currency Risk**

Foreign currency risk is the risk that changes in exchange rates between the U.S. dollar and foreign currencies could adversely affect an investment’s fair value. HPRS does not have a policy to limit foreign currency risk. HPRS’s exposure to foreign currency risk derives from its positions in foreign currency-denominated investments. At December 31, 2014, HPRS had zero exposure to foreign currency risk.

**Interest Rate Risk**

Interest rate risk is the risk that an interest rate change could adversely affect an investment’s fair value. HPRS does not have a policy to limit interest rate risk.

The reporting of effective duration in the table below quantifies, to the fullest extent possible, the interest rate risk of the system’s fixed income assets.

<b>Investment Maturities</b>	
December 31, 2014	
Less than 1 year	\$32,580,083
1 - 5 years	59,818,851
Greater than 5, up to 10 years	55,846,122
Greater than 10 years	21,029,816
Total	\$169,274,872

**Custodial Credit Risk**

Custodial credit risk is the risk that, in the event of a failure of a depository institution or counterparty to a transaction, HPRS will be unable to recover the value of deposits, investments, or collateral securities in the possession of an outside party.

At December 31, 2014, the carrying amounts of HPRS’s operating and investment cash deposits totaled \$12,107,228, and the corresponding bank balances totaled \$5,005,185. Of the bank balances, the Federal Deposit Insurance Corporation and the National Credit Union Association insured \$292,239. In accordance with state law, bank balances of \$4,712,946 were collateralized at 105% with securities held in the name of HPRS’s pledging financial institution.

Notes to the Financial Statements

**Investment Concentrations**

The following is a list of investments in any one organization that represents 5% or more of pension plan’s net assets held in trust for pension benefits:

Vanguard Mutual Funds  
 Evanston Capital Management, LLC  
 Wellington Management Company, LLP

**Money-Weighted Rate of Return**

The money-weighted rate of return expresses investment performance, net of investment expense, adjusted for the changing amounts actually invested. For the fiscal year ended December 31, 2014, the annual money-weighted rate of return on pension plan investments, net of investment expense was 5.99%.

**Commitments**

As of December 31, 2014, unfunded commitments related to the real estate and private equity investment portfolios totaled \$34,903,243.

**Note 6 Derivatives**

A derivative is an investment vehicle that derives its value from another instrument or index. Derivatives are primarily used to maximize yields and offset volatility caused by interest rate and currency fluctuations. These instruments leave investors exposed to various credit, market, and legal risks.

At December 31, 2014, HPRS did not have any direct investments in derivatives; however, it held shares in commingled funds that had incidental exposure to derivatives.

**Note 7 Net Pension Liability and Actuarial Information**

The components of the net pension liability as of December 31, 2014:

<b>Schedule of Net Pension Liability</b>						
Year ended December 31						
<b>Year</b>	<b>Total Pension Liability</b>	<b>Fiduciary Net Position</b>	<b>Net Pension Liability</b>	<b>Plan Net Position as a % of Total Pension Liability</b>	<b>Covered Payroll<sup>1</sup></b>	<b>Net Pension Liability as a % of Covered Payroll</b>
2014	\$1,044,345,838	\$740,661,880	\$303,683,958	70.92%	\$89,878,105	337.88%

Source: GRS

<sup>1</sup>Does not include members of DROP

The total pension liability was determined by an actuarial valuation as of December 31, 2013, and update procedures were used to roll forward the total pension liability

to December 31, 2014. The following actuarial assumptions were used, applied to all periods included in the measurement:

<b>Actuarial Assumptions</b>	
Valuation Date	December 31, 2013
Notes	The roll-forward of total pension liability from December 31, 2013 to December 31, 2014 reflects expected service cost and interest reduced by actual benefit payments and administrative expenses. Actuarially determined contribution rates are calculated as of December 31, which is one year prior to the beginning of the fiscal year in which contributions are reported.
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent Closed
Remaining Amortization Period	30 years
Asset Valuation Method	Four year smoothed market
Inflation	4.0% wage inflation; 3.0% price inflation
Salary Increases	4.3% to 14.0% including inflation
Investment Rate of Return	8.0%
Retirement Age	Experience-based table of rates that are specific to the type of eligibility condition.
Mortality	RP-2000 Combined Healthy Male and Female Tables projected to 2020 using Projection Scale AA. The current assumption allows for an approximate 2% margin for future mortality improvement.

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and 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. For each major asset class that is included in the system’s target asset allocation as of December 31, 2014, best estimates of the geometric rates of return are summarized in the following table:

## Financial Section

### Notes to the Financial Statements

<b>Asset Allocation</b>		
December 31, 2014		
<b>Asset Class</b>	<b>Target Allocations</b>	<b>Long-Term Expected Real Rate of Return</b>
Cash	0.00%	(0.10%)
Domestic Equity - Large Cap	25.00	5.68
Domestic Equity - Small Cap	10.00	6.50
International Equity	15.00	6.46
Emerging Markets	5.00	8.67
Domestic Corporate Fixed Income	7.75	1.49
Domestic Government Fixed Income	7.75	0.94
Treasury Inflation Protected Securities	0.00	1.02
High Yield Bonds	3.50	2.84
Real Estate	5.00	4.45
Private Equity	10.00	8.75
Hedge Funds	8.00	3.77
Other Alternatives	3.00	4.11
<b>Total</b>	<b>100.00%</b>	

*Source: Hartland*

A single discount rate of 8.0% was used to measure the total pension liability. This single discount rate was based on the expected rate of return on pension plan investments of 8.0%. The projection of cash flows used to determine this single discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at rates equal to the difference between actuarially determined contribution rates and the member rate. Based on these 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.

Regarding the sensitivity of the net pension liability to changes in the single discount rate, the following presents the plan's net pension liability, calculated using a single discount rate of 8.0%, as well as what the plan's net pension liability would be if it were calculated using a single discount rate that is one percent lower or one percent higher:

<b>NPL Sensitivity</b>			
December 31, 2014			
	<b>1% Decrease 7.00%</b>	<b>Current Single Discount Rate Assumption 8.00%</b>	<b>1% Increase 9.00%</b>
Net Pension Liability	\$ 414,090,275	\$ 303,683,958	\$ 211,233,160

*Source: GRS*

**Note 8 Pension and OPEB Benefits for Employees**

**Pension**

The employees of HPRS are members of the Ohio Public Employee Retirement System (OPERS), which administers three separate pension plans as described below:

1. The Traditional Pension Plan - a cost-sharing, multiple-employer defined benefit pension plan.
2. The Member-Directed Plan - a defined contribution plan in which the member invests both member and employer contributions (employer contributions vest over five years at 20% per year). Under the Member-Directed Plan, members accumulate retirement assets equal to the value of member and (vested) employer contributions, plus any investment earnings.
3. The Combined Plan - a cost-sharing, multiple-employer defined benefit pension plan. Under the Combined Plan, OPERS invests employer contributions to provide a formula retirement benefit similar in nature to, but less than, the Traditional Pension Plan benefit. Member contributions, the investment of which are self-directed by the members, accumulate retirement assets in a manner similar to the Member-Directed Plan.

OPERS provides retirement, disability, survivor and death benefits and annual cost of living adjustments to members of the Traditional Pension and Combined Plans. Members of the Member-Directed Plan do not qualify for ancillary benefits.

Authority to establish and amend benefits is provided in Chapter 145 of the Ohio Revised Code.

The Ohio Revised Code provides statutory authority for member and employer contributions. For 2014, member and employer contribution rates were consistent across all three plans. While members in the state and local divisions may participate in all three plans, law enforcement and public safety divisions exist only within the Traditional Pension Plan.

The 2014 member contribution rates were 10.00% of earnable salary for members in state and local classifications. Public safety and law enforcement members contributed 12.00% and 13.00%, respectively. The 2014 employer contribution rate for state and local employers was 14.00% of earnable salary. The law enforcement and public safety division employer contribution rate was 18.10% of earnable salary.

HPRS employer contributions to OPERS for the years ended December 31, 2014, 2013, and 2012, were \$96,651, \$98,036, and \$83,482, respectively, which were equal to the required contributions for each year.



In June 2012, the Governmental Accounting Standards Board (GASB) issued GASB Statement No. 68, *Accounting and Financial Reporting for Pensions*. This accounting standard replaces GASB Statement 27, and it is effective for employer fiscal years beginning after June 15, 2014.

#### **OPEB**

As described above, OPERS administers three separate pension plans: the Traditional Pension Plan – a cost-sharing, multiple-employer defined benefit pension plan; the Member-Directed Plan – a defined contribution plan; and the Combined Plan – a cost-sharing, multiple-employer defined benefit pension plan that has elements of both a defined benefit and defined contribution plan.

OPERS maintains a cost-sharing, multiple-employer defined benefit post-employment health care plan, which includes a medical plan, prescription drug program, and Medicare Part B premium reimbursement to qualifying benefit recipients of both the Traditional Pension and the Combined Plans. Members of the Member-Directed Plan do not qualify for ancillary benefits, including post-employment health care coverage.

In order to qualify for post-employment health care coverage, age-and-service retirees under the Traditional Pension and Combined Plans must have ten or more years of qualifying Ohio service credit. Health care coverage for disability benefit recipients and qualified survivor benefit recipients is available. The health care coverage provided by OPERS meets the definition of an “other post-employment benefit” (OPEB) as described in GASB Statement 45. OPERS’ eligibility requirements for post-employment health care coverage changed for those retiring on and after January 1, 2015. Please see the Plan Statement in the OPERS 2013 CAFR for details.

The Ohio Revised Code permits, but does not require, OPERS to provide OPEB benefits to its eligible benefit recipients. Authority to establish and amend health care coverage is provided in Chapter 145 of the Ohio Revised Code.

OPERS issues a stand-alone financial report. Interested parties may obtain a copy by visiting <https://www.opers.org/investments/cafr.shtml>, by writing to OPERS, 277 East Town Street, Columbus, OH 43215-4642, or by calling 614-222-5601 or 800-222-7377.

#### **Funding Policy**

The Ohio Revised Code provides the statutory authority requiring public employers to fund post-retirement health care through their contributions to OPERS. A portion of each employer’s contribution to OPERS is set aside for the funding of post-retirement health care.

Employer contribution rates are expressed as a percentage of the earnable salary of active members. In 2014, state and local employers contributed at a rate of 14.00% of earnable salary and public safety and law enforcement employers contributed at

18.10%. These are the maximum employer contribution rates permitted by the Ohio Revised Code. Active member contributions do not fund the OPEB plan.

OPERS' Post Employment Health Care Plan was established under, and is administrated in accordance with, Internal Revenue Code section 401(h). Each year, the OPERS Board of Trustees determines the portion of the employer contribution rate that will be set aside for funding of post-employment health care. The portion of employer contributions allocated to health care for members in the Traditional Pension Plan and Combined Plan was 2.0% during calendar year 2014. Effective January 1, 2015, the portion of employer contributions allocated to health care remains at 2.0% for both plans, as recommended by OPERS' actuary. The OPERS Board of Trustees is also authorized to establish rules for the retiree or his/her surviving beneficiaries to pay a portion of the health care provided. Payment amounts vary depending on the number of covered dependents and the coverage selected.

**Annual OPEB Cost**

The total employer contribution rates stated above are the statutorily required contribution rates for OPERS. HPRS employer contributions to OPERS for OPEB benefits for the year ended December 31, 2014 were \$13,801, which were equal to the required contributions for the year, and included in the employer contribution amount listed earlier in this Note.

**Health Care Plan**

Changes to the health care plan were adopted by the OPERS Board of Trustees on September 19, 2012, with a transition plan commencing January 1, 2014. With the passage of pension legislation under SB 343 and the approved health care changes, OPERS expects to be able to consistently allocate 4.0% of the employer contributions toward the health care fund after the end of the transition period.

**Note 9 DROP Activity**

<b>DROP Activity</b>	
Year ended December 31, 2014	
Beginning Balance	\$22,770,174
Contributions	5,888,294
Distributions	(7,237,618)
Net Adjustments	1,194,979
	<u>\$22,615,829</u>

**Note 10 Risk Management**

HPRS purchases insurance coverage for general liability, property damage, and employee and public official liability with varying policy limits. In the past three years, no settlements have exceeded insurance coverage, and coverage has not been significantly reduced.

**Note 11   Contingent Liabilities**

At any given time, HPRS is a party to various litigation actions. While the final outcome of any action can not be determined, management does not expect that the liability, if any, for these legal actions will have a material adverse effect on the financial position of HPRS.

## Financial Section

### Required Supplementary Schedules

<b>Schedule of Changes in Net Pension Liability and Related Ratios<sup>1</sup></b>	
Year ended December 31	
	<b>2014</b>
<b>Total Pension Liability</b>	
Service Cost	\$17,656,943
Interest on the Total Pension Liability	79,175,488
Benefit Changes	-
Difference between Expected and Actual Experience	-
Assumption Changes	-
Benefit Payments	(64,525,978)
Refunds	(2,177,476)
<b>Net Change in Total Pension Liability</b>	<b>30,128,977</b>
<b>Total Pension Liability - Beginning</b>	<b>1,014,216,861</b>
<b>Total Pension Liability - Ending (a)</b>	<b>1,044,345,838</b>
<b>Plan Fiduciary Net Position</b>	
Employer Contributions	22,325,421
Employee Contributions	11,577,268
Pension Plan Net Investment Income	45,104,959
Benefit Payments	(64,525,978)
Refunds	(2,177,476)
Pension Plan Administrative Expense	(1,031,473)
Other	420,984
<b>Net Change in Plan Fiduciary Net Position</b>	<b>11,693,705</b>
<b>Plan Fiduciary Net Position - Beginning</b>	<b>728,968,175</b>
<b>Plan Fiduciary Net Position - Ending (b)</b>	<b>740,661,880</b>
<b>Net Pension Liability - Ending (a) - (b)</b>	<b>303,683,958</b>
<b>Plan Fiduciary Net Position as a Percentage of Total Pension Liability</b>	70.92%
<b>Covered Employee Payroll<sup>2</sup></b>	89,878,105
<b>Net Pension Liability as a Percentage of Covered Employee Payroll</b>	337.88%
<b>Notes to Schedule:</b>	N/A
	<i>Source: GRS</i>

<sup>1</sup> The effort and cost to recreate financial statement information for the previous nine years was not practical. Additional years will be displayed as they become available.

<sup>2</sup> Does not include members of the DROP

## Financial Section

### Required Supplementary Schedules

#### Schedule of Employer Contributions - Pension

Years ended December 31, 2005 - 2014

Year	Actuarially Calculated Employer Contribution	Actual Contributions	Annual Contribution Deficiency	Covered Payroll	Annual Contributions as a % of Covered Payroll	% Contributed
2005	\$18,467,789	\$18,467,789	\$ -	\$83,408,155	22.14%	100%
2006	19,567,233	19,263,941	303,292	85,878,329	22.43	98
2007	21,666,160	19,956,700	1,709,460	93,752,908	21.29	92
2008	21,221,089	20,302,216	918,873	94,301,538	21.53	96
2009	19,978,427	20,453,914	475,487	94,824,789	21.57	102
2010	22,872,487	21,211,944	1,660,543	94,767,852	22.38	93
2011	26,956,449	22,966,338	3,990,111	93,126,449	24.66	85
2012	30,488,160	23,766,361	6,721,799	98,117,403	24.22	78
2013	35,429,985	22,908,182	12,521,803	98,519,844	23.25	65
2014	29,767,228	22,325,421	7,441,807	99,211,756	22.50	75

Source: GRS

#### Schedule Of Investment Returns<sup>1</sup>

Year ended December 31

	Annual Return <sup>2</sup>
2014	5.99%

Source: Hartland

<sup>1</sup>The effort and cost to recreate financial statement information for the previous nine years was not practical. Additional years will be displayed as they become available.

<sup>2</sup>Annual money-weighted rate of return, net of investment expenses

#### Schedule of Employer Contributions and Other Contributing Entities - OPEB

Years ended December 31, 2011 - 2014

Year	Actuarial Annual Required Contributions	% Contributed by Employer	Federal Subsidy	% Contributed
2011	\$18,600,414	8.73	\$422,640	11.00
2012	23,992,021	7.00	500,134	9.08
2013	24,296,709	15.06	446,616	16.89
2014	24,532,822	17.63	647,225	20.27

## Financial Section

### Required Supplementary Schedules

#### Schedule of Funding Progress - OPEB

Years ended December 31, 2010-2013

Valuation Year	Actuarially Accrued Liability ("AAL")	Valuation Assets	Unfunded Actuarially Accrued Liability ("UAAL")	Assets as a % of AAL	Active Member Payroll	UAAL as a % of Active Member Payroll
2010	\$406,864,423	\$104,738,337	\$302,126,086	25.7	\$94,767,852	318.8
2011	424,143,941	99,001,756	325,142,185	23.3	93,126,449	349.1
2012	411,467,825	99,817,173	311,650,652	24.3	98,117,403	317.6
2013	438,561,694	102,083,923	336,477,771	23.3	98,519,844	341.5

#### Notes to the Trend Data

Information in the Required Supplementary Schedules is from the actuarial valuation for each year indicated. Additional information from the latest actuarial valuation is as follows:

Valuation Date	December 31, 2013
Actuarial Cost Method	Entry Age
Amortization Method	Level Percent Closed
Remaining Amortization Period	30 years for retiree health benefits and pension benefits in determining the Annual Required Contribution
Asset Valuation Method	Four year smoothed market, 20% corridor
<u>Actuarial Assumptions</u>	
Investment Rate of Return	8.0% for pension, 5.0% for OPEB
Projected Salary Increases	4.3 – 14.0%, including wage inflation of 4.0%
Cost-of-living Adjustments	1.5% annual increases beginning at age 60 (age 53 for members who entered DROP as of December 29, 2012, or retired before January 7, 2013)
Health Trend	Intermediate

**Notes to Required Supplementary Schedules**

**Schedule of Changes in Net Pension Liability**

The total pension liability contained in this schedule was provided by HPRS's actuary, Gabriel, Roeder, Smith & Company. The net pension liability is measured as the total pension liability, less the amount of the fiduciary net position of the Retirement System.

**Description of Schedule of Funding Progress**

An unfunded actuarially accrued liability exists when (1) actual financial experiences are less favorable than assumed financial experiences and (2) additional benefit obligations are applied to past service. Section 5505.121 of the Ohio Revised Code requires that an unfunded liability be systematically financed over a period of no more than thirty years.

In an inflationary economy, the value of a dollar decreases over time. While member payroll and unfunded actuarially accrued liabilities may be increasing in dollar amounts, the relative percentages of these factors may be declining. To account for this inconsistency, it is useful to measure the quotient of unfunded actuarially accrued liabilities divided by active member payroll. A smaller ratio indicates greater system strength. A declining ratio over time indicates an improving financial position.

<b>Schedule of Administrative Expenses</b>	
Year ended December 31, 2014	
<b>Personnel</b>	<u>\$737,954</u>
<b>Professional and technical services</b>	
Computer services	66,446
Actuary	75,050
Education	13,004
Medical consulting	6,370
Audit	40,371
Legal	65,285
Miscellaneous services	6,840
Medical services	5,875
Total professional and technical services	<u>279,241</u>
<b>Communications</b>	
Printing	1,102
Postage	8,630
Telephone	4,233
Total communications	<u>13,965</u>
<b>Other expenses</b>	
Office rent	65,924
Depreciation	8,971
Insurance	31,962
Supplies	5,648
Miscellaneous	14,870
Ohio Retirement Study Council	2,366
Travel	18,953
Memberships and subscriptions	5,154
New equipment	2,641
Total other expenses	<u>156,489</u>
<b>Total administrative expenses</b>	<u><u>\$ 1,187,649</u></u>

Above amounts do not include investment-related administrative expenses.



<b>Schedule of Investment Expenses</b>	
Year ended December 31, 2014	
<b>Personnel</b>	\$202,875
<b>Professional services</b>	
Investment services	5,646,959
Monitoring services	268,636
Total professional services	5,915,595
<b>Other expenses</b>	
Due diligence	606
Computer services	7,383
Memberships and subscriptions	1,419
Printing and supplies	122
Total other expenses	9,530
<b>Total investment expenses</b>	<b>\$6,128,000</b>

<b>Payments to Consultants</b>		
Year ended December 31, 2014		
Consultant	Fee	Service
Attorney General's Office	\$ 9,584	Legal
Bricker & Eckler	3,238	Legal
Calfee, Halter & Griswold	23,593	Legal
County Of Summit Ohio	19,521	Auditing
David Tanner, D.O.	3,232	Medical
Earl N. Metz, M.D.	500	Medical
Gabriel, Roeder, Smith & Company	75,050	Actuarial
Groom Law Group	4,275	Legal
Hartland	268,636	Investment
Ice Miller LLC	20,621	Legal
John Wolfe, M.D.	1,288	Medical
Kennedy Cottrell Richards LLC	18,045	Auditing
Ohio Auditor of State	2,805	Auditing
Squire Patton Boggs LLP	3,975	Legal
<b>Total</b>	<b>\$ 454,363</b>	

See the Investment Section, pages 61-62 for payments to investment managers and brokers.



Big Thinking. Personal Focus.

INDEPENDENT AUDITORS' REPORT ON INTERNAL CONTROL OVER FINANCIAL REPORTING AND ON COMPLIANCE AND OTHER MATTERS  
BASED ON AN AUDIT OF FINANCIAL STATEMENTS PERFORMED IN ACCORDANCE WITH GOVERNMENT AUDITING STANDARDS

Board of Trustees  
Ohio State Highway Patrol Retirement System  
Columbus, Ohio

We have audited, in accordance with the auditing standards generally accepted in the United States of America and the standards applicable to financial audits contained in *Government Auditing Standards* issued by the Comptroller General of the United States, the financial statements of The Ohio State Highway Patrol Retirement System (HPRS), which comprise the statement of net position as of December 31, 2014, and the related statement of changes in net position for the year then ended, and the related notes to the financial statements, and have issued our report thereon dated June 25, 2015.

***Internal Control Over Financial Reporting***

In planning and performing our audit of the financial statements, we considered the HPRS's internal control over financial reporting (internal control) to determine the audit procedures that are appropriate in the circumstances for the purpose of expressing our opinions on the financial statements, but not for the purpose of expressing an opinion on the effectiveness of the HPRS's internal control. Accordingly, we do not express an opinion on the effectiveness of the HPRS's internal control.

A *deficiency in internal control* exists when the design or operation of a control does not allow management or employees, in the normal course of performing their assigned functions, to prevent, or detect and correct, misstatements on a timely basis. A *material weakness* is a deficiency, or a combination of deficiencies, in internal control, such that there is a reasonable possibility that a material misstatement of the HPRS's financial statements will not be prevented, or detected and corrected on a timely basis. A *significant deficiency* is a deficiency, or a combination of deficiencies, in internal control that is less severe than a material weakness, yet important enough to merit attention by those charged with governance.

Our consideration of internal control was for the limited purpose described in the first paragraph of this section and was not designed to identify all deficiencies in internal control that might be material weaknesses or, significant deficiencies. Given these limitations, during our audit we did not identify any deficiencies in internal control that we consider to be material weaknesses. However, material weaknesses may exist that have not been identified.

### ***Compliance and Other Matters***

As part of obtaining reasonable assurance about whether the HPRS's financial statements are free from material misstatement, we performed tests of its compliance with certain provisions of laws, regulations, contracts and grant agreements, noncompliance with which could have a direct and material effect on the determination of financial statement amounts. However, providing an opinion on compliance with those provisions was not an objective of our audit, and accordingly, we do not express such an opinion. The results of our tests disclosed no instances of noncompliance or other matters that are required to be reported under *Government Auditing Standards*.

### ***Purpose of This Report***

The purpose of this report is solely to describe the scope of our testing of internal control and compliance and the results of that testing, and not to provide an opinion on the effectiveness of the HPRS's internal control or on compliance. This report is an integral part of an audit performed in accordance with *Government Auditing Standards* in considering the entity's internal control and compliance. Accordingly, this communication is not suitable for any other purpose.

*Schneider Downs & Co., Inc.*

Columbus, Ohio  
June 25, 2015

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# **Investment Section**

### Investment Overview

#### Introduction

Chapter 5505 of the Ohio Revised Code and the Board-adopted *Investment Policy* govern investment activity at HPRS. In accordance with Ohio Revised Code 5505.06, “The Board shall have full power to invest the funds. The Board and other fiduciaries shall discharge their duties with respect to the funds solely in the interest of the participants and beneficiaries; for the exclusive purpose of providing benefits to participants and their beneficiaries and defraying reasonable expenses of administering the system; with care, skill, prudence, and diligence under the circumstances then prevailing that a prudent person acting in a like capacity and familiar with these matters would use in the conduct of an enterprise of a like character and with like aims; and by diversifying the investments of the system so as to minimize the risk of large losses, unless under the circumstances it is clearly prudent not to do so.”

HPRS’s total investment portfolio, as reflected in the *Statement of Fiduciary Net Position*, (pages 24-25) is comprised of the Pension (Defined Benefit) and Post-Employment Health Care portfolios’ assets. Defined Benefit portfolio assets originate from member and employer contributions to the system. The management of these assets is the responsibility of the HPRS Investment Committee, under the direction of the Board of Trustees, and HPRS’s Investment Consultant, Hartland. Hartland assists the Board with the construction and diversification of HPRS’s investment portfolio and manager selection. Additionally, Hartland assists with matters of investment policy and asset allocation recommendations, and provides monthly and quarterly performance reviews.

#### Investment Policy

The Board-adopted *Investment Policy* (pages 63-83) provides information on HPRS’s investment policies and performance objectives. The policy establishes asset allocation targets, risk tolerances, return objectives, and other guidelines, such as defining the responsibilities of the fiduciaries who implement the strategies and manage HPRS’s investment portfolio.

#### Investment Summary

HPRS’s *Investment Summary* (page 55) includes the total fund assets of the Pension and Post-Employment Health Care portfolios. All investments are reported at fair value, which is the amount that the plan could reasonably expect to receive in a current sale between a willing buyer and a willing seller, other than in a forced or liquidation sale.

A complete listing of assets held at December 31, 2014 is available from HPRS upon request.

#### Investment Performance

As shown in the *Schedule of Investment Results* (page 57), performance information is reported gross-of-fees (net-of-fees for alternative investments) versus benchmark for the total fund and each asset class over selected periods. All returns are calculated in U.S. Dollars using a time-weighted rate of return. Net-of-fees returns are available from HPRS upon request.

*Source: HPRS Investment Staff*

## Investment Section

### Investment Summary

December 31, 2014

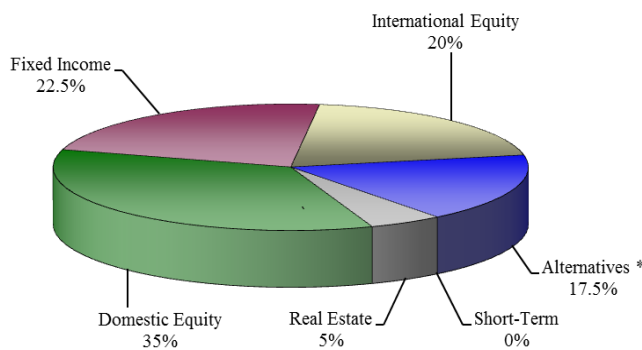
	Fair Value	Actual	Target	Range
Domestic equity	\$313,267,000	36.9%	35.0%	30-40%
Fixed income	169,274,872	20.0	22.5	17.5-27.5
Alternatives *	161,611,776	19.1	17.5	12.5-22.5
International equity	157,277,058	18.6	20.0	15-25
Short-term	12,107,228	1.4	0.0	0 – 5
Real estate	34,232,108	4.0	5.0	0 – 10
Net portfolio value	<u>\$847,770,042</u>	<u>100.0%</u>	<u>100.0%</u>	

\* Alternatives include private equity and fund of hedge funds investments.

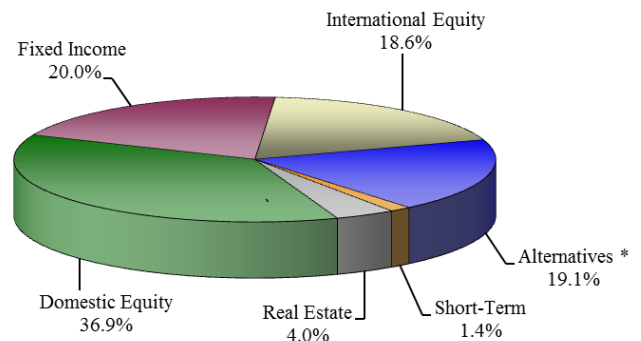
### Asset Allocation – Total Fund

December 31, 2014

Policy Allocation



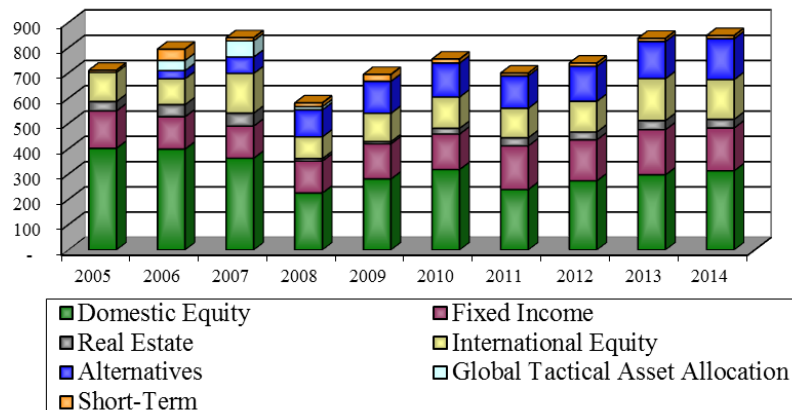
Actual Allocation



\* Alternatives include private equity and fund of hedge funds investments.

### Ten-Year Investment Comparison

(in millions)



\* Alternatives include private equity and fund of hedge funds investments.

#### **Economic and Market Review - 2014**

In 2014, the global capital markets were mainly impacted by four developments: 1) long-term interest rates declined in the United States due in part to inflows from foreign investors, 2) crude oil prices collapsed due mainly to supply and demand issues, 3) geopolitical events again impacted markets, particularly related to Russia, and 4) stimulus programs in the Euro zone and Japan were initiated/expanded. As a result, the dollar strengthened as the U.S. Dollar index appreciated approximately 12.7% in 2014, particularly vs. the Euro and Yen. Commodities sold off globally and energy/mining securities were significantly impacted.

The U.S. economy continued to grow in 2014, despite a negative first quarter; real GDP increased in 2014 by 2.4% for the year, up from 1.9% in 2013. Positive contributions were made by personal consumption expenditures, nonresidential fixed investment, exports, state and local government spending, private inventory investment, and residential fixed investment. These offset negative contributions from the federal government and imports.

Despite popular opinion, interest rates moved lower in the United States in 2014, at least on the long-end of the yield curve. Foreign investors have been motivated by extraordinarily low (and even negative) rates in their respective countries to invest abroad (see Germany, Switzerland, and Japan). At 3.0% at the beginning of the year, the 10-Year U.S. Treasury yield was a relative bargain compared to local bonds in many countries. On the short-end of the yield curve, yields moved higher, implying investors anticipate Fed action in the near future.

As supply of crude oil has increased in recent years due primarily to production enhancements in the United States, global demand has not kept up. The price of Brent crude oil declined from approximately \$110 in June to less than \$60 by year-end. Despite

the massive decline in prices, OPEC has elected not to cut back on production. Higher cost producers are most impacted by the price decline, but earnings and cash flow of nearly every company in the industry has been negatively impacted by lower prices. As result, securities in the energy sector have declined along with commodity prices.

Outside of the United States, easy monetary policy is being used in an attempt to stimulate growth, particularly in Europe and Japan. In addition, the United States and European Union have placed sanctions on Russia as a result of its occupation of Crimea in Ukraine. Such sanctions limit Russia's ability to outsource oil and gas, primarily. The Russian Ruble declined dramatically in 2014, and markets punished Russian holdings.

Capital market returns were led by interest-rate-sensitive investments, primarily U.S. REITs (+27.2% as measured by the FTSE NAREIT All REITs Index) and long-term bonds (+19.3% as measured by the Barclays Capital Long-Term Government / Credit Index). Equity markets were led by large capitalization U.S. equities (as measured by the S&P 500 Index), which returned 13.7% in 2014. Small capitalization stocks returned 7.0%, lagging larger stocks due mostly to concerns about valuations. In local terms, most international equity returns were positive; however, because the dollar strengthened, international equity returns were generally negative in 2014 for U.S. investors. The MSCI All Country World Index ex USA (ACWI ex USA) Index was down 3.4% for the year.

As previously mentioned, interest rates generally moved lower in 2014 as the 10-Year U.S. Treasury Yield declined 83 bps to finish the year at 2.17%. To the surprise of most investors, bond returns were strong in 2014 as the Barclays U.S. Aggregate Index returned +6.0%. In some areas globally, fixed income returns were challenged where spreads widened.

*Market data courtesy of Bloomberg*

*Source: Hartland*



**Schedule of Investment Results**

Year ended December 31, 2014

	2014	2013	3-Year	5-Year
<b>Domestic Equity</b>	<b>12.0%</b>	<b>35.6%</b>	<b>20.8%</b>	<b>16.1%</b>
S&P 500	13.7	32.4	20.4	15.5
Russell 3000	12.6	33.6	20.5	15.6
<b>International Equity</b>	<b>-4.7</b>	<b>19.3</b>	<b>10.2</b>	<b>5.0</b>
MSCI ACWI ex US	-3.4	15.8	9.5	4.9
<b>Fixed Income</b>	<b>4.0</b>	<b>-0.8</b>	<b>3.2</b>	<b>4.9</b>
Barclays Capital Aggregate	6.0	-2.0	2.7	4.4
<b>Real Estate</b>	<b>22.0</b>	<b>13.6</b>	<b>14.0</b>	<b>7.5</b>
NCREIF	11.3	11.0	11.1	11.0
<b>Alternatives ▲</b>	<b>9.0</b>	<b>13.2</b>	<b>9.0</b>	<b>5.3</b>
HFRI Fund of Funds Composite	3.4	8.7	5.7	3.3
Wilshire 5000 + 3% (lagged one quarter)	21.1	25.6	26.7	19.3
<b>Total Fund</b>	<b>6.8</b>	<b>19.7</b>	<b>12.5</b>	<b>9.5</b>
Absolute Objective	8.0	8.0	8.0	8.0
Relative/Composite Benchmark ►	7.0	16.8	12.2	10.1

▲ Includes private equity and fund of hedge funds. Performance results for private equity classes are typically reported on a quarter lag basis, adjusted for cash flow activity during the fourth quarter.

► Relative Composite Benchmark: Russell 3000, 35%; MSCI ACWI ex US Gross, 20%; NCREIF, 5%; HFRI Fund of Funds Composite Index, 12.5%; Wilshire 5000 +3% (lagged one quarter) – HPRS, 5%; Barclays Aggregate, 22.5%

The HPRS Total Fund performance returns consist of all assets of the fund. All returns are calculated in U.S. Dollars using a time-weighted rate of return based on market values.

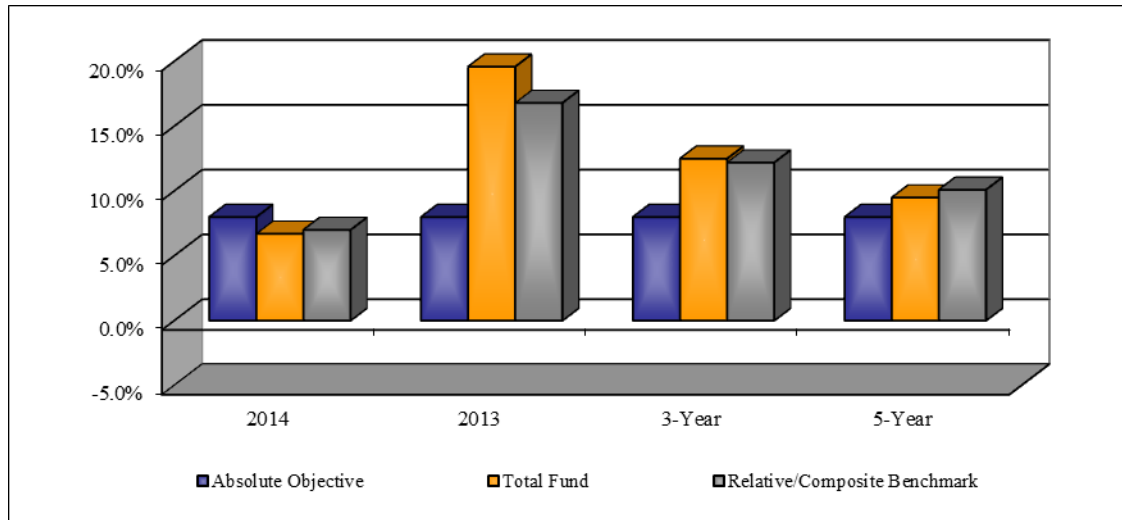
Performance is net of fees for alternative investments and gross of fees on all other investments. Net of fees returns are available upon request, and investment management fees vary among asset classes.

Market value adjustments made as of December 31 will be reflected in the investment returns in the next financial statement.

Source: Hartland

**Total Fund Rates of Return vs Policy Benchmark**

(Gross of fees)



## Investment Section

### Domestic Equity Holdings

December 31, 2014

<u>Security</u>	<u>Shares</u>	<u>Market Price</u>	<u>Fair Value</u>
Pfizer Inc	47,800	\$31.15	\$1,488,970
JPMorgan Chase & Co	21,600	62.58	1,351,728
Exxon Mobil Corp	12,550	92.45	1,160,247
AT&T Inc	33,650	33.59	1,130,303
Chevron Corp	9,200	112.18	1,032,056
Cisco Systems Inc	33,600	27.815	934,584
Wells Fargo & Company	14,800	54.82	811,336
Fifth Third Bancorp	38,100	20.375	776,288
Prudential Financial Inc	8,500	90.46	768,910
Ford Motor Company	48,800	15.50	756,400
Other	3,296,635		65,542,501
Total domestic equity securities	3,565,235		\$75,753,323
<b>Domestic Equity Commingled Funds</b>			
DFA Small Cap Subtrust			\$13,164,181
Vanguard Institutional Index Fund			138,942,784
Vanguard Mid Cap Index Fund			32,174,937
Wellington Mgmt Diversified Growth			53,231,775
Total domestic equity commingled funds			\$237,513,677
<b>Total domestic equity</b>			<b>\$313,267,000</b>

### International Equity Holdings

December 31, 2014

<u>Security</u>	<u>Shares</u>	<u>Market Price</u>	<u>Fair Value</u>
Seagate Technology	4,800	\$66.50	\$319,200
Icon Plc	6,020	50.99	306,960
Tronox Ltd	11,200	23.88	267,456
Syngenta AG	4,100	64.24	263,384
Copa Holdings S.A.	2,500	103.64	259,100
Transocean Ltd	9,500	18.33	174,135
Everest Re Group Ltd	1,000	170.30	170,300
Pentair Plc	2,430	66.42	161,401
Flextronics International Ltd	13,600	11.18	152,048
Prothena Corp Plc	7,000	20.76	145,320
Other	213,786		1,465,275
Total international equity securities	275,936		\$3,684,579
<b>International Equity Commingled Funds</b>			
DFA International Small Cap Value			\$13,167,800
Driehaus International Small Cap Growth			7,460,996
Manning & Napier Overseas Series			33,487,954
OFI Emerging Markets			24,023,954
Vanguard Total International Stock Indx Fnd			36,261,349
William Blair International			39,190,426
Total international equity commingled funds			\$153,592,479
<b>Total international equity</b>			<b>\$157,277,058</b>

All values are stated in U.S. dollars. A complete list of holdings is available upon request.

## Investment Section

### Fixed Income Holdings

December 31, 2014

Security	Par Value	Fair Value
USA Treasury Notes 3.125% Due 02/15/2042	\$1,575,000	\$1,695,456
USA Treasury Notes 2.750% Due 11/15/2042	1,275,000	1,273,700
Federal Home Loan Mtg Corp Series 3946 Class LN 3.5000% Due 04/15/2041	1,074,735	1,123,657
General Elec Cap Corp Sr Unsec VAR% Due 03/15/2023	1,000,000	1,014,080
Hamilton Cnty OH Hlth Care Fac Christ Hosp PJ Rev 5.000% Due 06/01/22	1,000,000	1,148,700
USA Treasury Notes 2.000% Due 04/30/2016	1,000,000	1,020,700
USA Treasury Notes Inflation Protected SECS .125% Due 01/15/2022	1,000,000	1,024,531
Verizon Communications Sr Unsec 3.500% Due 11/01/2021	1,000,000	1,022,290
Federal Home Loan Mtg Corp Gold Pool #J12635, 4.000%, Due 07/01/2025	910,758	972,726
Federal Natl Mtg Assn Struct NTS Call 07/30/2013 @100 1.000% Due 7/30/19	900,000	897,939
Other	22,743,554	24,982,442
Total fixed income securities	\$33,479,047	\$36,176,221
<b>Fixed Income Commingled Funds</b>		
Credit Suisse Secured Loan Fund		\$27,660,075
JP Morgan Investment Management		35,041,814
JP Morgan Strategic Income Opp Fund		37,528,730
Wellington World Bond		32,868,032
Total fixed income commingled funds		\$133,098,651
<b>Total fixed income</b>		<b>\$169,274,872</b>

### Real Estate Holdings

December 31, 2014

Asset	Shares	Market Price	Fair Value
HPRS Busch Properties, LLC			\$2,077,241
Brandywine Rlty Tr sh Ben Int REIT	7,000	15.98	111,860
Hospitality Pptys Tr Sh Ben Int REIT	4,200	31.00	130,200
Total real estate assets	11,200		\$2,319,301
<b>Real Estate Commingled Funds</b>			
Long Wharf Real Estate Partners Fund IV			\$4,216,124
Oaktree Real Estate Opportunities Fund IV			7,705,663
Oaktree Real Estate Opportunities Fund V			9,342,358
Oaktree Real Estate Opportunities Fund VI			8,921,694
Pyramis Global Advisors (FREG II)			68,924
Pyramis Global Advisors (FREG III)			1,658,044
Total real estate commingled funds			\$31,912,807
<b>Total real estate</b>			<b>\$34,232,108</b>

All values are stated in U.S. dollars. A complete list of holdings is available upon request.

## Investment Section

### Private Equity Holdings

December 31, 2014

<b>Asset</b>	<b>Fair Value</b>
Blue Point Capital Partners Fund III	\$2,478,947
Core Value, LLC	28,066,653
GCM Grosvenor Private Equity Opportunities Fund, LP	12,130,538
HarbourVest Partners 2013 Direct Fund L.P.	3,971,516
Kayne Anderson Energy Fund IV	858,851
Kayne Anderson Energy Fund V	3,720,852
Kayne Anderson Energy Fund VI	1,973,703
Kayne Anderson Mezzanine Partners	1,679,281
Kayne Anderson MLP Fund	14,035,196
Pantheon USA Fund VII, LP	17,582,685
<b>Total private equity</b>	<b>\$86,498,222</b>

### Fund of Hedge Funds Holdings

December 31, 2014

<b>Asset</b>	<b>Fair Value</b>
Evanston Capital Weatherlow Offshore Fund II	\$45,404,401
Feingold O'Keefe Distressed Loan Fund	10,970,784
GAM Fund Management Ltd.	254,892
Pinnacle Natural Resources Offshore	11,071,516
Sankaty / Prospect Harbor Credit Partners	66,004
Seix Credit Opportunities Fund, LLC	7,345,957
<b>Total fund of hedge funds</b>	<b>\$75,113,554</b>

All values are stated in U.S. dollars. A complete list of holdings is available upon request.

**Summary Schedule of Investment Manager Fees**

Year ended December 31, 2014

<b>Manager</b>	<b>Strategy</b>	<b>Assets Managed</b>	<b>Fees</b>
<b>Cash and Short-term Investments</b>			
The Vanguard Group	Money Market	\$ -	\$3,463
<b>Domestic equity</b>			
Ancora Investment Advisors	Micro Cap	11,256,963	70,379
DePrince, Race & Zollo, Inc.	Large Cap Value	25,569,106	149,255
Dimensional Fund Advisors	Small Cap Blend	13,164,181	69,826
LSV Asset Management	Large Cap Value	28,494,125	170,518
T. Rowe Price	Large Cap Blend	-	53,587
Vanguard Institutional Index Fund	Large Cap Blend	138,942,784	42,671
Vanguard Mid Cap Index Fund	Mid-Cap	32,174,937	27,325
WA Account	Miscellaneous	1,452	-
Wellington Mgmt Co., LLP	Large Cap Growth	53,231,775	292,529
Westfield Capital Management	Small Cap Growth	14,358,316	140,876
<b>International Equity</b>			
Dimensional Fund Advisors	Small Cap Value	13,167,800	97,975
Driehaus Capital Management	Small Cap Growth	7,460,996	153,671
Manning & Napier Advisors, Inc.	Large Cap Value	33,487,954	260,207
OFI Trust Company	Emerging Markets	24,023,954	204,269
Vanguard Total International Stock Indx Fnd	Large Cap Core	36,261,349	41,155
William Blair International	Large Cap Growth	39,190,426	297,814
<b>Fixed Income</b>			
Credit Suisse Secured Loan Fund	High Yield	27,660,075	112,125
Johnson Institutional Management	Intermediate-Term	36,176,221	81,354
JP Morgan Asset Management	Intermediate-Term	35,041,814	96,085
JP Morgan Strategic Income Opp Fund	Intermediate-Term	37,528,730	250,053
Wellington World Bond	Global Bond	32,868,032	139,366
<b>Real Estate</b>			
HPRS Busch Properties, LLC	Office Buildings	2,077,241	-
Henderson Global Investors	Specialty Real Estate	-	14,627
Long Wharf Real Estate Partners IV	Speciality Real Estate	4,216,124	87,703
Oaktree Capital Management, LP	Specialty Real Estate	25,969,715	416,780
Pyramis Global Advisors	Specialty Real Estate	1,726,968	31,834
<b>Private Equity</b>			
Blue Point Capital Partners	Mid-Market Buyout	2,478,947	332,263
Core Value, LLC	Timber	28,066,653	201,948
GCM Grosvenor Private Equity Opp Fund	Fund of Funds	12,130,538	81,151
HarbourVest Partners	Co-Investment	3,971,516	186,459
Kayne Anderson Capital Advisors, LP	Energy, MLP, and Mezzanine	22,267,883	416,686
Pantheon USA Fund VII, LP	Fund of Funds	17,582,685	150,000
<b>Hedge Funds</b>			
Evanston Capital Management, LLC	Fund of Funds	45,404,401	383,448
Feingold O'Keeffe Capital	Distressed Securities	10,970,784	171,530
GAM Fund Mgmt Ltd	Fund of Funds	254,892	-
Pinnacle Natural Resources Offshore, Ltd	Fund of Funds	11,071,516	212,412
Sankaty Advisors, LLC	Distressed Securities	66,004	1,446
Seix Investment Advisors, LLC	Distressed Securities	7,345,957	112,556
<b>Total</b>		<b>\$835,662,814</b>	<b>\$5,555,346</b>

**Summary Schedule of Broker Fees**

Year ended December 31, 2014

<b>Broker</b>	<b>Fees</b>	<b>Shares</b>	<b>Average Cost</b>
First Tennessee	\$ -	6,687,000	\$0.000
Wells Fargo Securities	34.00	5,677,840	0.000
Keybank Capital	8.00	3,420,200	0.000
BNY Capital Markets	-	2,490,000	0.000
Brownstone Investments	-	2,435,000	0.000
BNY / Suntrust Capital	-	2,400,000	0.000
Stephens Inc	-	2,124,371	0.000
UBS Financial Securities	-	2,000,000	0.000
Morgan Stanley	207.06	1,913,696	0.000
G.X. Clarke & Co	-	1,700,000	0.000
Abel Noser Corp	16,832.18	1,534,640	0.011
Cortview Capital	-	1,500,000	0.000
National Financial Services	-	1,203,000	0.000
JP Morgan Securities	438.00	1,130,100	0.000
Pierpont Securities	-	1,000,000	0.000
Ivy Securities	8,557.37	887,561	0.010
Mutual Fund Agent	-	834,763	0.000
Cabrera Capital	7,066.39	706,639	0.010
Barclays Capital	308.67	517,467	0.001
BNY / Griffin Kubek	-	500,000	0.000
Jeffries & Co	-	500,000	0.000
Suntrust Capital	-	451,959	0.000
Banc of America Securities LLC	-	300,000	0.000
Hilliard Lyons	-	240,000	0.000
Credit Suisse Fixed Income	1,858.50	219,330	0.008
Citigroup Global	382.00	191,100	0.002
Goldman Sachs & Co	1,226.46	147,940	0.008
Cap Institutional Services	1,587.60	105,840	0.015
Robert Baird	1,528.33	101,455	0.015
Merrill Lynch Pierce Fenner & Smith	623.88	70,625	0.009
UBS Securities LLC	278.86	26,263	0.011
Knight Equity Markets L.P.	55.20	22,080	0.003
RBC Capital Markets	401.60	16,060	0.025
Investment Technology Group Inc	123.81	15,841	0.008
Fox River Execution	108.50	15,500	0.007
Rosenblatt Securities Inc	131.99	12,899	0.010
Sanford C. Berns	180.25	11,125	0.016
BNY Convergex	158.30	11,030	0.014
Deutsche Morg Grenfell	153.00	9,950	0.015
Other	1,596.61	67,397	0.024
<b>Total</b>	<b>\$43,846.56</b>	<b>43,198,671</b>	<b>\$0.001</b>

The brokerage commissions do not include commissions paid by external investment managers utilizing commingled fund structures. HPRS maintains a commission recapture program with Abel / Noser Corporation.

#### HPRS Investment Policy

##### **Introduction**

The State Highway Patrol Retirement System was established by section 5505.02 of the Ohio Revised Code (ORC) for State Highway Patrol employees, as defined in division (A) of ORC section 5505.01.

Pursuant to ORC section 5505.04, the administration and management of the Highway Patrol Retirement System are vested in the State Highway Patrol Retirement Board. Members of the State Highway Patrol Retirement Board are the trustees of the funds created by ORC section 5505.03. The Board has full power to create and adopt, in regular meetings, an investment committee, policies, objectives, or criteria for the operation of the investment program that include asset allocation targets and ranges, risk factors, asset class benchmarks, time horizons, total return objectives, and performance evaluation guidelines. The funds created by ORC section 5505.03 and managed by the Retirement Board are the employees' savings fund, the employer's accumulation fund, the pension reserve fund, the survivors' benefit fund, the income fund, and the expense fund. These funds are for the exclusive purpose of operating the Retirement System and providing benefits to any qualified employee in the uniform division of the State Highway Patrol, any qualified employee in the radio division hired prior to November 2, 1989, and any State Highway Patrol cadet attending training school pursuant to ORC section 5503.05, whose attendance at the school began on or after June 30, 1991. "Employee" includes the Superintendent of the State Highway Patrol.

##### **Purpose and Duties**

The primary objective of the State Highway Patrol Retirement System is to provide eligible members and beneficiaries with scheduled pension benefits. Although the State Highway Patrol Retirement System is not governed by the Employees Retirement Income Security Act of 1974 (ERISA), the basic provisions contained in that act are recognized and will serve as guidance to the management of the fund. In particular, the *prudent person* guidelines are to be followed with regard to the investment management of the fund. These guidelines require the Board and other system fiduciaries to exercise care, skill, prudence, and diligence -- under the circumstances then prevailing -- that a prudent person acting in a like capacity and familiar with such matters would use in the conduct of an enterprise of a like character with like aims. A secondary objective of the fund is to maintain a sufficient degree of liquidity in order to meet unanticipated demands and changing environments. Members of the Retirement Board and other fiduciaries of the Retirement System fully accept the duty to incur only reasonable expenses in the operation of the State Highway Patrol Retirement System.

##### **Investment Goals**

Consistent with prudent standards for preservation of capital and maintenance of liquidity, the goal of the fund is to earn the highest possible rate of return consistent with the fund's tolerance for risk as determined periodically by the Board in its role as a fiduciary. This objective should

## Investment Section

### Investment Objectives, Policies, and Guidelines

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ensure adequate funds to meet scheduled benefits while maintaining level contributions. In meeting these objectives, the Board will give consideration to investments that enhance the welfare of the State of Ohio, and Ohio citizens, where such investments offer safety and quality of return comparable to other investments currently available. Equal consideration will be given to investments otherwise qualifying under this section that involve minority-owned and controlled firms, or firms owned and controlled by women, either alone or in joint venture with other firms.

#### **Policies**

Diversification of assets will ensure that adverse or unexpected results from a security class will not have a detrimental impact on the entire portfolio. Diversification is interpreted to include diversification by asset type, performance and risk characteristic, number of investments, and by investment style of management organizations. These guidelines may be implemented through specific directions or instructions to investment managers, and those directions or instructions may contain other more specific restrictions on diversification of assets by percentage holdings, by quality, or other factors.

Asset classes and ranges considered appropriate for investment of fund assets are to be determined by the Board in accordance with these investment guidelines. Asset class constraints only apply to separate account mandates.

Assignment of responsibilities for each asset category, including components of each asset category, may be assigned to one or more management firms that may be "specialty" managers (i.e., managing only one type of asset class).

The Board will, at least annually, establish a policy with the goal to increase utilization of Ohio-qualified investment managers, when an Ohio-qualified investment manager offers quality, services, and safety comparable to other investment managers otherwise available.

The Board will, at least annually, establish a policy with the goal to increase utilization of Ohio-qualified agents for the execution of domestic equity and fixed income trades on behalf of the retirement system, when an Ohio-qualified agent offers quality, services, and safety comparable to other agents otherwise available.

In order to achieve the return objectives, the fund will employ the following strategies for specific asset classes:

1. U.S. equities will represent from 30 to 40 percent of the market value of total fund assets with a targeted average of 35 percent. The term "equities" includes common stock, convertible bonds, and convertible stock.
2. Non-U.S. equities will represent from 15 to 25 percent of the market value of total fund assets with a targeted average of 20 percent.



## Investment Section

### Investment Objectives, Policies, and Guidelines

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3. U.S. fixed income obligations, including cash, will represent from 17.5 to 27.5 percent of the market value of total fund assets with a targeted average of 22.5 percent. Intermediate term bonds may include contractual payments, preferred stocks, and bonds with a maturity date greater than one year and less than or equal to ten years. Long-term bonds have a maturity date greater than ten years.

4. Investments in real estate and alternatives will represent from 17.5 to 27.5 percent of the market value of total fund assets with a targeted average of 22.5 percent. The term “alternatives” includes hedge funds, private equity, tactical asset allocation, master limited partnerships, timber and commodities.

#### *Short-Term*

The purpose of the short-term cash component is to provide liquidity for short-term obligations.

Cash equivalent investments may include the following:

- Short-Term Maturity Securities
- U.S. Treasury Bills
- U.S. Government Repurchase Agreements
- Commercial Paper
- Commingled Investment Funds

#### *Fixed Income*

The purpose of the fixed income component is to provide a deflation hedge, to reduce the overall volatility of the pension assets in relation to the liability, and to produce current income.

A core bond allocation will be diversified as to type of security, issuer, coupon, and maturity. Qualifying bonds, at the time of purchase, will be rated as investment-grade by at least two nationally-recognized bond rating services. Generally, the average maturity of a fixed income allocation will be ten years or less, although individual securities may be longer.

An alternative bond allocation may invest in (1) high-yield or other non-investment-grade bonds, (2) non-United States bonds, or (3) bonds issued by emerging countries.

No more than ten percent of a fixed income allocation will be invested in the securities of any one issuer, and no more than five percent in any one issue, with the exception of U.S. government securities. Diversification of the bond portfolio will be accomplished by investing in a combination of U.S. government bonds, U.S. agency bonds, domestic corporate bonds, high yield bonds, and non-U.S. bonds.

## Investment Section

### Investment Objectives, Policies, and Guidelines

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Managers are prohibited from using derivative instruments.

#### *Equities*

The purpose of the equity component is to provide for growth in principal, while at the same time preserve the purchasing power of the portfolio's assets. It is recognized that the equity in the portfolio will represent a greater assumption of market volatility and risk as well as high total return over the long-term.

Qualifying equities will be listed on an established stock market and be readily marketable. They may be held in separate or commingled accounts.

At least 67% of the value of a large cap domestic mandate will be invested in securities with a market capitalization of more than \$5 billion.

At least 67% of the value of a small/mid cap domestic mandate will be invested in securities with a market capitalization of more than \$500 million. Micro cap mandates are excluded from this guideline.

At least 50% of the value of an international mandate (excluding small cap) will be invested in securities with a market capitalization of more than \$1 billion. Each equity manager will diversify the portfolio in an attempt to minimize the impact of substantial losses in any specific industry or issuer.

An equity manager may not --

- hold more than 15% of the account value in a single issuer,
- where a sector is greater than 10% of the benchmark, allow that sector to exceed 50% of the portfolio,
- where a sector is 10% or less of the benchmark, allow that sector to exceed 30% of the portfolio,
- invest in international-domiciled securities exceeding 20% of portfolio value in a domestic mandate,
- allow one country to be more than 20 percentage points above the country weighting of the relative benchmark in an international mandate, or
- invest in emerging markets exceeding 35% of portfolio value in a developed international mandate.

## Investment Section

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### Investment Objectives, Policies, and Guidelines

Equity managers are prohibited from investing in the following:

- Private placements
- Unregistered or restricted stock
- Derivatives
- Margin Trading/Short Sales
- Commodities
- Real Estate Property (excluding REITs)
- Guaranteed Insurance Contracts
- Securities issued by Highway Patrol Retirement System or its affiliates.

#### *Real Estate*

The purpose of the real estate component is to provide for growth of principal while at the same time preserving the purchasing power of the portfolio's assets. In addition, the real estate component seeks to enhance the overall portfolio by providing income, a hedge on inflation and modest diversification.

The fund may invest in improved or unimproved real property, mortgage collective investment funds (Real Estate Investment Trusts or Real Estate Funds), notes secured by real property, mortgage-backed bonds, and pass-through securities backed by mortgages. The real estate portfolio will be constructed and managed to --

- provide sufficient diversity to protect against adverse conditions in any single market sector,
- provide diversity among geographical locations, property types, and property sizes,
- provide relatively stable returns consistent with the overall U.S. commercial real estate market,
- provide a strong current income stream with the potential for long-term principal growth,
- primarily contain fully developed, fully leased properties, and
- minimize the use of debt financing.

## Investment Section

### Investment Objectives, Policies, and Guidelines

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#### *Alternatives*

The purpose of the alternatives component is to provide diversification, risk reduction and to enhance the overall risk-adjusted return of the portfolio.

The fund may invest in alternatives with individual fund managers or with fund of funds managers.

#### **Performance**

Comparative performance measurement of the total fund and its components will be conducted at least quarterly.

Active large cap equity managers are expected to exceed benchmark performance by 50 bps over rolling three and five year periods, net-of-fees, and rank in the upper 40th percentile relative to peers.

The objective of each active small/mid cap equity and international manager is to exceed benchmark performance by 100 bps over rolling three and five year periods, net-of-fees, and rank in the upper 40th percentile relative to peers.

All other managers are expected to exceed benchmark performance over rolling three and five year periods, net-of-fees, and rank in the upper 40th percentile relative to peers. The broad benchmarks for each type of manager, subject to revision, are as follows:

- Large cap equity – S&P 500
- Large cap growth equity – Russell 1000 Growth
- Large cap value equity – Russell 1000 Value
- Mid cap equity – Russell Mid Cap
- Small cap equity – Russell 2000
- Small cap growth equity – Russell 2000 Growth
- Small cap value equity – Russell 2000 Value
- Micro cap equity – Russell Micro Cap
- International equity – MSCI ACWI ex-US
- Fixed income – Barclays Capital Aggregate
- Real estate – NCREIF
- Hedge funds – HFRI Fund of Funds
- Private equity/GTAA – Wilshire 5000 + 3%, lagged one quarter

Over a market cycle, the total fund return is expected to exceed the following benchmarks:

- A minimum return target of eight percent, representing the fund's actuarial assumption, and also representing the long-term inflation rate of three percent plus a risk premium of five percent.

## Investment Section

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### Investment Objectives, Policies, and Guidelines

- A composite reference benchmark composed of 35% Russell 3000 Index, 20% MSCI ACWI ex-US Index, 5% NCREIF, 12.5% HFRI Fund of Funds, 5% Wilshire 5000 + 3% (lagged one quarter), and 22.5% Barclays Capital Aggregate Index.

#### Directed Brokerage

In separately-managed equity accounts, HPRS investment managers are expected to use brokers that are under contract with HPRS to provide execution-only brokerage. Every five years, these brokers will be reviewed; the Board may consider issuing a Request for Proposal if it is deemed necessary. An investment manager may be excused from the directed brokerage requirement if it can document favorable execution.

#### Manager Selection

Each new investment manager will be selected through a Request for Proposal process, as follows:

- The Investment Committee will authorize the issuance of an RFP that is posted on the HPRS website and disseminated as a press release to at least three nationally recognized investment trade publications.
- Responses that meet the RFP requirements will be subjected to a due diligence analysis by the HPRS Investment Consultant.
- One or more finalists will be selected to be interviewed by the Investment Committee.
- The Investment Committee will recommend the hiring of an investment manager to the Retirement Board.
- The Investment Committee may recommend the hiring of a separate investment manager to the Retirement Board, contingent upon unsatisfactory contract negotiations with the primary selection.
- The Chief Investment Officer will negotiate contract terms with the selected investment manager.
- The Chief Investment Officer may conduct an onsite due diligence visit to the selected investment manager's premises.

An existing manager may be selected for an additional mandate without the need for an RFP process. All other aspects of the Investment Process must be followed with regard to the selection of an investment manager.

#### **Roles and Responsibilities**

##### *Board*

The role of the Board is supervisory, and discretion is delegated to investment managers who must adhere to the general guidelines established by the Board. The primary role of the Board is to --

- establish performance goals,
- identify and review appropriate investment policy and guidelines,
- retain outside investment and actuarial counsel,
- reject, modify, or approve a recommendation from the Investment Committee regarding the decision to hire or terminate a manager, and
- review the results of the fund on a regular basis and implement necessary changes in the investment policies, objectives, asset allocation, and investment managers as needed.

##### *Investment Committee*

The Investment Committee will, at least quarterly, review the performance of the overall portfolio and selected components against their investment goals and policies. The Investment Committee will require investment managers to provide a comprehensive written quarterly report that includes the following:

- a review of investment performance, including the investment manager's relative performance,
- a review of the HPRS investment,
- a report on the investment manager's current investment outlook or forecast, and
- a strategy for the future.

The Investment Committee will, at least biannually, consider whether the manager continues to operate in the manner represented when retained and outlined in the agreement between the Investment Committee and the investment manager. The Investment Committee will require their manager to report key personnel staffing changes to the Investment Committee on or before the effective date of such changes. While the actual frequency and the nature of reviews will vary according to asset class, the liquidity of markets, and perhaps logistics, the regulations above should be seen as the minimum standards for effective monitoring of managers. The elected Chair, or Vice-Chair, will report to the Board at regularly scheduled meetings.

Other roles of the Investment Committee include the following:

## Investment Section

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### Investment Objectives, Policies, and Guidelines

- approve the initiation of a search,
- validate that the search process was carried out appropriately,
- select and evaluate the finalists,
- attend manager presentations at HPRS's offices when necessary,
- request additional information, if warranted, and
- select the manager(s) that will be recommended to the Board for hiring.

#### *Staff*

The Chief Investment Officer (CIO), who is responsible for the day-to-day management of the investment program, is employed by, and is directly responsible to, the Retirement Board. A complete job description is available from HPRS upon request.

Other roles of the staff include the following:

- post the RFP to HPRS's website,
- oversee the work of the Investment Consultant,
- ensure the process is completed in an appropriate manner,
- ensure the Investment Committee and Board receive appropriate information,
- coordinate the development and execution of manager contracts and guidelines, and
- conduct on-site due diligence with selected finalist firm if deemed appropriate.

#### *Investment Consultant*

An Investment Consultant is employed by, and is directly responsible to, the Retirement Board. The consultant is a fiduciary to the system, attends Investment Committee and Board meetings, provides quarterly investment monitoring reports, and works with the CIO to implement the Investment Policy of the Retirement Board.

Other roles of the investment consultant include the following:

- identify the need for new managers,
- develop the Request for Proposal (RFP),

## Investment Section

### Investment Objectives, Policies, and Guidelines

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- evaluate proposals,
- assist the Investment Committee in identifying finalists,
- attend manager presentations at HPRS's office when necessary,
- discuss candidates with the Investment Committee and the Board,
- conduct on-site due diligence with finalist firms,
- conduct on-site due diligence with existing managers when necessary,
- prepare comprehensive written search reports,
- assist in the development of investment manager guidelines,
- conduct and provide the HPRS staff with comprehensive written search reports , and
- at least every three years, the investment consultant will provide a written manager structure review. This review will go beyond a customary statistical review to elaborate on the following aspects of the manager structure: including the number of managers, allocations to managers, active versus passive management, investment management fees, and overall risk levels of the portfolio,
- provide the HPRS staff with written reviews of the investment managers in the portfolio when necessary. These reviews should include both relevant statistical data as well as qualitative assessments of the manager's performance and portfolio strategy,
- provide HPRS staff with a quarterly report that documents managers' compliance with the guidelines they are to operate within, and
- attend the ORSC or other legislative meetings with the executive director as needed.

#### *Custodian*

As provided in ORC section 5505.11, the Treasurer of State is the custodian of HPRS funds. The Treasurer appoints a banking institution as a subcustodian, which acts as the custodian of HPRS funds. All disbursements are processed under the direction of the Treasurer after authorization by the Board.



#### *Investment Managers*

Managers are expected to --

- acknowledge the acceptance of this document,
- act as a fiduciary to the system,
- meet with the Board or Investment Committee when requested, to review investment activity and results,
- hold and maintain errors and omissions insurance and provide proof of this insurance,
- provide performance measurement data, explanation, and other communication as required by the Investment Consultant,
- provide frequent communication with HPRS and the Investment Consultant on all significant matters pertaining to the investment of assets,
- promptly notify HPRS and the Investment Consultant of any significant changes in the manager's investment strategy, organizational structure, financial condition, or personnel assigned to manage HPRS assets, and
- vote the proxies of the fund's assets, consistent with the manager's internal voting process.

#### **Asset Allocation**

The definition of asset allocation targets and ranges is the single most important investment decision that the Board faces. An optimal mix of investments will produce returns that consistently meet the long-term assumed rate of return at a prudent level of risk.

#### **Periodic Reviews**

Asset allocation should be reviewed at least annually to ensure that the plan is on track to achieve the investment goals and that all the major assumptions used to establish the plan remain reasonable. A comprehensive review of asset allocation in the form of asset-liability modeling should be conducted every five years, or whenever a major structural change occurs in liabilities or investment assets.

An asset allocation plan may require reconsideration when it becomes apparent that the assets are not keeping pace with the liabilities of a plan. This may occur not only as a result of the assets not performing as expected but also because the liabilities may not be behaving as expected. A new asset allocation review may be necessary when various asset classes are either failing to achieve their expected long-term returns or exhibiting volatility or correlation characteristics much different than expected.

## Investment Section

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### Investment Objectives, Policies, and Guidelines

The Investment Consultant will conduct risk budgeting to monitor the active risk that each asset class introduces into the portfolio to ensure it remains consistent with the Board's risk tolerance on a periodic basis.

#### **Rebalancing Policy**

In order to maintain the desired asset allocation mix, the portfolio will be reviewed quarterly to determine compliance with asset allocation targets and ranges. Strategic decisions will be based on trading costs, liquidity needs and the relative weighting of each manager.

To the extent that an asset class is outside of the allowable range, the Chief Investment Officer and the Investment Consultant will develop a plan for compliance. Without formal Board approval, the Chief Investment Officer may authorize one or more rebalancing transactions to implement the plan.

To the extent that an asset class varies from the target, the Chief Investment Officer and the Investment Consultant may develop a plan for tighter compliance. Provided that rebalancing may be achieved at minimal cost (e.g., through commingled funds with no direct trading expense), without formal Board approval, the Chief Investment Officer may authorize one or more rebalancing transactions to implement the plan.

#### **Securities Lending**

The Board may authorize an external service provider to conduct securities lending activities.

#### **Shareholder Activities**

Each investment manager is responsible for voting the proxies of the fund's assets, consistent with the manager's internal voting process. Unless the Board takes specific action to do so, HPRS does not take positions on shareholder proposals.

#### **Monitoring and Reporting**

Periodically, to accomplish the goal of earning the highest rate of return, HPRS may elect to have existing managers present to the Investment Committee, a subset of the Investment Committee or to the Investment Consultant. This comprehensive performance review should go well beyond simply reviewing the manager's performance relative to the benchmark. It should encompass: ensuring compliance with the investment guidelines, ensuring compliance with reporting requirements, ensuring continuity of the investment process and philosophy, and ensuring consistency of strategy (no "style drift"). In short, the review is intended to ensure that the reasons for originally selecting the manager are still intact.

## Investment Section

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### Investment Objectives, Policies, and Guidelines

The manager's presentation should begin with an organizational overview, including discussion of the firm's mission, history, ownership, assets, clients, etc. Any pertinent organizational or staff changes (resignations, hires, etc.) should be highlighted, and biographies of key personnel should always be included. Any pending legal or regulatory issues should be disclosed. A thorough review should restate the portfolio objectives and account guidelines.

The investment universe should be reviewed, highlighting allowed or prohibited types of securities and what, if any, derivative use is allowed. Perhaps most importantly, Investment Committee members should inquire about and be comfortable with the manager's risk management procedures. The manager should offer a market overview, reviewing and analyzing trends and conditions in the relevant market. He should compare the portfolio structure to the benchmark, highlighting significant over-weightings or under-weightings in sectors. Similar comparisons should be shown for major portfolio characteristics (for stocks, cap size, P/E valuation, etc.; for bonds, maturity, coupon, etc.). Major holdings should be listed; if possible, all holdings should be listed.

Analysis of performance should begin with confirmation that the manager is using the benchmark(s) agreed to in the account guidelines. Appropriate time periods for performance appraisal should be both short-term (quarter, year-to-date, past 12 months) and long-term (i.e., three years, five years, since inception). Performance should ideally be presented in both gross and net terms, but it should at least be clear which returns are being presented.

Just as important as the appropriate presentation of relevant performance figures is the discussion of performance attribution. The manager should explicitly present the factors (sectors, securities, duration, etc.) that enhanced performance and that had a negative impact.

As part of the presentation, the manager should present the firm's and/or department's outlook for the economy, the market and the portfolio. For managers of nontraditional asset classes like real estate and alternative investments, the monitoring process will be different, tempered by such facts as the absence of public markets for the underlying investments, the lack of obvious benchmarks and the much longer investment time horizons.

#### **Annual Review**

In light of rapid changes in the capital markets and in investment management techniques, these guidelines will be reviewed by the Board on an annual basis. Changes and exceptions to these guidelines may be made at any time with the approval of the Board.

#### Investment Process

##### **I. Organize and Formalize**

###### **A. Organize**

1. Manage investments in accordance with applicable laws and written investment policy statements (IPS)
2. Define, document, and acknowledge the roles and responsibilities of all involved parties (fiduciaries and non-fiduciaries)
3. Service agreements and contracts are in writing, and do not contain provisions that conflict with fiduciary standards of care
4. Assets are within the jurisdiction of appropriate courts, and are protected from theft and embezzlement

###### **B. Formalize**

1. Identify an investment time horizon
2. Identify a targeted risk level
3. Identify an expected, modeled return to meet investment objectives
4. Select asset classes which are consistent with the identified risk, return, and time horizon
5. Select asset classes which are consistent with implementation and monitoring constraints
6. Ensure that IPS contains the detail to define, implement, and manage a specific investment strategy

##### **II. Search, Selection, and Monitoring**

###### **A. Search and Selection**

###### **1. Due diligence procedures**

After asset allocation, the most important decision facing HPRS is the selection of investment managers. This process is generally as much an art as a science, and it typically takes several years to reliably determine whether the effort has been successful.

An investment management firm should be selected not because of its relationship with a particular Investment Committee member or with any other party, not because it made the glitziest presentation, and not necessarily just because it had superior performance in the recent past. While investment management fees should be a valid consideration, they should not necessarily be a decisive factor. A search for an investment manager should incorporate an examination of ownership and organizational factors pertaining to the firm, an understanding of

its investment philosophy as well as the process by which it implements that philosophy, as well as a thorough assessment of past performance and how relevant it might be for anticipating future returns.

The HPRS search for an investment manager begins with a decision as to how the mandate would fit in with overall asset allocation. The process should end with the selection of a manager in whom the Investment Committee and Board has confidence not only for its capability to fulfill its investment mandate but also for the likelihood of being treated as an important client and receiving excellent client service.

Since investment styles go in and out of favor, since very few managers outperform their benchmarks year-in and year-out, and since all firms are subject to organizational and personnel change, there are no “sure things” in investment manager selection. However, it is fair to say that the keys to a successful relationship between a client and a manager involve not just a determination of investment expertise but also the establishment of a sense of overall comfort and mutual respect.

#### **2. Document decisions on all investment managers (including passive)**

##### Request for Proposal

The Investment Committee will authorize the issuance of an RFP that is posted on the HPRS website and disseminated as a press release to at least three nationally recognized investment trade publications. Responses that meet the RFP requirements will be subjected to a due diligence analysis by the HPRS Investment Consultant.

##### Due Diligence Meeting

The Chief Investment Officer and/ or the Executive Director may conduct an onsite due diligence visit to the selected investment manager’s premises.

The meetings will focus on:

- Performance Review
- Portfolio Review
- Organizational Review
- Operational Review
- Strategy Review
- Management Review

##### Archiving Information

An electronic record will be stored with all aspects of the search.

#### B. Monitoring

##### 1. **Manager Assessments**

###### Regular Oversight

- The Investment Committee will, at least biannually, consider whether the manager continues to operate in the manner represented when retained and outlined in the agreement between the Investment Committee and the investment manager.
- The Investment Committee will require its manager to report key personnel staffing changes to the Investment Committee on or before the effective date of such changes.
- The Investment Consultant will perform onsite due diligence on every manager before an initial investment is made and will perform additional onsite due diligence periodically through normal travel and when appropriate. A written due diligence report summarizing the visit will be made available to the Investment Committee and the Board.
- While the actual frequency and the nature of reviews will vary according to asset class, the liquidity of markets, and perhaps logistics, the regulations above should be seen as the minimum standards for effective monitoring of managers.

The Investment Committee may request a presentation by existing managers if it believes the reasons for originally selecting the manager are no longer intact.

##### 2. **"Watch list" and termination procedures are followed for underperforming investment options**

###### Watch List

A fundamental part of the monitoring process is the Investment Committee's annual determination that a manager is satisfactorily fulfilling the assigned mandate. Possible reasons for placing a manager on a watch list are 1) organizational issues such as a change in firm ownership or control, significant change in team composition or responsibilities, or departure of key personnel, 2) below average performance over both short and longer-term periods or performance inconsistent with the manager's style and mandate, or 3) other factors such as a material undisclosed guideline violation, uncorrected contract violation, unsatisfactory client service, or major regulatory or other proceedings affecting the firm.

#### Termination

Reasons to consider the termination of a manager may be either 1) qualitative, such as major personnel changes or other organizational issues, or 2) quantitative, involving measurable underperformance over a full market cycle or clear evidence of deviation from the manager's mandate. They may involve policy issues, such as violation of investment policies or change in basic investment strategy, or even communication issues, such as failure to adhere to reporting requirements.

There are no hard and fast rules as to what constitutes sufficient and decisive justification to terminate a manager. In the end, it is simply a matter of the Investment Committee no longer being comfortable with and no longer having confidence in a manager.

Termination can come about by a change in any of the factors that led to the manager's hiring. This could include the Investment Committee simply making an adjustment to its asset allocation that lowers or eliminates exposure to a particular asset class or subclass; in such circumstances, a manager would be terminated despite having satisfactorily fulfilled its mandate in every way.

### **III. Implementation**

#### **1. Define target asset allocation and ranges**

Over time, asset allocation generally accounts for a very high percentage (as much as 90%, by some estimates) of the investment return of a retirement system portfolio.

#### Basic Objective

The objective of asset allocation is to develop an investment program that will, at the minimum, meet or exceed the Investment Committee's assumed actuarial rate/spending rate on a consistent basis. It accomplishes this by seeking to achieve the highest possible rate of total return consistent with prudent levels of risk and liquidity. Another goal is to achieve sufficient diversification that will deliver the expected return while preserving capital and avoiding large losses. In accomplishing these goals, the investment program will ensure that funds are managed with care, skill, prudence, and diligence.

#### Primary Components

In determining asset allocation, the primary components are 1) analysis of the current and expected financial condition of the System, including existing assets and future liabilities, and 2) expectations of long-term returns from the capital markets and the outlook for inflation.

Asset classes considered viable for inclusion in an asset allocation study can be any aggregation of financial or real assets that have risk, return, and correlation characteristics that are clearly different from those of other asset classes and where the inclusion or exclusion has a definable affect on the risk and return expectations of the portfolio's total return. All included asset classes should have some clear value to the portfolio such as diversification benefit, return enhancement, or liquidity that is sufficiently different from that of other asset classes.

Asset classes considered for inclusion must have sufficient data and history to allow for an objective assessment of the viability or potential benefit of the asset class to the plan. There must be a sufficient basis for developing expected investment returns, risks, and correlations to other asset classes. Eligible asset classes must have sufficient size, liquidity, and cost efficiency to allow the System to invest amounts meaningful enough to have an impact on total return.

#### Methodology

An asset allocation plan is typically developed using a combination of quantitative and qualitative techniques. For each prospective asset class, the process requires a projected annualized return, an estimate of volatility (usually expressed as the standard deviation of expected returns), and an estimate of the asset class's correlation to the broad stock market. Using computerized simulation programs, several possible portfolios will be developed and considered, each having slightly different asset allocation distributions. The Investment Committee will consider the various alternative asset allocation plans, each of which will have its own projected return and projected volatility. The Investment Committee will consider all the alternatives and select the one that they are most comfortable with in the context of the likelihood of achieving a particular return with a level of risk that all deem acceptable. Since purely quantitative simulation analysis will often produce asset allocation alternatives that may not appear practical or realistic, such as assigning unacceptably high allocations to certain nontraditional asset classes, the process is as much an art as it is science.

#### **IV. Model and Optimization**

- A. Conduct an Asset Liability Study
- B. Conduct an Experience Study
- C. Document sources of return data for each asset class

##### **1. Historical**

Historical returns provide a factual picture of how asset classes have performed over time and through various market conditions. They are also helpful in analyzing how asset classes have



### Investment Objectives, Policies, and Guidelines

performed relative to other asset classes over time or in specific time periods (correlation). The limitation of historical analysis is that it is all based on series of events that have happened in the past that may or may not occur in the future.

#### **2. Projected - Black Litterman**

In order to improve upon the historical returns, the Black-Litterman model is used to develop projected returns. Black Litterman is a mathematical model for portfolio allocation developed in 1990 at Goldman Sachs by Fischer Black and Robert Litterman. It seeks to overcome problems that institutional investors have encountered in applying modern portfolio theory in practice. The model starts with the equilibrium assumption that the asset allocation of a certain asset class should be proportional to the market values of that asset class, and then modifies that to take into account the specific opinions about asset returns to arrive at an asset allocation.

#### **D. Optimization – Efficient Frontier**

The asset allocation process starts with a detailed study to determine how assets are to be managed for the benefit of the organization, as detailed above. The next step is to construct portfolios that are likely to deliver the highest possible return at an acceptable level of risk by utilizing the Modern Portfolio Theory. Once the target risk/reward level has been identified, various portfolios are plotted along an Efficient Frontier to optimize the amount of return contributed by each asset class while minimizing the overall level of risk for the resulting portfolio.

Asset allocation targets are generated via the modeling and optimization process. Once presented to the Investment Committee and adopted by the Board, these targets are memorialized in the Investment Policy Statement along with tolerance ranges showing the allowable deviation from target.

### **V. Risk Management**

#### **A. Background**

The assumption of risk within the investment portfolio is necessary in order for the System to meet its obligations because there are no risk free assets which generate the required level of return. The assumption of risk should therefore be managed through a risk budgeting process.

#### **B. Risk Budgeting**

## Investment Section

### Investment Objectives, Policies, and Guidelines

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Risk budgeting is the process of determining the desired level of risk within the overall portfolio and allocating the risk within the various asset classes. Risk budgets will change over time for various reasons, including (but not limited to) changes in asset allocation, return assumption revisions, correlation between asset classes, and changes to funding levels, and therefore should be reviewed periodically to ensure that the current budget reflects all available information.

#### C. Monitoring

Risk will be monitored through various forms of analysis and reporting in an attempt to understand risk within the plan, and to ensure adequate compensation for the risk that is taken. Analysis will occur on various levels from individual manager portfolios up through and including the total plan level.

In addition to relative performance evaluation, an analysis of diversification, tracking error, standard deviation, and other risk measures will be conducted and reported.

The Investment Committee will review portfolios, asset classes, and total plan information periodically for compliance within the overall risk budget. Portfolios or asset classes out of compliance with guidelines will be brought into compliance, or a plan for doing so will be developed. Alternatively, justification for maintaining the exposure will be provided to the Investment Committee.

#### D. Reporting

Reports will be assembled and presented to the Investment Committee periodically. Summary reports will be assembled and presented to the Board of Trustees periodically.

Revised, December 18, 2014  
Approved, No Revisions, December 19, 2013  
Revised, February 21, 2013  
Revised, February 23, 2012  
Revised, October 27, 2011  
Revised, August 26, 2010  
Revised, April 22, 2010  
Revised, February 25, 2010  
Revised, April 23, 2009  
Revised, October 25, 2007  
Revised, June 16, 2005  
Revised, June 26, 2003  
Revised, November 15, 2001  
Revised, June 22, 1999  
Revised, March 13, 1997  
Adopted and approved, September 7, 1994

## **Investment Section**

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### **Investment Objectives, Policies, and Guidelines**

Revised, June 29, 1994

Revised, September 5, 1990

Revised, June 1, 1988

Adopted and approved, June 11, 1986

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# **Actuarial Section**

June 15, 2015

The Retirement Board  
Ohio State Highway Patrol Retirement System  
1900 Polaris Parkway, Suite 201  
Columbus, Ohio 43240-4037

Dear Board Members:

The basic financial objective of the Highway Patrol Retirement System (HPRS) is to establish and receive contributions which:

- when expressed in terms of percents of active member payroll will remain approximately level from generation to generation, and
- when combined with present assets and future investment return will be sufficient to meet the financial obligations of HPRS to present and future retirees and beneficiaries.

The financial objective is addressed within the annual actuarial funding valuation. The valuation process develops contribution rates for the pension benefits provided by HPRS (i.e., not retiree health benefits) that are sufficient to fund the plan's current cost (i.e., the costs assigned by the valuation method to the year of service about to be rendered), as well as to fund unfunded actuarial accrued liabilities as a level percent of active member payroll over a finite period. The most recent valuations were completed based upon population data, asset data, and plan provisions as of December 31, 2013 and an actuarial funding valuation report was issued as of that date. In addition, this report provides accounting information for the retiree health portion of HPRS in accordance with Governmental Accounting Standards Board (GASB) Statement No. 43.

In addition to the funding valuation report, a separate report is issued to provide financial reporting information for HPRS in accordance with Governmental Accounting Standards Board (GASB) Statement No. 67. Financial reporting information has been produced based upon a measurement date of December 31, 2014 for GASB Statement No. 67.

The plan administrative staff provides the actuary with data for the actuarial valuation. The actuary relies on the data after reviewing it for internal and year-to-year consistency. The actuary summarizes and tabulates population data in order to analyze longer term trends. The plan's external auditor also audits the actuarial data annually.

The following schedules in the Actuarial Section of the CAFR were prepared based upon certain information presented in the previously mentioned funding and financial reporting valuation reports:

Actuarial Section

Summary of Assumptions

Funding Method, Asset Valuation Method, Interest Rate

Payroll Growth

- Probabilities of Age & Service Retirement
- Probabilities of Separation from Active Employment Before Age & Service Retirement
- Health Care and Medicare
- Short-Term Solvency Test
- Recent Experience in the Health Care Fund
- Membership Data
- Analysis of Financial Experience
- Supplementary Schedules
  - Schedule of Funding Progress
  - Schedule of Employer Contributions
- Notes to Trend Data

For funding valuation purposes, assets are valued on a market related basis that recognizes each year's difference between actual and assumed investment return over a closed four-year period, subject to an 80% to 120% corridor on market value. The actuarial value of assets is 95% of the market value of assets as of December 31, 2013. For GASB Statement No. 67 purposes, assets are valued on a market basis.

Actuarial valuations are based upon assumptions regarding future activity in specific risk areas including the rates of investment return and payroll growth, eligibility for the various classes of benefits, and longevity among retired lives. These assumptions are adopted by the Board after considering the advice of the actuary and other professionals. The assumptions and the methods comply with the requirements of Statements No. 67 and No. 43 of the Governmental Accounting Standards Board. Each actuarial valuation takes into account all prior differences between actual and assumed experience in each risk area and adjusts the contribution rates as needed. The assumptions used in the funding and accounting valuations were based upon a study of experience during the years 2005 through 2009.

Investment return on a market value basis during 2013 was greater than assumed. Areas of particular concern include: (1) the pension unfunded actuarial accrued liability is 303% of the covered payroll, and (2) the funded ratio of the pension program is 70% based upon the actuarial value of assets and in particular the retiree and beneficiary portion is only 96% funded. The pension plan has an amortization period of 30 years. Based upon the present contribution rate allocation, the retiree health plan is expected to remain solvent until 2026. Available resources need to be brought in line with projected benefit payouts in the near future if the retiree health plan is to continue to provide benefits similar to those currently provided.

**Based upon the results of the December 31, 2013 funding valuation, the Highway Patrol Retirement System of Ohio is meeting its basic financial objective with respect to pensions and continues to operate in accordance with actuarial principles of level percent of payroll financing. However, improvement in the funded ratio of the pension program will be important for its long-term financial security. Continued cost containment efforts can have a positive effect on the retiree health plan, but additional contribution income is needed.**

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these

measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

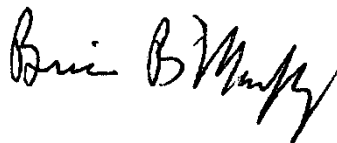
Readers desiring a more complete understanding of the actuarial condition of HPRS are encouraged to obtain and read the complete valuation reports. The material in the Actuarial Section and Financial Section of this CAFR contains some, but not all of, the information in the valuation reports.

Mita D. Drazilov and Brian B. Murphy 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.

Respectfully submitted,



Mita D. Drazilov, ASA, MAAA



Brian B. Murphy, FSA, MAAA

BBM/MDD:mdd



Statement of Actuarial Assumptions and Methods

After consulting with the actuary, these assumptions have been adopted by the Highway Patrol Retirement System Board of Trustees, effective December 31, 2009. The assumptions used for funding purposes are the same as those that are used for financial reporting purposes.

**Funding Method**

An entry age normal actuarial cost method of valuation is used in determining benefit liabilities and normal cost. Differences between assumed experience and actual experience (“actuarial gains and losses”) become part of actuarially accrued liabilities. Unfunded actuarially accrued liabilities are amortized to produce payments (principal and interest) that are a level percent of payroll contributions.

**Asset Valuation Method**

The asset valuation method fully recognizes assumed investment income each year. Differences between actual and expected investment income are phased in over a closed four-year period.

**Interest Rate**

The investment return rates used in making valuations are 8.0% for pension assets and 5.0% for OPEB assets, compounded annually (net of administrative and investment expenses).

**Payroll Growth**

Base pay increases are assumed to be 4.0% annually, attributable to broad economic effects such as inflation and real wage growth. Additional merit and seniority increases are assumed as follows:

Payroll Growth			
Service Years	Merit & Seniority	Base (Economic)	Total
1 - 2	10.0%	4.0%	14.0%
3 - 5	3.0	4.0	7.0
6 - 10	1.0	4.0	5.0
11 +	0.3	4.0	4.3

**Other Assumptions**

85% of active participants are assumed to be married for purposes of death-in-service benefits and for purposes of retiring with the automatic joint and survivor benefit.

Health care costs are assumed to increase annually by 4.0%, plus an additional declining percentage ranging from 5.0% - 0.5% until 2024.

Each benefit recipient is assumed to be eligible for Medicare at age 65.

Post-employment mortality is based on the RP-2000 Combined Healthy Male and Female Tables projected to 2020 using Projection Scale AA.

Rates of separation from active service before retirement are developed on the basis of actual plan experience.

**Actuarial Section**

**Statement of Actuarial Assumptions and Methods**

<b>Probabilities of Separation from Active Employment before Age &amp; Service Retirement</b>				
<i>Percentage of Active Members Separating Within Next Year</i>				
<b>Sample Age</b>	<b>Disability</b>	<b>Death (Men)</b>	<b>Death (Women)</b>	<b>Other</b>
20	0.08%	0.02%	0.01%	2.57%
25	0.08	0.02	0.01	2.24
30	0.23	0.02	0.01	1.91
35	0.42	0.04	0.02	1.56
40	0.70	0.05	0.04	0.84
45	0.85	0.08	0.06	0.41
50	1.13	0.11	0.08	0.15
55	1.32	0.18	0.14	0.00

<b>Probabilities of Age &amp; Service Retirement</b>		
<i>Percentage of Eligible Members Retiring Within Next Year</i>		
<b>Retirement Ages</b>	<b>Unreduced Benefit</b>	<b>Reduced Benefit</b>
48	35%	3.5%
49	15	3.5
50	10	3.5
51	10	3.5
52	15	--
53	10	--
54	10	--
55	20	--
56	30	--
57	25	--
58	20	--
59	20	--
60+	100	--

**Short-Term Solvency Test**

The HPRS financing objective is to pay for benefits through contributions that remain approximately level from year to year as a percent of member payroll. If the contributions to the system are level in concept and soundly executed, the system will pay all promised benefits when due, which is the ultimate test of financial soundness.

A short-term solvency test is one means of checking a system’s progress under its funding program. In a short-term solvency test, the plan’s present assets (cash and investments) are compared with (1) active member contributions on deposit, (2) the liabilities for future benefits to present retired lives, and (3) the liabilities for service already rendered by active members. In a system that has been following the discipline of level percent financing, the liabilities for active member contributions on deposit (column 1 below) and the liabilities for future benefits to present retired lives (column 2 below) will be fully covered by present assets, except in rare circumstances. In addition, the liabilities for service already rendered by active members (column 3 below) will be partially covered by the remainder of the present assets. Generally, if the system has been using level cost financing, the funded portion of column 3 will increase over time.

**Short-Term Solvency Test**

Accrued Liabilities and Assets Allocated to Retirement, Survivor, and Disability Allowances

Year	(1) Active Member Contributions	(2) Retirees, Beneficiaries, & Deferrals	(3) Active Members (Employer Financed Portion)	Valuation Assets (\$)	% of Accrued Liabilities Covered by Reported Assets		
	(\$)	(\$)	(\$)		(1)	(2)	(3)
2008	94,749,356	511,626,943	298,146,078	603,265,803	100	99	-
2009	101,131,517	528,087,050	310,865,779	620,356,505	100	98	-
2010 ▶	104,503,065	583,714,389	329,552,995	630,971,500	100	90	-
2011	104,701,161	618,984,073	324,014,452	623,360,121	100	84	-
2012 ▲	108,311,937	586,311,106	271,687,442	658,428,914	100	94	-
2013 ▶	113,334,067	601,342,081	274,425,322	690,605,582	100	96	-

- ▲ Plan Amendment – COLA eligibility changed to age 60
- ▶ Assumption or method change

**Active Member Valuation Data**

Years Ended December 31

Year	Active Members	Annual Payroll (\$)	Average Annual Salary (\$)	% Increase in Average Pay
2008	1,544	94,301,538	61,076	4.0
2009	1,547	94,824,789	61,296	0.4
2010	1,537	94,767,852	61,658	0.6
2011	1,520	93,126,449	61,267	(0.6)
2012	1,645	98,117,403	59,646	(2.6)
2013	1,613	98,519,844	61,079	2.4

**Retirees and Beneficiaries Added to and Removed from Rolls**

Years Ended December 31

Year	Added to Rolls		Removed from Rolls		Rolls at End of Year		% Increase in Annual Allowances	Average Annual Allowances (\$)
	Number	Annual Allowances (\$)	Number	Annual Allowances (\$)	Number	Annual Allowances (\$)		
2008	45	2,532,732	33	639,576	1,371	43,537,104	4.5	31,752
2009	45	2,491,176	31	511,632	1,385	45,516,648	4.5	32,868
2010	64	3,119,568	25	497,568	1,424	48,138,648	5.8	33,804
2011	73	3,932,508	32	821,472	1,465	51,249,684	6.5	34,980
2012	79	3,380,304	47	983,484	1,497	53,646,504	4.7	35,832
2013	61	3,204,660	35	843,804	1,523	56,007,360	4.4	36,780

**Analysis of Financial Experience**

Gains and Losses in Pension Accrued Liabilities Resulting from Differences Between Assumed Experience and Actual Experience

Type of Activity	Gain (or Loss) for Year	
	2013	2012
<b>Age &amp; Service Retirements</b> If members retire at older ages or with lower final average pay than assumed, there is a gain -- if younger ages or higher average pays, a loss.	(\$103,886)	(\$173,926)
<b>Disability Retirements</b> If disability claims are less than assumed, there is a gain - if more claims, a loss.	410,735	142,398
<b>Death-in-Service Benefits</b> If survivor claims are less than assumed, there is a gain - if more claims, a loss.	(139,409)	67,718
<b>Withdrawal from Employment</b> If more liabilities are released by withdrawals than assumed, there is a gain -- if smaller releases, a loss.	254,877	722,990
<b>Pay Increases</b> If there are smaller pay increases than assumed, there is a gain - if greater increases, a loss.	7,802,910	9,912,757
<b>Investment Income</b> If there is greater investment return on pension assets than assumed, there is a gain - if less return, a loss.	9,288,759	9,850,905
<b>Other</b> Miscellaneous gains and losses resulting from data adjustments, timing of financial transactions, valuation methods, and other events.	(1,441,900)	(885,173)
<b>Gain (or Loss) During Year From Experience</b>	\$16,072,086	\$19,637,669
<b>Non-Recurring Items</b> Adjustments for benefit and assumption changes.	1,940,695	117,486,392
<b>Composite Gain (or Loss) During Year</b>	\$18,012,781	\$137,124,061

### Summary of Plan Provisions

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#### **Purpose**

In 1941, the Highway Patrol Retirement System (HPRS) was created by the Ohio General Assembly to provide for retirement and survivor benefits for members and dependents.

#### **Administration**

The general administration and management of HPRS are vested in the Highway Patrol Retirement System Board of Trustees under Ohio Revised Code Chapter 5505. The eleven-member Board consists of the Superintendent of the State Highway Patrol, three appointed members, five elected active members, and two elected retired members.

The appointed members are investment experts designated by the Governor, the Treasurer of State, and the General Assembly. The active members are elected to four-year terms by members of the plan. Any contributing member is eligible to become an active member candidate, and each contributing member is eligible to vote in the active member election process. Any retiree who is an Ohio resident and who has not served as a statutory or active member of the Board during the past three years is eligible to become a retired member candidate. Each retiree is eligible to vote in the retired member election. DROP members are eligible to become a candidate and vote in the retired member election.

The Superintendent of the State Highway Patrol serves by virtue of the office held. A chairperson and vice-chairperson are elected by the Board annually. All regular Board meetings are considered to be public meetings. While the Board members serve without compensation, they are not expected to suffer any loss because of absence from regular employment while engaged in official Board duties. In addition, the members of the Board are reimbursed for actual and necessary expenses.

#### **Employer Contributions**

Ohio law requires that the Board certify the employer contribution rate to the Office of Budget and Management in even-numbered years. The employer rate may not be lower than the member rate, nor may it exceed three times the member rate. The employer contribution rate was 26.5% in 2014.

#### **Member Contributions**

Each member of HPRS, through payroll deduction, must contribute the legally established contribution rate as a percentage of salary. Individual member accounts are maintained by HPRS and, upon termination of employment, the amount contributed is refundable in lieu of the payment of a pension benefit. The member contribution rate was 11.5% in 2014.

#### **Service Credit**

Prior to retirement, the following types of additional service credit may be purchased: (1) military service, (2) prior refunded full-time service as a contributing member of the State Highway Patrol Retirement System, the Ohio Police & Fire Pension Fund, the State Teachers Retirement System of Ohio, the School Employees Retirement System of Ohio, the Ohio Public Employees Retirement System, and the Cincinnati Retirement System. Military service and prior refunded full-time service in HPRS and the Ohio Police & Fire Pension Fund may be used to meet the minimum service requirement in order to qualify for unreduced pension benefits. In the case of prior service

**Summary of Plan Provisions**

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credit that was not refunded, service credit may be transferred directly from another Ohio retirement system to HPRS.

**Retirement**

**Age and Service Retirement**

Upon retirement from active service, a member is eligible to receive a pension by achieving a minimum age and service requirement, as follows:

<b>Age</b>	<b>Service Credit</b>
52	20 years
48	25 years

A member may retire at age 52 to age 60, provided he has 20 or more years of service, or at age 48 with 25 or more years of contributing service. The member's pension equals the sum of 2.5% of final average salary times years of service not in excess of 20, 2.25% of final average salary times years of service in excess of 20 but not in excess of 25, and 2% of final average salary times years of service in excess of 25. The maximum pension payable is 79.25% of the member's final average salary. A member must retire upon attainment of age 60 or completion of 20 years of service, whichever occurs later.

The final average salary, which includes base pay, longevity pay, hazard duty pay, shift differential, and professional achievement pay, is the average of a member's three highest years of salary. Due to legislative changes in 2012, final average salary will be based on a member's five highest years beginning in 2015.

Benefit payments become effective the day following the last day of employment and are payable monthly throughout the retiree's lifetime.

**Deferred Retirement**

A member who has acquired 20 years of service and retires is eligible to receive a pension computed in the same manner as an age and service pension at the attainment of age 52. A reduced benefit is payable if the retirant elects to receive a benefit after age 48 and prior to age 52. The reduction is waived for members with 25 or more years of service.

**Reduced Retirement**

A member who has acquired at least 20 but less than 25 years of service and is between the ages of 48 and 52 is eligible to receive a pension computed in the same manner as an age and service pension but reduced as follows:

Summary of Plan Provisions

Age	Percent of Age & Service Pension
48	75 %
49	80 %
50	86 %
51	93 %
52	100%

The election to receive a reduced pension may not be changed once a retiree has received a benefit payment.

**Other Pension**

A member who has acquired 15 years of service and who voluntarily resigns or is discharged is eligible to receive a pension equal to 1-1/2% of final average salary multiplied by total service. The pension shall begin the first month after attainment of age 55, provided the member does not withdraw his accumulated contributions from the employees’ savings fund.

**Resignation or Discharge**

With less than 20 years of service credit, a member may not collect a pension if “dishonesty, cowardice, intemperate habits, or conviction of a felony” was the basis for discharge or resignation from the Ohio State Highway Patrol.

**Disability Retirement**

A member who retires as the result of a disability that was incurred in the line of duty is eligible to receive a pension that is the larger of (1) 61.25% of average final salary, or (2) the age and service pension. A member who retires as the result of a disability that was not incurred in the line of duty is eligible to receive a pension that is the larger of (1) 50% of average annual salary or (2) the age and service pension.

**Deferred Retirement Option Plan (DROP)**

A member who is eligible to retire with an unreduced pension benefit may enter the DROP. The member will continue to work for the Ohio State Highway Patrol. For actuarial purposes, a DROP member is considered retired; however, instead of receiving a monthly pension benefit, the member begins to accrue funds in a tax-deferred account. The DROP account is funded by the member’s continuing active contributions and a pension accrual, as well as interest that accrues on these amounts.

A member may participate in DROP until age 60, but for no more than eight years. The minimum participation period is two years for members who enter the DROP at age 52 or more and three years for members who enter the DROP before age 52. A member who terminates employment earlier than the minimum participation period will forfeit any accrued interest.

When a DROP member terminates employment with the Ohio State Highway Patrol, the member will begin to receive the monthly pension benefit that had previously been funding the DROP account. In addition, after the minimum participation period, the proceeds of the DROP account will be rolled over into a qualified plan or paid to the member in a lump sum, an annuity, or a combination of these distribution types.

### Summary of Plan Provisions

#### **Payment Plans**

Each retirement applicant must select a benefit payment plan. Regardless of the plan selected, a survivor benefit is paid to an eligible survivor of a deceased active member or retiree. The plan options are as follows:

#### **Plan 1 - Single Life Annuity**

This plan pays the highest monthly benefit, calculated as a percentage of final average salary, and is limited to the lifetime of the retiree. A member who receives a disability retirement may only receive a single life annuity.

#### **Plan 2 - Joint and Survivor Annuity**

This plan pays a reduced monthly benefit for a member's lifetime and provides for a monthly benefit to a surviving beneficiary.

#### **Plan 3 - Life Annuity Certain and Continuous**

This plan is an annuity, payable for a guaranteed minimum period. If a retiree dies before the end of the period, the pension benefit is paid to the designated beneficiary for the remainder of the period.

#### **Partial Lump-Sum (PLUS) Distribution**

In addition to selecting one of the three retirement payment plans, a retiree may elect to receive a lump-sum cash payment, either as a taxable distribution, or as a rollover to a tax-qualified plan. Following this payment, a retiree will receive a reduced monthly benefit for life. To be eligible for a PLUS distribution, a retiree must have attained age 51 with at least 25 years of total service, or age 52 with at least 20 years of total service. The lump-sum amount may not be less than six times the monthly single life pension and not more than 60 times the monthly single life pension.

#### **Survivor Benefits**

A surviving spouse of a deceased retiree, or of an active member who was eligible to receive a retirement pension at the time of death, receives a monthly benefit equal to one-half the deceased member's monthly pension benefit (minimum, \$900). A surviving spouse of an active member who was not eligible for a retirement benefit at the time of death receives a monthly survivor benefit of \$900.

Each surviving dependent child receives \$150 monthly until age 18. If the child is a full-time student, this benefit continues until age 23. A surviving qualified disabled child receives this benefit for life.

#### **Health Care**

A comprehensive medical health care plan is currently offered to all benefit recipients and dependents. Benefit recipients may elect to cover spouses and dependent children by authorizing the appropriate premium deduction.

Dental and vision coverage is also available to benefit recipients and dependents. The Board, which has the authority to implement changes, annually evaluates the premiums and plan design.



## Actuarial Section

### Summary of Plan Provisions

#### Medicare

A portion (annually set by the Board) of the Medicare Part B basic premium amount may be reimbursed to eligible benefit recipients upon proof of coverage. The reimbursement amount was \$90 monthly for 2014.

#### Cost of Living (COLA)

The Board has been vested with the responsibility to establish the COLA rate each year between 0.0 and 3.0%. In August 2013, the Board set a COLA rate of 1.5%, effective January 1, 2014. Various benefit recipients are eligible for a COLA according to the table below:

Cost of Living Adjustment Eligibility		
Type of Benefit Recipient	Pension Effective Date Prior to January 7, 2013	Pension Effective Date On or After January 7, 2013
Service Retirant / DROP Participant	The later of age 53 or the 13 <sup>th</sup> month after benefit commences	The later of age 60 or the 13 <sup>th</sup> month after benefit commences
Disability Retirant	The earlier of age 53 or the 61 <sup>st</sup> month after the benefit commences	
Beneficiary / Survivor	The 13 <sup>th</sup> month after the benefit commences	

#### Death After Retirement

Upon the death of a retiree, a lump-sum payment of \$5,000 is paid to the surviving spouse, or to the retiree's estate if there is no surviving spouse.

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# Statistical Section

### Introduction

The objectives of the statistical section are to provide financial statement users with additional historical perspective, context, and relevant details that will assist in using information in the financial statements, notes to the financial statements, and required supplementary information in order to better understand and assess HPRS's overall financial condition.

The schedules, beginning on page 101, show financial trend information that will assist users in understanding and assessing how HPRS's financial condition has changed over the past ten years. The financial trend schedules presented are --

- Changes in Fiduciary Net Position
- Benefit Deductions from Fiduciary Net Position by Type

The schedules, beginning on page 102, show demographic and economic information. This information is designed to assist in understanding the environment in which HPRS operates. The demographic and economic information and the operating information presented include --

- Principal Participating Employer
- Benefit Recipient by Type of Benefit
- Average Benefit Payments

## Statistical Section

### Changes in Fiduciary Net Position – Pension

Years Ended December 31

<b>Additions</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>
Employer contributions	\$22,325,421	\$22,908,182	\$23,766,361	\$22,966,338	\$21,211,944	\$20,453,914	\$20,302,216	\$19,956,700	\$19,263,941	\$18,467,789
Member contributions	10,637,385	9,082,857	8,755,937	8,348,577	8,295,882	8,624,025	8,870,985	8,901,454	8,610,088	8,582,130
Transfers from other systems	586,929	1,353,520	557,316	608,366	329,335	1,009,422	632,894	717,017	648,282	1,180,951
Investment income, net	44,848,656	115,686,752	63,509,018	(16,385,745)	72,161,170	109,493,243	(207,583,959)	50,333,115	85,692,657	37,890,851
<b>Total additions</b>	<b>\$78,398,391</b>	<b>\$149,031,311</b>	<b>\$96,588,632</b>	<b>\$15,537,536</b>	<b>\$101,998,331</b>	<b>\$139,580,604</b>	<b>(\$177,777,864)</b>	<b>\$79,908,286</b>	<b>\$114,214,968</b>	<b>\$66,121,721</b>
<b>Deductions</b>										
Benefits paid to participants	63,329,792	60,955,916	58,297,304	55,638,322	52,498,558	49,884,126	47,939,139	44,676,510	40,343,244	37,716,268
Member contribution refunds	2,177,476	943,433	179,614	451,682	476,936	1,076,685	570,827	98,628	299,128	495,640
Administrative expenses	1,031,473	909,929	859,477	948,319	637,943	758,818	613,447	605,165	572,616	561,817
Transfers to other systems	165,945	467,462	377,994	1,797,986	566,615	406,147	282,987	330,539	914,950	403,975
<b>Total deductions</b>	<b>\$66,704,686</b>	<b>\$63,276,740</b>	<b>\$59,714,389</b>	<b>\$58,836,309</b>	<b>\$54,180,052</b>	<b>\$52,125,776</b>	<b>\$49,406,400</b>	<b>\$45,710,842</b>	<b>\$42,129,938</b>	<b>\$39,177,700</b>
<b>Change in pension net position</b>	<b>\$11,693,705</b>	<b>\$85,754,571</b>	<b>\$36,874,243</b>	<b>(\$43,298,773)</b>	<b>\$47,818,279</b>	<b>\$87,454,828</b>	<b>(\$227,184,264)</b>	<b>\$34,197,444</b>	<b>\$72,085,030</b>	<b>\$26,944,021</b>

### Changes in Fiduciary Net Position – OPEB

Years Ended December 31

<b>Additions</b>	<b>2014</b>	<b>2013</b>	<b>2012</b>	<b>2011</b>	<b>2010</b>	<b>2009</b>	<b>2008</b>	<b>2007</b>	<b>2006</b>	<b>2005</b>
Employer contributions	\$4,325,434	\$3,658,189	\$1,679,422	\$1,622,889	\$3,227,905	\$4,281,052	\$4,350,474	\$4,276,436	\$3,064,718	\$3,006,385
Investment income, net	6,790,553	17,885,294	10,192,983	(2,752,009)	17,734,416	21,030,418	(30,809,552)	11,254,046	15,632,184	8,998,070
Health care premiums	1,756,117	1,570,692	1,283,866	1,274,337	911,076	902,310	784,499	577,511	553,916	552,570
Retiree Drug Subsidy	647,225	446,616	500,134	422,640	471,909	513,668	317,381	329,158	336,794	-
Prescription Drug Rebates	886,661	612,325	356,377	366,316	-	-	-	-	-	-
Medicare D Refunds	-	1,521	17,090	6,567	-	-	-	-	-	-
<b>Total additions</b>	<b>\$14,405,990</b>	<b>\$24,174,637</b>	<b>\$14,029,872</b>	<b>\$940,740</b>	<b>\$22,345,306</b>	<b>\$26,727,448</b>	<b>(\$25,357,198)</b>	<b>\$16,437,151</b>	<b>\$19,587,612</b>	<b>\$12,557,025</b>
<b>Deductions</b>										
Health care expenses	14,055,881	13,703,605	12,302,980	12,360,917	11,447,630	9,801,853	9,648,543	11,260,675	8,871,533	9,484,829
Administrative expenses	156,176	140,676	137,943	159,271	106,450	123,210	98,082	97,101	92,761	92,344
<b>Total deductions</b>	<b>\$14,212,057</b>	<b>\$13,844,281</b>	<b>\$12,440,923</b>	<b>\$12,520,188</b>	<b>\$11,554,080</b>	<b>\$9,925,063</b>	<b>\$9,746,625</b>	<b>\$11,357,776</b>	<b>\$8,964,294</b>	<b>\$9,577,173</b>
<b>Change in OPEB net position</b>	<b>\$193,933</b>	<b>\$10,330,356</b>	<b>\$1,588,949</b>	<b>(\$11,579,448)</b>	<b>\$10,791,226</b>	<b>\$16,802,385</b>	<b>(\$35,103,823)</b>	<b>\$5,079,375</b>	<b>\$10,623,318</b>	<b>\$2,979,852</b>

## Statistical Section

### Benefit Deductions from Net Position by Type - Pension

Years Ended December 31

Type of Benefit*	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Age & Service	\$52,593,663	\$50,462,318	\$47,725,907	\$46,540,462	\$43,425,529	\$41,439,766	\$44,842,690	\$36,835,804	\$32,597,875	\$33,633,740
Reduced	2,186,653	2,224,182	2,777,829	1,829,190	1,865,761	1,828,296	1,833,554	1,693,050	1,659,235	86,287
Disability	4,270,957	4,068,926	3,840,068	3,537,849	3,305,364	3,044,325	2,927,862	2,761,851	2,534,672	2,305,544
Survivor	4,208,519	4,080,490	3,803,500	3,670,821	3,846,904	3,496,739	3,575,139	3,320,805	3,486,462	1,615,697
Death Benefits	70,000	120,000	150,000	60,000	55,000	75,000	80,000	65,000	65,000	75,000
<b>Total Pension Benefits</b>	<b>\$63,329,792</b>	<b>\$60,955,916</b>	<b>\$58,297,304</b>	<b>\$55,638,322</b>	<b>\$52,498,558</b>	<b>\$49,884,126</b>	<b>\$53,259,245</b>	<b>\$44,676,510</b>	<b>\$40,343,244</b>	<b>\$37,716,268</b>

\*Previous versions of this schedule included an "Early" category, which has now been combined with "Age & Service", as the criterion for eligibility is the same.

### Benefit Deductions from Net Position by Type - OPEB

Years Ended December 31

Type of Benefit	2014	2013	2012	2011	2010	2009	2008	2007	2006	2005
Medical	\$7,623,999	\$7,872,163	\$6,393,584	\$6,755,757	\$6,380,295	\$4,983,739	\$5,087,073	\$6,512,976	\$4,971,003	\$5,593,232
Wellness	48,728	53,440	24,604	95,210	57,747	86,007	79,679	67,479	28,820	-
Prescription drugs	4,722,044	4,110,260	4,301,088	4,053,343	3,709,855	3,430,089	3,274,896	3,513,662	2,832,743	2,980,755
Medicare-B reimbursement	874,164	896,970	839,451	770,183	713,317	673,450	632,293	572,127	503,034	422,045
Dental	619,286	612,575	594,292	528,824	453,276	495,272	453,003	464,402	408,667	364,139
Vision	167,660	158,197	149,962	157,600	133,140	133,296	121,599	130,029	127,266	124,658
Total	\$14,055,881	\$13,703,605	\$12,302,981	\$12,360,917	\$11,447,630	\$9,801,853	\$9,648,543	\$11,260,675	\$8,871,533	\$9,484,829
Member premiums/adjustments	(3,290,003)	(2,631,154)	(2,157,466)	(2,069,859)	(1,382,985)	(1,415,978)	(1,101,880)	(906,669)	(890,710)	(552,570)
<b>Net paid by HPRS</b>	<b>\$10,765,878</b>	<b>\$11,072,451</b>	<b>\$10,145,515</b>	<b>\$10,291,058</b>	<b>\$10,064,645</b>	<b>\$8,385,875</b>	<b>\$8,546,663</b>	<b>\$10,354,006</b>	<b>\$7,980,823</b>	<b>\$8,932,259</b>

### Principal Participating Employer

2005-2014

Year	Participating Government*	Covered Employees	Year	Participating Government*	Covered Employees
2014	Ohio State Highway Patrol	1,622	2009	Ohio State Highway Patrol	1,547
2013	Ohio State Highway Patrol	1,613	2008	Ohio State Highway Patrol	1,544
2012	Ohio State Highway Patrol	1,645	2007	Ohio State Highway Patrol	1,597
2011	Ohio State Highway Patrol	1,520	2006	Ohio State Highway Patrol	1,592
2010	Ohio State Highway Patrol	1,537	2005	Ohio State Highway Patrol	1,573

\*HPRS is a single-employer pension system; 100% of members are employed by the Ohio State Highway Patrol.

## Statistical Section

### Benefit Recipients by Type of Benefit

December 31, 2014

Monthly Benefit	Number of Benefit Recipients	Type of Benefit					Unmodified	Retirement Option								
		1	2	3	4	5		1	2	3	4	5	6	7		
Deferred	10	-	-	-	-	-	-	-	-	-	-	-	-	-	-	-
\$1 - 250	24	-	-	-	23	1	24	-	-	-	-	-	-	-	-	-
251-500	2	-	-	-	-	2	2	-	-	-	-	-	-	-	-	-
501 - 750	6	-	-	-	-	6	6	-	-	-	-	-	-	-	-	-
751 - 1000	24	-	-	-	19	5	24	-	-	-	-	-	-	-	-	-
1001 - 1250	68	2	-	1	58	7	68	-	-	-	-	-	-	-	-	-
1251 - 1500	112	-	15	1	87	9	111	1	-	-	-	-	-	-	-	-
1501 - 1750	88	12	15	6	48	7	87	-	1	-	-	-	-	-	-	-
1751 - 2000	71	33	16	5	15	2	70	-	-	1	-	-	-	-	-	-
2001 - 2250	40	14	10	4	11	1	39	1	-	-	-	-	-	-	-	-
2251 - 2500	60	20	13	20	6	1	60	-	-	-	-	-	-	-	-	-
2501 - 2750	46	29	5	9	3	-	44	1	1	-	-	-	-	-	-	-
2751 - 3000	121	83	5	32	1	-	115	-	5	1	-	-	-	-	-	-
3001 - 3250	181	162	1	18	-	-	174	1	5	-	-	-	-	-	-	1
3251 - 3500	150	132	5	13	-	-	143	-	4	2	-	-	-	-	-	1
Over 3,500	691	674	2	15	-	-	671	2	14	3	-	-	-	1	-	-
<b>Total</b>	<b>1,694</b>	<b>1161</b>	<b>87</b>	<b>124</b>	<b>271</b>	<b>41</b>	<b>1,638</b>	<b>6</b>	<b>30</b>	<b>7</b>	<b>-</b>	<b>-</b>	<b>1</b>	<b>2</b>	<b>-</b>	<b>-</b>

#### Type of Benefit Recipient (Includes current members in DROP)\*

1 – Age & Service

2 – Reduced

3 – Disability

4 – Survivor

5 – Alternate Payee (Division of Property Order)

\* Previous versions of this schedule included an “Early” category, which has now been combined with “Age & Service”, as the criterion for eligibility is the same.

#### Retirement Option

Under the unmodified plan, a surviving spouse receives a 50% continuance (minimum, \$900 monthly)

Under the following options, a surviving spouse qualifies for the above-noted 50% continuance; however, the member’s lifetime benefit is reduced:

Option 1 – Beneficiary receives 0 to <25% of member’s reduced monthly benefit

Option 2 – Beneficiary receives 25 to <50% of member’s reduced monthly benefit

Option 3 – Beneficiary receives 50% or more of member’s reduced monthly benefit

Option 4 – Beneficiary receives 100% of member’s remaining reduced monthly benefit for 5 years after benefit begins

Option 5 – Beneficiary receives 100% of member’s remaining reduced monthly benefit for >5 to 10 years after benefit begins

Option 6 – Beneficiary receives 100% of member’s remaining reduced monthly benefit for >10 to 15 years after benefit begins

Option 7 – Beneficiary receives 100% of member’s remaining reduced monthly benefit for >15 years after benefit begins

**Average Benefit Payments**  
2005-2014

<b>Retirement During</b>		<b>Years of Credited Service</b>			<b>Overall</b>
		<b>20 to &lt;25</b>	<b>25 to &lt;30</b>	<b>30+</b>	
2014	Average Monthly Benefit	\$3,181	\$4,063	\$6,669	\$4,002
	Average Final Average Salary	\$5,093	\$5,982	\$7,824	\$5,903
	Number of Retirees	6	37	1	44
2013	Average Monthly Benefit	\$3,725	\$4,128	\$4,207	\$3,936
	Average Final Average Salary	\$5,190	\$6,164	\$5,747	\$5,677
	Number of Retirees	13	33	2	48
2012	Average Monthly Benefit	\$3,023	\$3,453	\$4,055	\$3,339
	Average Final Average Salary	\$5,146	\$5,643	\$4,922	\$5,450
	Number of Retirees	15	29	2	46
2011	Average Monthly Benefit	\$2,781	\$3,757	\$4,738	\$3,685
	Average Final Average Salary	\$5,734	\$5,779	\$6,155	\$5,694
	Number of Retirees	8	42	4	54
2010	Average Monthly Benefit	\$2,923	\$3,571	\$5,375	\$3,670
	Average Final Average Salary	\$5,185	\$5,501	\$7,123	\$5,632
	Number of Retirees	7	33	5	45
2009	Average Monthly Benefit	\$2,861	\$4,114	\$5,424	\$3,826
	Average Final Average Salary	\$4,975	\$6,016	\$7,334	\$5,792
	Number of Retirees	9	19	2	30
2008	Average Monthly Benefit	\$2,621	\$3,879	\$4,822	\$3,736
	Average Final Average Salary	\$5,182	\$6,009	\$6,491	\$5,902
	Number of Retirees	6	24	3	33
2007	Average Monthly Benefit	\$2,089	\$3,245	\$5,619	\$3,202
	Average Final Average Salary	\$4,359	\$5,138	\$7,523	\$5,174
	Number of Retirees	5	17	2	24
2006	Average Monthly Benefit	\$2,681	\$3,571	\$6,850	\$3,353
	Average Final Average Salary	\$4,838	\$5,575	\$8,852	\$5,409
	Number of Retirees	13	24	1	38
2005	Average Monthly Benefit	\$2,601	\$3,238	\$5,064	\$3,378
	Average Final Average Salary	\$4,807	\$4,995	\$6,721	\$5,176
	Number of Retirees	4	26	4	34

The table above does not include active DROP participants.

The average monthly benefit is based on the benefit paid at termination from employment, not entry into DROP.



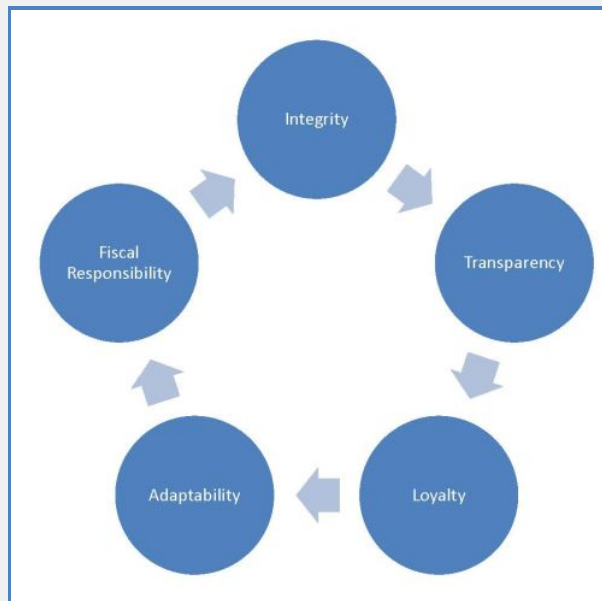
### **HPRS Mission Statement**

*Provide stable pension services that are fiscally responsible, prudently administered, and delivered with understanding and responsiveness to all members and beneficiaries.*

### **HPRS Vision Statement**

*Maintain a financially sound pension system that is a leader in the oversight of our investments and liabilities, providing for the long term financial wellbeing of our retirement system.*

### **HPRS Values**



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