

**COMMONWEALTH OF MASSACHUSETTS
POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS (OPEB) PLAN**

Schedules of Employer and Nonemployer Allocations and
Schedules of OPEB Amounts by Employer and Nonemployer

June 30, 2017 and 2016

(With Independent Auditors' Report Thereon)



KPMG LLP
Two Financial Center
60 South Street
Boston, MA 02111

Independent Auditors' Report

Mr. Thomas G. Shack III, Comptroller
Commonwealth of Massachusetts:

We have audited the accompanying schedules of employer and nonemployer allocations of the Commonwealth of Massachusetts Postemployment Benefits Other Than Pensions (OPEB) Plan (the Plan) as of and for the years ended June 30, 2017 and June 30, 2016, and the related notes. We have also audited the total for all entities of the columns titled net OPEB liability, total deferred outflows of resources, total deferred inflows of resources, and total employer OPEB expense (specified column totals) included in the accompanying schedules of OPEB amounts by employer and nonemployer of the Plan as of and for the year ended June 30, 2017, the total for all entities of the column titled net OPEB liability (specified column total) included in the accompanying schedules of OPEB amounts by employer and nonemployer of the Plan as of June 30, 2016, and the related notes.

Management's Responsibility for the Schedules

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

Auditors' Responsibility

Our responsibility is to express opinions on the schedules of employer and nonemployer allocations and the specified column totals included in the schedules of OPEB amounts by employer and nonemployer based on our audit. We conducted our audit in accordance with auditing standards generally accepted in the United States of America. Those standards require that we plan and perform the audit to obtain reasonable assurance about whether the schedules of employer and nonemployer allocations and the specified column totals included in the schedules of OPEB amounts by employer and nonemployer are free from material misstatement.

An audit involves performing procedures to obtain audit evidence about the amounts and disclosures in the schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer. The procedures selected depend on the auditors' judgment, including the assessment of the risks of material misstatement of the schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer, 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 schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer 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 schedule of employer and nonemployer allocations and the specified column totals included in the schedule of OPEB amounts by employer and nonemployer.

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



Opinions

In our opinion, the schedules and related notes referred to above present fairly, in all material respects, the employer and nonemployer allocations, and net OPEB liability, total deferred outflows of resources, total deferred inflows of resources, and total employer OPEB expense for the total of all participating entities for the Plan as of and for the year ended June 30, 2017 and the employer and nonemployer allocations, and net OPEB liability for the total of all participating entities of the Plan as of and for the year ended June 30, 2016, in accordance with U.S. generally accepted accounting principles.

Restriction on Use

Our report is intended solely for information and use of Plan management, the Board of Trustees of the Plan, Plan employers and their auditors, and the Commonwealth of Massachusetts, and is not intended to be and should not be used by anyone other than these specified parties.

KPMG LLP

Boston, Massachusetts
October 12, 2018

COMMONWEALTH OF MASSACHUSETTS
POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS (OPEB) PLAN
 SCHEDULES OF EMPLOYER AND NONEMPLOYER ALLOCATIONS
 As of and for the fiscal years ended June 30, 2017 and 2016

Employer/Nonemployer	FY2017		FY2016	
	Actual Contributions	Employer/ Nonemployer Allocation Percentage	Actual Contributions	Employer/ Nonemployer Allocation Percentage
Employer:				
Commonwealth of Massachusetts:				
Employer contributions.....	\$ 419,323,122		\$ 404,085,691	
Total Commonwealth of Massachusetts.....	419,323,122	95.26874%	404,085,691	95.04643%
Massachusetts State College Building Authority:				
Employer contributions.....	135,943		115,253	
Total Massachusetts State College Building Authority.....	135,943	0.03089%	115,253	0.02711%
Massachusetts Department of Transportation:				
Employer contributions.....	20,215,711		19,073,761	
Nonemployer contributions.....	-		1,505,385	
Total Massachusetts Department of Transportation.....	20,215,711	4.59294%	20,579,146	4.84049%
Non-employer:				
Devens Enterprise Commission.....	21,366	0.00485%	20,489	0.00482%
Massachusetts PRIM Board.....	451,511	0.10258%	344,987	0.08115%
Total for all entities.....	\$ 440,147,653	100.00000%	\$ 425,145,566	100.00000%

See accompanying notes to schedules of employer and nonemployer allocations and schedules of OPEB amounts by employer and nonemployer.

COMMONWEALTH OF MASSACHUSETTS
POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS (OPEB) PLAN
SCHEDULES OF OPEB AMOUNTS BY EMPLOYER AND NONEMPLOYER
As of and for the fiscal years ended June 30, 2017 and 2016

Employer/Nonemployer	June 30, 2016		June 30, 2017		Deferred Outflows of Resources - June 30, 2017				Deferred Inflows of Resources - June 30, 2017				OPEB Expense - Year Ended June 30, 2017			
	Net OPEB Liability	Net OPEB Liability	Changes in Proportion	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Change of Assumptions	Net Differences Between Projected and Actual Investment Earnings on OPEB Plan Investments	Changes in Proportion	Total Deferred Inflows of Resources	Proportionate Share of Plan OPEB Expense	Net Amortization of Deferred Amounts from Change in Proportion	Employer Specific OPEB Expense	Total Employer OPEB Expense			
Employer:																
Commonwealth of Massachusetts.....	\$ 20,756,579,131	\$ 18,839,325,655	\$ 40,163,513	\$ 40,163,513	\$ 49,332,059	\$ 2,427,769,498	\$ 30,459,321	\$ -	\$ 2,507,560,878	\$ 961,695,996	\$ 8,384,867	\$ 25,449,015	\$ 995,529,878			
Massachusetts State College Building Authority.....	5,920,165	6,107,639	682,316	682,316	15,993	787,074	9,875	-	812,942	311,778	142,446	-	454,224			
Massachusetts Department of Transportation.....	1,057,084,381	908,250,315	-	-	2,378,315	117,043,596	1,468,454	44,724,919	165,615,285	46,363,692	(9,337,144)	-	37,026,548			
Nonemployer (Commonwealth) attributable to:																
Devens Enterprise Commission.....	1,052,454	959,930								49,002	1,319	-	50,321			
Massachusetts PRIM Board.....	17,720,870	20,285,461								1,035,517	808,512	-	1,844,029			
Total nonemployer (Commonwealth of Massachusetts).....	18,773,324	21,245,391	3,879,090	3,879,090	55,633	2,737,832	34,349	-	2,827,814	1,084,519	809,831	-	1,894,350			
Totals.....	\$ 21,838,357,000	\$ 19,774,929,000	\$ 44,724,919	\$ 44,724,919	\$ 51,782,000	\$ 2,548,338,000	\$ 31,972,000	\$ 44,724,919	\$ 2,676,816,919	\$ 1,009,455,985	\$ -	\$ 25,449,015	\$ 1,034,905,000			

See accompanying notes to schedules of employer and nonemployer allocations and schedules of OPEB amounts by employer and nonemployer.

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NOTE 1 - PLAN DESCRIPTION

The Commonwealth of Massachusetts administers a single-employer defined benefit Postemployment Benefits Other Than Pensions (OPEB) Plan (the Plan). Benefits are managed by the Group Insurance Commission (GIC) and investments are managed by the Pension Reserves Investment Management (PRIM) Board.

Management of the Plan is vested with a board of trustees, which consists of 7 members including the Secretary of Administration and Finance (or their designee), the Executive Director of the GIC (or their designee), the Executive Director of the Public Employee Retirement Administration Commission (PERAC) (or their designee), the State Treasurer (or their designee), the Comptroller (or a designee), 1 person appointed by the Governor and 1 person appointed by the State Treasurer. The members elect 1 person to serve as chair of the board. The Plan is administered by the board of trustees and is reported as an OPEB Trust Fund in the Commonwealth's financial statements and does not issue a stand-alone audited financial report.

Benefits provided. Under Chapter 32A of the Massachusetts General Laws (MGL) the Commonwealth is required to provide certain health care and life insurance benefits for retired employees of the Commonwealth. Substantially all of the Commonwealth's employees may become eligible for these benefits if they reach retirement age while working for the Commonwealth. Eligible retirees are required to contribute a specified percentage of the health care/benefit costs, which are comparable to contributions required from employees.

Employer and employee contribution rates are set in MGL. The Commonwealth recognizes its share of the costs on an actuarial basis. As of June 30, 2017 and 2016 retirees contribute between 0% and 20% of premium costs, depending on the date of hire.

NOTE 2 - BASIS OF PRESENTATION

The schedules of employer and nonemployer allocations and schedules of OPEB amounts by employer and nonemployer (the Schedules) present amounts that are elements of the financial statements of the Plan or of its participating employers and nonemployers. Accordingly, they do not purport to be a complete presentation of the financial position or changes in financial position of the Plan or its participating employers and nonemployers. The amounts presented in the Schedules were prepared in accordance with U.S. generally accepted accounting principles. Such preparation requires management of the Plan to make a number of estimates and assumptions related to the reported amounts. Actual results could differ from those estimates.

The allocations in the schedules of employer and nonemployer allocations are based on actual contributions adjusted for any nonemployer contributions.

The MGLs governing employer contributions to the Plan determine whether entities are billed for OPEB costs. Consequently, the Plan developed an effective contribution methodology which allocates total actual contributions amongst the employers in a consistent manner (based on an employer's share of total covered payroll). Any differences between the effective contribution and an employer's actual contributions are considered a nonemployer contribution from the Commonwealth. According to MGL,

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certain nonemployer contributions are the legal responsibility of the Commonwealth and have accordingly been reflected on the schedule of employer and nonemployer allocations as special funding situations.

The schedules of OPEB amounts by employer and nonemployer present each employer in sufficient detail to permit each contributing employer as well as each employer considered to be in special funding situation to derive the necessary information for the preparation of their individual financial statements.

For entities considered to be in a 100% special funding situation there is no net OPEB liability recognized. However, the notes to the financial statements for these entities must disclose the portion of the nonemployer contributing entity's total proportionate share of the net OPEB liability and record its portion of OPEB expense as both revenue and OPEB expense.

NOTE 3 - RECONCILIATION TO FINANCIAL STATEMENTS

Nonemployer contributions

The current year employer and nonemployer contributions used in the schedules of employer and nonemployer allocations is a component of the Plan's OPEB Trust Fund financial statements contained in the Commonwealth's CAFR. The reconciliation of employer and nonemployer contributions is as follows for the fiscal years ended June 30, 2017 and 2016 (amounts in thousands):

	2017	2016
Employer contributions reported in the Statement of Changes in Fiduciary Net Position per the CAFR.....	\$ 465,449	\$ 502,285
Less:		
Tobacco settlement proceeds deposited by the Commonwealth into the PRIT fund but reported as net OPEB expense in the schedules as they are not used to pay current benefits.....	(25,449)	(77,284)
Plus:		
Other.....	148	145
Total employer and nonemployer contributions per Schedules of Employer and Nonemployer Allocations.....	\$ 440,148	\$ 425,146

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NOTE 4 - COLLECTIVE NET OPEB LIABILITY

Components of the collective net OPEB liability at June 30, 2017 and 2016 are as follows (amounts in thousands):

	2017	2016
Total OPEB liability.....	\$ 20,771,336	\$ 22,704,400
Less:		
Plan fiduciary net position.....	996,407	866,043
Employers/nonemployers' net OPEB liability.....	\$ 19,774,929	\$ 21,838,357
Plan fiduciary net position as a percentage of total OPEB liability.....	4.80%	3.81%

Actuarial Assumptions

The total OPEB liability for the June 30, 2016 measurement date was determined by an actuarial valuation as of January 1, 2017 rolled back to June 30, 2016. The total OPEB liability for the June 30, 2017 measurement date was determined by an actuarial valuation as of January 1, 2017 rolled forward to June 30, 2017. This valuation used the following assumptions:

1. The following annual healthcare cost trend rates: (1) 8.5%, decreasing by 0.5% each year to an ultimate rate of 5.0% in 2024 for medical, (2) 5.0% for EGWP and (3) 5.0% for administration costs.
2. The mortality rate was in accordance with RP 2014 Blue Collar Mortality Table projected with scale MP-2016 from the central year, with females set forward one year.
3. Participation rates:
 - a. 100% of all retirees who currently have health care coverage will continue with the same coverage, except that retirees under age 65 with POS/PPO coverage switch to Indemnity at age 65 and those over age 65 with POS/PPO coverage switch to HMO.
 - b. All current retirees, other than those indicated on the census data as not being eligible by Medicare, have Medicare coverage upon attainment of age 65, as do their spouses. All future retirees are assumed to have Medicare coverage upon attainment of age 65.
 - c. 80% of current and future contingent eligible participants will elect health care benefits at age 65, or current age if later.

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d. Actives, upon retirement, take coverage, and are assumed to have the following coverage:

	<u>Retirement Age</u>	
	<u>Under 65</u>	<u>Age 65 +</u>
Indemnity.....	40.0%	85.0%
POS/PPO.....	50.0%	0.0%
HMO.....	10.0%	15.0%

4. Long-term expected rate of return:

Investment assets of the Plan are held by the Pension Reserves Investment Trust (PRIT) Fund. The long-term expected rate of return on OPEB Plan investments was determined using a building-block method in which best-estimate ranges of expected future rates of return 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 rates of return by the target asset allocation percentage. Best estimates of geometric rates of return for each major asset class included in the PRIT Fund's target asset allocation as of June 30, 2017 and 2016 are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rate of Return</u>	
		<u>2017</u>	<u>2016</u>
Global Equity.....	40.0%	5.0%	6.9%
Portfolio Completion Strategies.....	13.0%	3.6%	3.6%
Core Fixed Income.....	12.0%	1.1%	1.6%
Private Equity.....	11.0%	6.6%	8.7%
Value Added Fixed Income.....	10.0%	3.8%	4.8%
Real Estate.....	10.0%	3.6%	4.6%
Timber/Natural Resources.....	4.0%	3.2%	5.4%
Hedge Funds.....	0.0%	3.6%	4.0%
Total.....	<u>100.0%</u>		

Discount Rates

The discount rates used to measure the OPEB liability as of June 30, 2017 and 2016 were 3.63% and 2.88%, respectively. These rates were based on a blend of the Bond Buyer Index rates of 3.58% and 2.85%, respectively as of the measurement dates of June 30, 2017 and 2016, respectively, and the expected rates of return. The plan's fiduciary net position was not projected to be available to make all projected future benefit payments for current plan members. The projected "depletion date" when projected benefits are

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not covered by projected assets is 2023. Therefore, the long-term expected rate of return on plan investments of 7.50% per annum was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2017 and 2016.

Sensitivity Analysis of the net OPEB liability to changes in the discount rate

The following presents the net OPEB liability of the Commonwealth calculated using the discount rate, as well as what the net OPEB liability would be if it were calculated using a discount rate that is 1-percentage-point lower or 1-percentage-point higher than the current rate (amounts in thousands):

<u>Fiscal Year Ended</u>	<u>1% Decrease</u>	<u>Current Discount</u>	<u>1% Increase</u>
June 30, 2017 (A).....	\$ 24,029,500	\$ 19,774,929	\$ 16,505,500
June 30, 2016 (B).....	26,813,300	21,838,357	18,050,200

A – The discount rates as of June 30, 2017 are as follows: 3.63% (current); 2.63% (1% decrease) and 4.63% (1% increase)

B – The discount rates as of June 30, 2016 are as follows: 2.88% (current); 1.88% (1% decrease) and 3.88% (1% increase)

Sensitivity Analysis of the net OPEB liability to changes in the healthcare cost trend rate

The following presents the net OPEB liability of the Commonwealth, as well as what the net OPEB liability would be if it were calculated using a healthcare cost trend rate that is 1-percentage-point lower or 1-percentage-point higher than the current healthcare cost trend rate (amounts in thousands):

<u>Fiscal Year Ended</u>	<u>1% Decrease (b)</u>	<u>Current Rate (a)</u>	<u>1% Increase (c)</u>
June 30, 2017.....	\$ 16,266,600	\$ 19,774,929	\$ 24,499,900
June 30, 2016.....	17,886,600	21,838,357	27,144,700

a – The current healthcare cost trend rates are as follows: 9.0% (June 30, 2017) and 8.5% (June 30, 2016) for medical and 5.0% for both fiscal years 2017 and 2016 EGWP and administration costs

b – The healthcare cost trend rates after a 1% decrease are as follows: 8.0% (June 30, 2017) and 7.5% (June 30, 2016) for medical and 4.0% for both fiscal years 2017 and 2016 EGWP and administration costs

c – The healthcare cost trend rates after a 1% increase are as follows: 10.0% (June 30, 2017) and 9.5% (June 30, 2016) for medical and 6.0% for both fiscal years 2017 and 2016 EGWP and administration costs

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NOTE 5 - DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

The following table summarizes the changes in deferred inflows of resources excluding employer specific amounts (change in proportion) (amounts in thousands):

	<u>Year of Deferral</u>	<u>Amortization Period</u>	<u>Balance July 1, 2016</u>	<u>Additions</u>	<u>Deletions</u>	<u>Balance June 30, 2017</u>
Deferred Inflows of Resources:						
Differences between expected and actual experience.....	2017	5.79 years	\$ -	\$ (62,592)	\$ 10,810	\$ (51,782)
Change of assumptions.....	2017	5.79 years	-	(3,080,350)	532,012	(2,548,338)
Net difference between projected and actual earnings on plan investments.....	2017	5 years	-	(39,965)	7,993	(31,972)
Total deferred inflows of resources.....			<u>\$ -</u>	<u>\$ (3,120,315)</u>	<u>\$ 540,005</u>	<u>\$ (2,632,092)</u>

Amounts reported as deferred inflows of resources related to OPEB will be recognized in the collective OPEB expense as follows (amounts in thousands):

<u>Fiscal Year Ending June 30</u>	
2018.....	\$ (550,815)
2019.....	(550,815)
2020.....	(550,815)
2021.....	(550,815)
2022.....	<u>(428,832)</u>
Total.....	<u>\$ (2,632,092)</u>

Changes in proportion

The previous amounts do not include employer specific deferred outflows of resources and deferred inflows of resources related to changes in proportion. These amounts should be recognized (amortized) by each employer over the average of the expected remaining service lives of all plan members, which is 5.79 years for the 2017 amounts.

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NOTE 6 - COLLECTIVE OPEB EXPENSE

The following table shows the components of OPEB expense, excluding employer specific OPEB expense for changes in proportion, as of June 30, 2017 (amounts in thousands):

Service cost.....	\$	975,282
Interest on the total OPEB liability.....		675,668
Projected earnings on plan investments.....		(65,857)
Administrative expense.....		127
Other expenses.....		500
Recognition (amortization) of deferred outflows and inflows of resources:		
Differences between expected and actual experience.....		(10,810)
Changes of assumptions.....		(532,012)
Differences between projected and actual earnings on plan investments.....		(7,993)
		<hr/>
OPEB expense.....	\$	<u>1,034,905</u>

The employer/nonemployer proportionate share of the collective OPEB expense is equal to the collective OPEB expense multiplied by the employer/nonemployer proportionate share percentage for the fiscal year ending June 30, 2017 as shown in the schedule of employer and nonemployer allocations.