

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

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

June 30, 2018

(With Independent Auditors' Report Thereon)



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

## Independent Auditors' Report

Mr. Andrew W. Maylor, Comptroller  
Commonwealth of Massachusetts:

We have audited the accompanying schedule of employer and nonemployer allocations of the Commonwealth of Massachusetts Postemployment Benefits Other Than Pensions (OPEB) Plan (the Plan) as of and for the year ended June 30, 2018, 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 schedule of OPEB amounts by employer and nonemployer of the Plan as of and for the year ended June 30, 2018, 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 schedule of employer and nonemployer allocations and the specified column totals included in the schedule 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 schedule of employer and nonemployer allocations and the specified column totals included in the schedule 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, 2018, 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  
August 28, 2019

**COMMONWEALTH OF MASSACHUSETTS**  
**POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS (OPEB) PLAN**  
 SCHEDULE OF EMPLOYER AND NONEMPLOYER ALLOCATIONS  
 As of and for the fiscal year ended June 30, 2018

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Employer/Nonemployer	Actual Contributions	Employer/ Nonemployer Allocation Percentage
<b><u>Employer:</u></b>		
Commonwealth of Massachusetts.....	\$ 423,813,017	95.40890%
Massachusetts Department of Transportation.....	19,876,303	4.47456%
<b><u>Nonemployer (Commonwealth) attributable to:</u></b>		
Devens Enterprise Commission.....	22,001	0.00495%
Massachusetts PRIM Board.....	495,679	0.11159%
Total for all entities.....	<u>\$ 444,207,000</u>	100.00000%

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

**COMMONWEALTH OF MASSACHUSETTS**  
**POSTEMPLOYMENT BENEFITS OTHER THAN PENSIONS (OPEB) PLAN**  
 SCHEDULE OF OPEB AMOUNTS BY EMPLOYER AND NONEMPLOYER  
 As of and for the fiscal year ended June 30, 2018

Employer/Nonemployer	Deferred Outflows of Resources				Deferred Inflows of Resources					OPEB Expense			
	Net OPEB Liability	Differences Between Expected and Actual Experience	Changes in Proportion	Total Deferred Outflows of Resources	Differences Between Expected and Actual Experience	Changes 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 Changes in Proportion	Employer Specific OPEB Expense	Total Employer OPEB Expense
Employer:													
Commonwealth of Massachusetts.....	\$ 14,224,707,685	\$ 172,771,780	\$ 45,714,137	\$ 218,485,917	\$ 30,361,688	\$ 4,370,440,942	\$ 35,519,398	\$ -	\$ 4,436,322,028	\$ 271,975,285	\$ 11,088,895	\$ 98,689,000	\$ 381,753,180
Massachusetts Department of Transportation.....	667,121,089	8,102,782	-	8,102,782	1,423,925	204,968,242	1,665,816	49,849,734	257,907,717	12,755,302	(12,099,026)	-	656,276
Nonemployer (Commonwealth) attributable to:													
Devens Enterprise Commission.....	738,434									14,119	4,471	-	18,590
Massachusetts PRIM Board.....	16,636,792									318,094	1,005,660	-	1,323,754
Total nonemployer (Commonwealth of Massachusetts).....	17,375,226	211,038	4,135,597	4,346,635	37,086	5,338,416	43,386	-	5,418,889	332,213	1,010,131	-	1,342,344
Totals.....	\$ 14,909,204,000	\$ 181,085,600	\$ 49,849,734	\$ 230,935,334	\$ 31,822,700	\$ 4,580,747,600	\$ 37,228,600	\$ 49,849,734	\$ 4,699,648,634	\$ 285,062,800	\$ -	\$ 98,689,000	\$ 383,751,800

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

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

Notes to the Schedule of Employer and Nonemployer Allocations and  
the Schedule of OPEB Amounts by Employer and Nonemployer

June 30, 2018

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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 (ANF) (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, 2018, the retirees share of premium costs is between 0% and 20%, depending on the date of hire.

**NOTE 2 - BASIS OF PRESENTATION**

The schedule of employer and nonemployer allocations and schedule 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 schedule 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 schedule 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 schedule 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 year ended June 30, 2018 (amounts in thousands):

Employer contributions reported in the Statement of Changes in Fiduciary Net Position per the CAFR.....	\$ 542,896
Less:	
Tobacco settlement proceeds deposited by the Commonwealth into the PRIT fund but reported as net OPEB expense in the schedule as they are not used to pay current benefits.....	(72,994)
Excess capital gains tax revenue deposited by the Commonwealth into the PRIT fund but reported as net OPEB expense in the schedule as they are not used to pay current benefits.....	<u>(25,695)</u>
Total employer and nonemployer contributions per the Schedule of Employer and Nonemployer Allocations.....	<u><u>\$ 444,207</u></u>

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**NOTE 4 - COLLECTIVE NET OPEB LIABILITY**

Components of the collective net OPEB liability at June 30, 2018 are as follows (amounts in thousands):

Total OPEB liability.....	\$ 16,096,773
Less:	
Plan fiduciary net position.....	1,187,569
Employers/nonemployers' net OPEB liability.....	\$ 14,909,204
Plan fiduciary net position as a percentage of total OPEB liability.....	7.38%

*Actuarial assumptions*

The total OPEB liability for the June 30, 2018 measurement date was determined by an actuarial valuation as of January 1, 2018 rolled forward to June 30, 2018. This valuation used the following assumptions:

1. The following annual healthcare cost trend rates: (1) 8.0%, decreasing by 0.5% each year to 5.5% in 2023 and then decreasing 0.25% each year to an ultimate rate of 5.0% in 2025 for medical and (2) 5.0% for administration costs. Healthcare costs are offset by reimbursements for Employer Group Waiver Plans (EGWP), which are assumed to increase 5.0% per year.
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 55, or current age if later.
  - d. Actives, upon retirement, take coverage, and are assumed to have the following coverage:

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



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4. Long-term expected rate of return:

The long-term expected rate of return as of June 30, 2018 was 7.35%. 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, 2018 are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Global Equity.....	39.0%	5.0%
Portfolio Completion Strategies.....	13.0%	3.7%
Core Fixed Income.....	12.0%	0.9%
Private Equity.....	12.0%	6.6%
Real Estate.....	10.0%	3.8%
Value Added Fixed Income.....	10.0%	3.8%
Timberland/Natural Resources....	4.0%	3.4%
Total.....	100.0%	

***Discount rates***

The discount rate used to measure the OPEB liability as of June 30, 2018 was 3.95%. This rate was based on a blend of the Bond Buyer Index rate of 3.87% as of the measurement date and the long-term expected rate of return on plan investments of 7.35%. 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 not covered by projected assets is 2025. Therefore, the long-term expected rate of return on plan investments was not applied to all periods of projected benefit payments to determine the total OPEB liability as of June 30, 2018.

***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):

1% Decrease (2.95%)	Current Discount (3.95%)	1% Increase (4.95%)
\$ 17,605,212	\$ 14,909,204	\$ 12,753,786

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*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, as disclosed on page 7 of this report (amounts in thousands):

1% Decrease	Current Rate	1% Increase
\$ 12,386,975	\$ 14,909,204	\$ 18,201,860

**NOTE 5 - DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES**

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

	Year of Deferral	Amortization Period	Balance July 1, 2017	Additions	Deletions	Balance June 30, 2018
<b>Deferred Outflows of Resources:</b>						
Differences between expected and actual experience.....	2018	5.79 years	\$ -	\$ 218,891	\$ (37,805)	\$ 181,086
<b>Deferred Inflows of Resources:</b>						
Differences between expected and actual experience.....	2017	5.79 years	\$ (40,220)	\$ -	\$ 8,397	\$ (31,823)
Changes of assumptions.....	2017	5.79 years	(1,980,319)	-	413,428	(1,566,891)
	2018	5.79 years	-	(3,643,054)	629,197	(3,013,857)
Subtotal.....			(1,980,319)	(3,643,054)	1,042,625	(4,580,748)
Net difference between projected and actual earnings on plan investments....	2017	5 years	(31,996)	-	7,999	(23,997)
	2018	5 years	-	(16,540)	3,308	(13,232)
Subtotal.....			(31,996)	(16,540)	11,307	(37,229)
Total deferred inflows of resources.....			\$ (2,052,535)	\$ (3,659,594)	\$ 1,062,329	\$ (4,649,800)

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

Fiscal Year Ending June 30	
2019.....	\$ (1,024,524)
2020.....	(1,024,524)
2021.....	(1,024,524)
2022.....	(927,942)
2023.....	<u>(467,201)</u>
Total.....	<u>\$ (4,468,714)</u>

***Changes in proportion***

The previous amounts do not include employer specific deferred outflows 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.

**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, 2018 (amounts in thousands):

Service cost.....	\$ 792,135
Interest on the total OPEB liability.....	691,630
Projected earnings on plan investments.....	(76,768)
Administrative expense.....	150
Other changes.....	1,262
Other additions.....	(133)
Recognition (amortization) of deferred outflows and inflows of resources:	
Differences between expected and actual experience.....	29,408
Changes of assumptions.....	(1,042,625)
Differences between projected and actual earnings on plan investments.....	<u>(11,307)</u>
OPEB expense.....	<u>\$ 383,752</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, 2018 as shown in the schedule of employer and nonemployer allocations.