GASB 45 Actuarial Valuation of Postemployment Benefits Other than Pensions for TriMet

As of January 1, 2017

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April 28, 2017

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Ms. Dee Brookshire
Executive Director, Finance & Administration
TriMet

Re: GASB 45 Actuarial Valuation of Postemployment Benefits as of January 1, 2017

At the request of TriMet, we have completed an actuarial valuation of TriMet's postemployment benefits as of January 1, 2017.

The purpose of this report is to determine the Annual Required Contribution and provide required financial disclosures under the Governmental Accounting Standards Board Statement No. 45 – *Accounting and Financial Reporting by Employers for Postemployment Benefits Other Than Pensions* (GASB 45). Our determinations reflect the procedures and methods prescribed in GASB 45.

In preparing our report, we relied on accounting and benefits information and employee data furnished to us by TriMet. While Milliman has not audited the benefits information and census data, we reviewed them for reasonableness and they are, in our opinion, sufficient and reliable for the purposes of our calculations. If any of the information summarized in this report is inaccurate or incomplete, the results could be materially affected and this report may need to be revised.

The results contained in this report do not reflect all potential changes in future health costs due to the passage of the Patient Protection and Affordable Care Act. The impact on future health care costs due to this legislation will depend on a number of factors, including future regulations that are not yet known. An analysis of the impact of health care reform on future plan costs was beyond the scope of this report.

Actuarial computations under GASB 45 are for purposes of fulfilling financial accounting requirements. The calculations reported herein have been made on a basis consistent with our understanding of GASB 45. Determinations for purposes other than meeting financial accounting requirements may be significantly different from the results reported herein. Accordingly, additional determinations are needed for other purposes.

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); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It cannot predict the Plan's future condition. While the valuation is based on an array of individually reasonable assumptions, other assumption sets may also be reasonable and valuation results based on those assumptions would be different. No one set of assumptions is uniquely correct. Determining results using alternative assumptions is outside the scope of our engagement.

Milliman's work is prepared solely for the use and benefit of TriMet.

Milliman does not intend to benefit or create a legal duty to any third party recipient of this report. No third party recipient of Milliman's work product should rely upon this report. Such recipients should engage qualified professionals for advice appropriate to their own specific needs.

The consultants who worked on this assignment are pension actuaries. Milliman's advice is not intended to be a substitute for qualified legal or accounting counsel.

On the basis of the foregoing, we hereby certify that, to the best of our knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. We further certify that all costs, liabilities, rates of interest, and other factors in this valuation have been determined on the basis of actuarial assumptions and methods which, taking into account the experience of TriMet and reasonable expectations, are reasonable both individually and in combination. TriMet has reviewed and approved these assumptions and methods.

We are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein.

Respectfully Submitted,

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Principal and Consulting Actuary	Principal and Consulting Actuary

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Introduction

Milliman, Inc. ("Milliman") has been retained by TriMet to provide a GASB 45 actuarial valuation of its postemployment benefits (OPEB). In our valuation we:

- Project expected payouts for the next 10 years
- Calculate the present value of benefits
- Calculate the actuarial accrued liability (present value of benefits attributable to past service)
- Reconcile January 1, 2016 actuarial results to January 1, 2017 actuarial results
- Determine the Annual Required Contribution (ARC) and Annual OPEB Cost under GASB 45, for the fiscal year ending June 30, 2017
- Prepare draft financial statement disclosures relating to the funded status of the plan

In June 2015, the Governmental Accounting Standards Board issued GASB Statements No. 74 and 75, which replace Statements 43 and 45 effective for fiscal years beginning after June 15, 2016 and June 15, 2017 respectively. The effects of these accounting changes have not been included in this valuation report.

Results of Study

The valuation results are summarized in the following exhibit and compared with the results of the prior valuation.

	January 1, 2017	January 1, 2016
Active Employees	2,888	2,789
Healthy and Disabled Retirees	1,504	1,444
Surviving Spouses	142	149
Total Participants	4,534	4,382
Spouses of Retirees	896	860
Present Value of Benefits	$ 1,121,983,378	$ 1,145,854,892
Actuarial Accrued Liability	$ 769,305,106	$ 760,727,353
Assets	401,426	401,008
Unfunded Actuarial Accrued Liability	$ 768,903,680	$ 760,326,345
Normal Cost	$ 33,146,553	$ 35,207,555

The results of the January 1, 2017 valuation will be used to prepare GASB 45 accounting results for the fiscal year ending June 30, 2017. Accounting results are developed in Exhibits 2, 4 and 5.

The summary exhibit above uses the following terms:

The **Present Value of Benefits** is the present value of projected benefits (projected costs less retiree contributions) discounted at the valuation discount rate.

The Present Value of Benefits is allocated over the service for each active employee from their date of hire to their expected retirement age, as a level percent of the employee's pay. This level percent times pay is referred to as the **Normal Cost**, and is that portion of the Present Value of Benefits attributable to an employee's service in the current year. The Normal Cost equals $0 for retired members.

The **Actuarial Accrued Liability (AAL)** is the Present Value of Benefits less the actuarial present value of future Normal Costs and represents the liabilities allocated to service up to the valuation date. For retirees, the Actuarial Accrued Liability is equal to the Present Value of Benefits.

The **Unfunded Actuarial Accrued Liability (UAAL)** is the Actuarial Accrued Liability offset by any assets set aside to provide retiree health benefits.

Background

GASB 45 is a governmental accounting standard released in June 2004 which requires public-sector employers to apply accrual accounting to OPEB offerings to its retirees and their dependents.

The accounting applies to two broad classifications of benefits, which are discussed in greater detail in Appendix A for Union members and Appendix F for Non-Union members. First, GASB 45 requires that future employer-paid OPEB, such as an employer contribution towards retiree medical insurance, be recognized over the working lifetime of an employee – that is, the cost is recognized prior to the employee's retirement. GASB also requires that, under certain circumstances, an employer must recognize an implicit subsidy arising from allowing retirees to continue medical coverage, even if the retirees pay the "full" premium charged by the insurance carrier. This implicit subsidy arises from the fact that health care premiums do not increase with age, whereas health care costs do increase with age.

The actuarial valuation process involves projecting the costs of retiree benefits in years following the valuation date, based upon the active and retired membership as of the valuation date. Exhibit 1 shows the projection of these costs over the next ten years. These costs are then assigned to past service and future service, as shown in Exhibit 2. The ARC – which is the accrual cost for accounting purposes – is developed in Exhibit 5 as the sum of the Normal Cost and an amortized portion of the Unfunded Actuarial Accrued Liability. The Annual OPEB Cost is the ARC, plus accounting adjustments required under GASB 45. Finally, the change in the Net OPEB Obligation is calculated by netting the Annual OPEB Cost against the cost of benefits actually paid in the current fiscal year. In other words, the accrual cost is netted against the current cost, and the difference is the remaining accrual to be paid in future years. The Net OPEB obligation accumulates over time as the sum of annual accrual costs, less current year costs, with interest.

Assuming TriMet does not increase funding of its OPEB benefits through its trust fund, GASB 45 essentially recognizes the Unfunded Actuarial Accrued Liability over time on the District's balance sheet.

GASB 75 will replace GASB 45 and become effective for employer fiscal years beginning after June 15, 2017. The most significant impact of the new standard is the change from reporting the unfunded actuarial accrued liability for the plan in the notes of the financial statements to recognizing the unfunded actuarial accrued liability on the balance sheet of individual employers. Other changes made by the new standard are very similar to changes made to the accounting standards for pension plans when GASB 67 and 68 were issued. This includes a different approach for determining the discount rate and separation of funding from financial reporting. As a result, only accounting calculations for the fiscal year ending June 30, 2017 are presented in this GASB 45 valuation report.

Assumptions

With any valuation of future benefits, assumptions of anticipated future events are required. TriMet approved the assumptions used herein which were developed in consultation with Milliman.

Discount Rate. GASB 45 requires that the interest rate used to discount future benefit payments back to the present day be based on the expected rate of return on any investments set aside to pay for these benefits. If no funds are set aside for this purpose, the discount rate would be based on the expected return on TriMet's operating funds. Although the District established a separate, irrevocable trust dedicated to OPEB costs valued at about $400,000, the plan is funded on a pay-as-you-go basis. We have, therefore, used a discount rate of 3.50% based on long-term expectations of investment return for the Oregon Local Government Investment Pool or similar investments, which are representative of TriMet's general financial assets.

Health Cost Trend. In future years, the medical cost trend varies from 4.25% to 8.50% depending upon the timing of the excise tax scheduled to affect health care benefits beginning in 2020. The trend then settles to an ultimate rate of 4.25%. Appendices D and I display the complete trends for the Union and Non-Union Plans respectively. In addition, dental costs are assumed to increase 5.00% per year. These trends were developed based upon a model circulated by the Society of Actuaries. A separate trend for Medicare Part B was used to reflect the expected premium increases.

Demographic Assumptions. With limited exceptions, we followed the demographic assumptions used for the actuarial valuation of the TriMet Defined Benefit Retirement Plan for Management and Staff Employees (Non-Union) and the actuarial valuation of the Pension Plan for Bargaining Unit Employees of TriMet (Union).

Complete summaries of the actuarial assumptions are presented in Appendix D for the Union Plan and Appendix I for the Non-Union Plan.

Variability of Results

The results contained in this report represent reasonable estimates. However, variation from these or any other estimates of future retiree medical costs is not only possible but probable. Actual future costs may vary significantly from estimates in this report.

Valuation results are particularly sensitive to the assumptions used to project future health care cost increases (health care cost trend). Exhibit 7 shows a comparison of valuation results based on valuation assumptions and based on a one percent change in the health care cost trend.

Exhibit 3 reconciles the Actuarial Accrued Liability measured in the prior valuation to the amount calculated for this valuation and estimates the amount and source of unexpected changes. Significant differences between actual and expected liability can come from health cost trend or demographic experience which differ from expectations. Changes to benefits offered or to valuation assumptions can also affect liabilities.

The District should note that liabilities for implicit subsidies are calculated as the difference between expected claims and premiums. A relatively small percentage change to expected claims or premiums can affect the net liability by a larger percentage. This is one of several reasons why GASB 45 implicit subsidy liabilities tend to be more volatile than pension liabilities.

Exhibit 1. Projected Benefit Payments – Union Members

The table below illustrates the projected pay-as-you-go costs of providing retiree OPEB for Union members. The projections only consider the current group of employees and retirees and their current benefit structure.

Year Ending Dec 31,	*Projected Costs*	*Retiree Premiums*	*Retiree Life Insurance*	*Total Benefits*
2017	$ 21,043,035	$ (948,946)	$ 374,628	$ 20,468,717
2018	23,595,766	(1,024,038)	403,988	22,975,716
2019	25,925,259	(1,094,253)	434,505	25,265,511
2020	28,165,434	(1,170,923)	464,068	27,458,579
2021	30,034,041	(1,239,329)	493,665	29,288,377
2022	31,876,585	(1,303,941)	522,547	31,095,191
2023	33,716,855	(1,359,969)	552,874	32,909,760
2024	35,627,435	(1,432,397)	584,287	34,779,325
2025	38,369,548	(1,536,002)	617,354	37,450,900
2026	40,443,876	(1,610,108)	649,928	39,483,696

Exhibit 1. Projected Benefit Payments – Non-Union Members

The table below illustrates the projected pay-as-you-go costs of providing retiree OPEB for the Non-Union members. The projections only consider the current group of employees and retirees and their current benefit structure.

Year Ending Dec 31,	*Projected Costs*	*Retiree Premiums*	*Retiree Life Insurance*	*Total Benefits*
2017	$ 2,241,464	$ (111,055)	$ 25,116	$ 2,155,525
2018	2,634,893	(130,150)	28,072	2,532,815
2019	2,865,939	(144,204)	30,999	2,752,734
2020	3,115,152	(158,800)	34,169	2,990,521
2021	3,282,841	(173,122)	37,411	3,147,130
2022	3,550,405	(195,571)	40,779	3,395,613
2023	3,878,178	(215,223)	44,238	3,707,193
2024	4,126,569	(237,972)	48,003	3,936,600
2025	4,473,187	(273,780)	51,709	4,251,116
2026	4,883,316	(307,340)	55,925	4,631,901

Exhibit 2. Liabilities and Normal Cost

The **Present Value of Benefits** is the actuarial present value of projected benefits (projected costs less retiree contributions) expected to be paid for all current retirees and current covered employees who are expected to retire and become eligible for OPEB in the future.

The Present Value of Benefits is allocated over the service for each active employee from their date of hire to their expected retirement age, as a level percent of the employee's pay. This level percent times pay is referred to as the **Normal Cost**, and is that portion of the Present Value of Benefits attributable to an employee's service in the current year. The Normal Cost equals $0 for retired members. Normal costs are increased from the valuation dates to the fiscal year end dates using a combination of the discount rate and health care cost trend assumptions.

The **Actuarial Accrued Liability (AAL)** is the Present Value of Benefits less the actuarial present value of future Normal Costs and represents the liabilities allocated to service up to the valuation date. For retirees, the Actuarial Accrued Liability is equal to the Present Value of Benefits.

	Valuation Date			
	January 1, 2017			***January 1, 2016***
	Union	Non-Union	Total	Total
Present Value of Benefits				
Actives	$ 675,351,134	$ 94,364,847	$ 769,715,981	$ 803,637,035
Retirees	314,389,048	37,878,349	352,267,397	342,217,857
Total	$ 989,740,182	$ 132,243,196	$1,121,983,378	$1,145,854,892
Actuarial Accrued Liability				
Actives	$ 351,441,936	$ 65,595,773	$ 417,037,709	$ 418,509,496
Retirees	314,389,048	37,878,349	352,267,397	342,217,857
Total	$ 665,830,984	$ 103,474,122	$ 769,305,106	$ 760,727,353
Normal Cost				
As of Valuation Date	$ 30,323,408	$ 2,823,145	$ 33,146,553	$ 35,207,555
FYE June 30, 2016				$ 35,818,389
FYE June 30, 2017	$ 30,849,504	$ 2,872,125	$ 33,721,629	

Exhibit 3. Reconciliation of Valuation Results

This exhibit reconciles the results of the January 1, 2016 valuation with the results of the January 1, 2017 valuation. The January 1, 2016 Actuarial Accrued Liability (AAL) and Normal Cost are brought forward in time with interest and reduced by benefits expected to have been received.

Union Members

Expected January 1, 2017 AAL			
(1)	January 1, 2016 AAL	$655,389,312	
(2)	January 1, 2016 Normal Cost	32,034,852	
(3)	Expected Benefits Received, January 1, 2016 – December 31, 2016	19,348,333	
(4)	Interest on Items (1) through (3) at 3.50%	23,724,162	
(5)	Expected January 1, 2017 AAL = (1) + (2) - (3) + (4)	$691,799,993	
Reconciliation to Actual January 1, 2017 AAL			***As a Percent of Expected AAL***
(6)	Demographic (Gain) / Loss	$ (1,850,601)	-0%
(7)	Health Cost (Gain) / Loss	(28,199,745)	-4%
(8)	Changes in Other Assumptions	4,081,337	1%
(9)	Actual January 1, 2017 AAL = (5) + (6) + (7) + (8)	$665,830,984	

Non-Union Members

Expected January 1, 2017 AAL			
(1)	January 1, 2016 AAL	$105,338,041	
(2)	January 1, 2016 Normal Cost	3,172,703	
(3)	Expected Benefits Received, January 1, 2016 – December 31, 2016	2,009,350	
(4)	Interest on Items (1) through (3) at 3.50%	3,763,015	
(5)	Expected January 1, 2017 AAL = (1) + (2) - (3) + (4)	$110,264,409	
Reconciliation to Actual January 1, 2017 AAL			***As a Percent of Expected AAL***
(6)	Demographic (Gain) / Loss	$ 1,319,245	1%
(7)	Health Cost (Gain) / Loss	(7,834,753)	-7%
(8)	Changes in Other Assumptions	(274,779)	-0%
(9)	Actual January 1, 2017 AAL = (5) + (6) + (7) + (8)	$103,474,122	

Actuarial gains and losses result from differences between the expectations of the prior valuation and the remeasurement of the current valuation.

Demographic gains and losses come from many sources, such as actual rates of termination, retirement, and election of health care benefits that differ from the actuarial assumptions. New entrants into the population generate demographic losses.

Health cost gains and losses result from differences in projected health care costs as of January 1, 2017 compared with projections based on the January 1, 2016 valuation. In many cases, these gains and losses may be the largest source of gain or loss from one valuation to the next. It captures changes in health care coverages offered by TriMet or elected by retirees as well as changes to expected per capita health care claims costs.

The changes in other assumptions reflect changes in demographic assumptions and other health care related assumptions. For this valuation, only the health care cost trend was updated. Appendix D and Appendix I describe the changes in assumptions since the prior valuation for the Union and Non-Union Plans respectively.

Exhibit 4. Unfunded Actuarial Accrued Liability

The Unfunded Actuarial Accrued Liability (UAAL) is the Actuarial Accrued Liability offset by any assets set aside to provide retiree health benefits. This is equal to the value of the retiree health benefits accrued to date that has not been funded. The UAAL is amortized over a fixed number of years and included in the ARC amount (shown in Exhibit 5).

The amortization of UAAL was calculated as a level percent of pay over a closed period of 30 years beginning January 1, 2008. The amortization period as of January 1, 2017 is 21 years. Amortization amounts are expected to increase at the same rate as total pay increases each year. TriMet's total payroll is assumed to increase 2.00% per year.

UAAL amortization payments are increased from the valuation dates to the fiscal year end dates using the discount rate assumption. The UAAL amortization payment for the fiscal year end June 30, 2017 is based upon the amortization of projected UAAL as of January 1, 2018.

	January 1, 2017			***January 1, 2016***
	Union	Non-Union	Total	Total
Unfunded Actuarial Liability (UAAL)				
Actuarial Accrued Liability	$ 665,830,984	$ 103,474,122	$ 769,305,106	$ 760,727,353
Actuarial Value of Assets	401,426	0	401,426	401,008
Unfunded Actuarial Accrued Liability	$ 665,429,558	$ 103,474,122	$ 768,903,680	$ 760,326,345
Amortization of UAAL for ARC				
Amortization Factor	18.2185	18.2185	18.2185	18.9545
Amortization Amount as of				
Valuation Date	$ 36,524,937	$ 5,679,618	$ 42,204,555	$ 40,113,237
June 30, 2016				$ 40,809,181
June 30, 2017	$ 37,158,626	$ 5,778,157	$ 42,936,783	
Discount Rate	3.50%	3.50%	3.50%	3.50%
Amortization Period	21 years	21 years	21 years	22 years

Exhibit 5. Projected Financial Statement Disclosures

The following tables show the estimated Annual Required Contribution and Net OPEB Obligation for the fiscal year ending June 30, 2017.

		Fiscal Year Ending June 30, 2017		
		Union	Non-Union	Total
Determination of Annual Required Contribution				
(1)	Normal Cost at year end	$ 30,849,504	$ 2,872,125	$ 33,721,629
(2)	Amortization of UAAL	37,158,626	5,778,157	42,936,783
(3)	Annual Required Contribution (ARC) (1) + (2)	$ 68,008,130	$ 8,650,282	$ 76,658,412
Determination of Net OPEB Obligation				
(4)	Annual Required Contribution	$ 68,008,130	$ 8,650,282	$ 76,658,412
(5)	Interest on prior year Net OPEB Obligation	16,496,111	1,725,404	18,221,515
(6)	Adjustment to ARC *	(26,775,726)	(2,800,596)	(29,576,322)
(7)	Annual OPEB Cost (4) + (5) + (6)	57,728,515	7,575,090	65,303,605
(8)	Explicit Benefit Payments **	14,863,983	1,689,591	16,553,574
	Implicit Benefit Payments	5,157,384	361,076	5,518,460
(9)	Increase in Net OPEB Obligation (7) - (8)	$ 37,707,148	$ 5,524,423	$ 43,231,571
(10)	Net OPEB Obligation – beginning of year	$ 471,317,466	$ 49,297,266	$ 520,614,732
(11)	Net OPEB Obligation – end of year (9) + (10)	$ 509,024,614	$ 54,821,689	$ 563,846,303

* *Based upon beginning of year Net OPEB Obligation divided by ARC amortization factor shown in Exhibit 4, and given interest to end of year.*

** *For projection purposes, employer contributions are equal to expected explicit benefit payments plus implicit benefit payments during a given fiscal year. GASB 45 defines contributions for this purpose to be actual benefit payments during the year and contributions made to a separate, irrevocable trust. These GASB 45 contributions can be accounted for by reflecting actual (or estimated) explicit benefit payments for the fiscal year, plus estimated implicit benefit payments shown above. Life insurance benefits are recognized under the explicit benefit payments.*

GASB 75 will replace GASB 45 and become effective for employer fiscal years beginning after June 15, 2017. As a result, only accounting calculations for the fiscal year ending June 30, 2017 are presented in this GASB 45 valuation report.

Exhibit 5. Projected Financial Statement Disclosures (continued)

The following table shows historical Annual OPEB Cost and Net OPEB Obligation. For a given fiscal year end disclosure, results for the current year and the preceding two years are required to be shown.

Fiscal Year Ended		*Annual OPEB Cost*	*Percentage of OPEB Cost Contributed*	*Net OPEB Obligation*
6/30/2015	Union			$431,923,096
	Non-Union			43,085,723
	Total	$61,758,534*	29%	$475,008,819
6/30/2016	Union			$471,317,466
	Non-Union			49,297,266
	Total	$62,712,925*	27%	$520,614,732
6/30/2017	Union	$57,728,515	35%**	$509,024,614
	Non-Union	7,575,090	27%**	54,821,689
	Total	$65,303,605	34%**	$563,846,303

* *The June 30, 2015 and 2016 Annual OPEB Costs were supplied by TriMet and differ from the previous valuation reports.*

*** Based upon Expected Benefit Payments.*

Funded Status and Funding Progress. As of January 1, 2017, the most recent actuarial valuation date, the plan was 0.05% percent funded. The Actuarial Accrued Liability was $769,305,106, and the value of assets was $401,426, resulting in an Unfunded Actuarial Accrued Liability of $768,903,680.

Exhibit 6. Required Supplementary Information

The following table shows a schedule of Funding Progress required under GASB 45.

Actuarial Valuation Date	*Actuarial Value of Assets*	*Actuarial Accrued Liability (AAL)*	*Unfunded AAL (UAAL)*	*Funded Ratio*	*Covered Payroll*	*UAAL as a Percentage of Covered Payroll*
01/01/2015	400,968	711,180,701	710,779,733	0%	154,966,472	459%
01/01/2016	401,008	760,727,353	760,326,345	0%	167,369,116	454%
01/01/2017	401,426	769,305,106	768,903,680	0%	173,891,742	442%

Exhibit 7. Valuation Results – Sensitivity of Economic Assumptions

The following exhibit shows the results of the valuation based on alternate health care cost trend assumptions to illustrate the sensitivity of changes of the valuation results to changes in the health care cost trend. The alternate health care cost trend assumptions are 1% higher or 1% lower than the valuation assumptions in all future years.

Discount Rate ***Ultimate Trend Rate***	***3.50%*** ***4.25%***	***3.50%*** ***3.25%***	***3.50%*** ***5.25%***
Actuarial Accrued Liability (AAL)	$ 769,305,106	$ 663,484,088	$ 901,658,340
Change in AAL		$ (105,821,018)	$ 132,353,234
Normal Cost	$ 33,146,553	$ 27,119,104	$ 41,092,284
Change in Normal Cost		$ (6,027,449)	$ 7,945,731

SUMMARY OF BENEFITS VALUED

The following summary is intended only to describe our understanding of the essential features of the postemployment benefits other than pensions (OPEB) provided to current and future Union retirees of TriMet as of January 1, 2017. All eligibility requirements and benefit amounts shall be determined in strict accordance with the relevant documents, including collective bargaining agreements. To the extent that this summary does not accurately reflect any OPEB provisions, the results of this valuation may need to be revised.

There are two categories of OPEB valued under GASB 45: explicit employer benefits and implicit employer subsidies. Explicit employer benefits are paid from the employer to the retiree or from the employer to a benefits provider on behalf of the retiree. Implicit employer subsidies arise from offering benefits to retirees.

Explicit employer benefits under GASB 45 include retiree medical, dental and life insurance coverage, where the employer pays for all or a portion of such coverage. Termination benefits, such as payout of unused sick leave or conversion of such payout to an individual account, are not accounted for under GASB 45.

Implicit employer subsidies under GASB 45 represent the difference between the premiums charged for coverage and the expected claims resulting from that coverage. One common implicit subsidy in Oregon comes from offering pre-Medicare health care insurance coverage to retirees based on the same gross premium rates as are charged to active employees. Health care premiums, priced only for retirees who on average incur higher health care claims costs than younger active employees, would be more expensive than health care premiums that are priced to cover the average costs of both actives and retirees combined. GASB 45 states that this implicit subsidy must be included in the liabilities and costs reported on the entity's financial statements. The liability from the explicit employer benefits plus the implicit employer subsidies equals the total Actuarial Accrued Liability (AAL) under GASB 45.

Unless changed by new legislation, beginning in 2020, an excise tax of 40% is scheduled to apply to the portion of group health care plan costs that exceeds thresholds set under law. While many details of this excise tax are still unknown, its overall structure is clear enough that actuaries are generally making an estimate of its potential impact when performing OPEB valuations. We have modeled the impact of the excise tax in this valuation. The effect of the excise tax can be observed by the increase in trend rates beginning in 2019 for pre-65 medical benefits, and in 2042 for post-65 medical benefits.

GASB 75 will replace GASB 45 and become effective for employer fiscal years beginning after June 15, 2017. Therefore, only accounting calculations for the fiscal year ending June 30, 2017 are presented in this GASB 45 valuation report.

To our knowledge, the summary below covers all OPEB for Union retirees of TriMet which result in material AAL under GASB 45. If additional retiree benefits may result in AAL under GASB 45, the results of this valuation may need to be revised.

Eligibility

Retirees who were employees immediately prior to retirement after attaining age 55 and 10 years of continuous service or who became disabled after 10 years of continuous service are eligible for OPEB benefits.

Health Care Benefits

Tier 1 – Retirees who retired prior to February 1, 1992

Medical, prescription drug, and dental benefits are provided to all covered retirees, spouses and domestic partners. Dependents receive all benefits except dental. Retirees also are reimbursed for Medicare Part B premiums.

Benefits are payable over the life of the retiree and spouse or domestic partner while both are alive. Following the retiree's death, benefits continue to the surviving spouse or domestic partner until the earlier of the survivor's death or 16 years after the retiree's death.

Retirees and their dependents under age 65 may continue to receive the same health care coverage received prior to retirement, subject to plan changes made by insurers from time to time.

Retirees do not contribute to the cost of health care insurance premiums for coverage.

Tier 2 – Retirees who retired on or after February 1, 1992 and hired on or before October 24, 2014

Medical, prescription drug, and dental benefits are provided to all covered retirees, spouses and domestic partners until the age of 65. Dependents receive all benefits except dental.

Retirees and dependents who become Medicare eligible must enroll in a Medicare Advantage plan and maintain Medicare Parts A & B. Instead of electing coverage under a Medicare Advantage and dental plan, a retiree may elect to receive a monthly stipend. If the retiree elects the monthly stipend, the retiree is required to maintain Medicare Parts A & B. Once the stipend election is made, the retiree has no right to revert to enrolling in a Medicare Advantage plan and dental plan. The monthly stipend increases annually with inflation. Retirees who maintain Medicare Part B will receive reimbursement for the Medicare Part B premiums.

Benefits are payable over the life of the retiree and spouse or domestic partner while both are alive. Following the retiree's death, benefits continue to the surviving spouse or domestic partner until the earlier of the survivor's death or 16 years after the retiree's death.

Retirees and their dependents under age 65 and non-Medicare eligible may continue to receive the same health care coverage as active employees receive. Health insurance premiums for retirees who are ineligible for one of TriMet's Medicare Advantage plans are underwritten together with active employees, and they contribute to health care insurance premiums for coverage on the same basis as active employees.

Retirees under age 65 and non-Medicare eligible, and who do not elect a stipend in lieu of coverage pay a portion of the health care premium according to the following table.*

Provider / Covered Group	Premium*
Regence PPO 90/10	Retirees pay the difference between the Regence 90/10 premium and TriMet's employer contribution for the Regence PPO 80/20.
Regence PPO 80/20	Retirees pay 5% of the of the premium costs for the Regence PPO 80/20.
Regence HDHP/HSA	The HSA deposit by TriMet on behalf of the retiree is equal to the difference between the HDHP premium and TriMet's employer contribution of the Regence PPO 80/20.
All Other Medical and Dental	Retirees in all other medical and dental plans pay 5% of the premium costs

* *During the hiatus period between labor contracts, 100% of the premium increases between 2016 and 2017 will be passed onto retirees. The resolution date for successor contract negotiations is uncertain, but it is unlikely that a resolution will occur before December 31, 2017.*

Implicit Subsidies

Most benefits for Tier 1 and Tier 2 employees involve TriMet health care coverages being provided to retirees. For these TriMet-sponsored coverages, the implicit employer subsidy is measured as the expected health care cost per retiree and dependent, less the gross premiums charged by the insurance carrier for that coverage. We are not aware of any additional implicit employer OPEB subsidies that result in GASB 45 AAL.

Tier 3 – Retirees hired on or after October 25, 2014

A monthly stipend is provided to the retiree until the age of 65 to be used for health care related expenses. Retirees cannot purchase medical coverage from TriMet. The monthly stipend increases annually with inflation. Retiree health benefits cease when the employee turns 65. There are no benefits for the spouse, domestic partner or dependents.

Life Insurance Benefits

Eligible retirees in all tiers are provided a $10,000 whole life insurance benefit fully paid by TriMet.

Changes since the Prior Valuation

As of January 1, 2017 Regence plans are self-funded.

OPEB COSTS AND PREMIUMS

The following methods were used to establish costs and premiums for purposes of measuring the OPEB liability.

Health Care Premiums per Month

Current monthly health insurance premiums charged by providers are shown below. Premiums are the same for full-time and mini-run operators.

Provider / Covered Group	January – December 2017		
	Retired after 1991		Retired prior to 1992
Regence PPO			
Retiree Only	N/A		$ 740.66
Retiree & Spouse/Domestic Partner	N/A		1,484.56
Retiree & Child(ren)	N/A		1,327.24
Family	N/A		2,008.94
Regence PPO 80/20			
Retiree Only	$ 774.56		N/A
Retiree & Spouse/Domestic Partner	1,626.58		N/A
Retiree & Child(ren)	1,355.54		N/A
Family	2,168.88		N/A
Regence PPO 90/10			
Retiree Only	$ 821.86		N/A
Retiree & Spouse/Domestic Partner	1,725.96		N/A
Retiree & Child(ren)	1,438.36		N/A
Family	2,301.34		N/A
Regence HDHP/HSA	HDHP	HSA	
Retiree Only	$ 623.06	$ 112.78	N/A
Retiree & Spouse/Domestic Partner	1,308.40	236.86	N/A
Retiree & Child(ren)	1,090.36	197.40	N/A
Family	1,744.50	315.94	N/A
United Healthcare PPO	$ 437.81		N/A
Kaiser Permanente			
Retiree Only	$ 739.48		$ 1,158.50
Retiree & Spouse/Domestic Partner	1,478.96		2,317.00
Retiree & Child(ren)	1,331.08		2,085.30
Family	2,218.38		3,475.50
Medicare, Single*	394.02		523.72

Provider / Covered Group	January – December 2017	
	Retired after 1991	Retired prior to 1992
Moda Dental		
Retiree Only	$ 60.74	$ 60.74
Retiree & Spouse/Domestic Partner	114.82	114.82
Kaiser Dental		
Retiree Only	$ 44.26	$ 44.26
Retiree & Spouse/Domestic Partner	80.70	80.70

** Over age 65 members with Medicare Part A and B coverage*

Stipend

Covered Group	2017 Monthly Stipend
Tier 1	N/A
Tier 2	
Retiree Only	$ 429.97
Retiree & Spouse/Domestic Partner	853.51
Tier 3	
Retiree Only	$ 824.19

Medicare Part B

The standard Part B premium for individuals earning $85,000 or less (or $170,000 or less if married filing jointly) is $108.92 per month for continuing retirees in 2017, and $134.00 per month for new retirees in 2017.

For the valuation, $108.92 will be valued for all retirees and a higher trend will be applied so the premium catches up with the projected premium for new retirees.

Expected Health Care Costs Per Person per Month

Expected health care costs were developed using a composite of the premiums due for active and retired members electing coverage as of December 31, 2016. The effective date of the premiums provided as of the valuation date was January 1, 2017.

Expected health care costs for pre-65 retirees who retired before 1992 and are covered under Regence or Kaiser were developed based on the coverage of pre-65 retirees who retired after 1991 and pro-rated by the relative level of premiums.

Regence claims for pre-65 retirees who retired after 1991 were based on the following expected election rates by plan and tier:

Covered Group	80/20	90/10	HSA
Retiree Only	27%	70%	3%
Retiree and Spouse/Domestic Partner	27%	70%	3%
Retiree & Child(ren)	17%	80%	3%
Family	30%	50%	20%

Expected dental costs for Moda Dental and Kaiser Dental were blended based on expected election rates by plan and tier as shown below:

Covered Group	Moda	Kaiser
Retiree Only	70%	30%
Retiree and Spouse/Domestic Partner	80%	20%

Milliman's Health Cost Guidelines were used to allocate costs by age and gender. Retirees' costs include a load for expected health status of retirees relative to active employees and spouses.

Jeff Bradley, FSA and health consultant with Milliman, assisted in the development of the per capita claims costs.

For the period January 1, 2017 – December 31, 2017:

Regence – Retired after 1991				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$1,011.26	$1,068.75	$919.85	$1,020.75
60	1,229.80	1,210.58	1,109.33	1,147.81
64	1,531.45	1,392.60	1,354.56	1,291.08

Kaiser – Under 65 – Retired after 1991				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$1,040.43	$1,099.58	$ 973.61	$1,077.37
60	1,265.27	1,245.49	1,168.63	1,208.13
64	1,575.63	1,432.77	1,421.05	1,355.56

Kaiser – 65 and Older – Retired after 1991				
	Retiree		Spouse	
Age	Male	Female	Male	Female
65	$390.94	$392.03	$390.94	$392.03
70	406.74	385.17	406.74	385.17
75	422.02	378.08	422.02	378.08
80	427.58	379.27	427.58	379.27
85	423.61	362.96	423.61	362.96
90+	418.72	339.02	418.72	339.02

United Healthcare and Regence – Retired before 1992				
	Retiree		Spouse	
Age	Male	Female	Male	Female
65	$ 442.94	$ 444.17	$ 442.94	$ 444.17
70	460.84	436.40	460.84	436.40
75	478.15	428.37	478.15	428.37
80	484.45	429.72	484.45	429.72
85	479.96	411.23	479.96	411.23
90+	474.41	384.11	474.41	384.11

Dental				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$50.21	$53.55	$51.80	$55.13
60	56.26	57.87	57.84	59.46
65	61.49	59.64	63.07	61.22
70+	65.39	59.44	66.96	61.02

Expected Carrier Elections for Tier 2 Retirees

Medical and prescription drug costs for current retirees are valued based on the retiree's elected plan. For active members and retirees under age 65, post-65 coverage is valued assuming the member elects a carrier according to the percentages as shown in the following table. In the case where a retiree and spouse are on separate pre-65 and post-65 plans ("split coverage"), the pre-65 member is assumed to elect the same plan as the post-65 member at age 65.

Medical and prescription drug costs for future retirees and post-65 coverage for members currently under age 65 are valued assuming the member elects a carrier according to the percentages as shown in the following table, except in the case of split pre-65 and post-65 coverage as noted above.

Carrier	Pre-65	Carrier	Post-65
Regence 90/10 & 80/20 PPO	48%	Kaiser Senior Advantage	49%
Regence HSA	2%	United Healthcare National PPO	49%
Kaiser HMO	50%	Stipend	2%

Life Insurance

Life insurance for current and future retirees was valued at its face amount under the valuation assumptions.

Administrative Expenses

No administrative expenses were valued.

ACTUARIAL COST METHOD

The method used for this valuation is the **Entry Age Normal Actuarial Cost Method** with Normal Cost expressed as a level percent of pay.

The **Present Value of Benefits** is the present value of projected benefits (projected costs less retiree contributions) discounted at the valuation discount rate.

The Present Value of Benefits is allocated over the service for each active employee from their date of hire to their expected retirement age, as a level percent of the employee's pay. This level percent times pay is referred to as the **Normal Cost**, and is that portion of the Present Value of Benefits attributable to an employee's service in the current year. The Normal Cost equals $0 for retired members.

The **Actuarial Accrued Liability (AAL)** is the Present Value of Benefits less the actuarial present value of future Normal Costs and represents the liabilities allocated to service up to the valuation date. For retirees, the Actuarial Accrued Liability is equal to the Present Value of Benefits.

The **Annual Required Contribution (ARC)** is the amount TriMet would be required to report as an expense for a given fiscal year under GASB 45. The ARC is equal to the Normal Cost plus an amount to amortize the unfunded AAL as a level percentage of payroll over 21 years as of December 31, 2016 on a closed basis. Note, the ARC represents an accounting expense, but TriMet is not required to contribute the ARC to a separate trust. If TriMet does not set aside funds equal to the ARC each year, then the ARC (less actual benefit payments) will accumulate as a liability (Net OPEB Obligation) on its balance sheet.

ACTUARIAL ASSUMPTIONS

This section of the report describes the assumptions used for the Union Plan. These assumptions have been chosen on the basis of recent experience of the Plan, published actuarial tables and on current and future expectations. Please see the Plan's 2013 Experience Study dated February 14, 2014, and letter regarding the assumptions for the 2016 Actuarial Valuation for the Pension Plan for Bargaining Unit Employees of TriMet dated February 18, 2016 for additional detail regarding the development of the demographic assumptions not related to Plan coverage.

The assumptions are intended to estimate the future experience of the participants of the Plan and of the Plan itself in areas which affect the projected benefit flow and anticipated investment earnings. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of the Plan's benefits.

ECONOMIC ASSUMPTIONS

1. **Discount Rate**

   3.50%. The discount rate is based on long-term expectations of investment return for the Oregon Local Government Investment Pool or similar investments, which are representative of TriMet's general financial assets. In our professional judgment the selected discount rate is reasonable and is not expected to have any significant bias.

2. **Inflation**

   2.50% per annum compounded annually.

3. **Health Care Cost Trend**

   Health care cost trend affects both the projected health care costs as well as the projected health care premiums. Jeff Bradley, FSA and health consultant with Milliman, assisted in the development of the trend rates.

   Dental: 5.0% per year.

Medicare and Prescription Drugs				Medicare Part B	
Pre-65		Post-65		Post-65	
Year	Trend Rate	Year	Trend Rate	Year	Trend Rate
2017	8.25%	2017	8.25%	2017	14.25%
2018	6.25%	2018	6.00%	2018	5.75%
2019	6.00%	2019	5.75%	2019	5.50%
2020-2021	5.50%	2020-2024	5.25%	2020-2029	5.25%
2022	5.25%	2025-2031	5.00%	2030-2039	4.75%
2023	5.75%	2032-2040	5.25%	2040-2079	4.25%
2024-2029	6.00%	2041	5.00%	2080+	4.00%
2030	5.75%	2042	5.25%		
2031-2039	6.00%	2043-2045	5.50%		
2040-2041	5.75%	2046-2054	5.25%		

Medicare and Prescription Drugs				Medicare Part B	
Pre-65		Post-65		Post-65	
Year	Trend Rate	Year	Trend Rate	Year	Trend Rate
2042-2047	5.50%	2055-2063	5.50%		
2048-2060	5.25%	2064-2066	5.25%		
2061-2066	5.00%	2067-2068	5.00%		
2067-2069	4.75%	2069-2071	4.75%		
2070-2072	4.50%	2072-2083	4.50%		
2073+	4.25%	2084+	4.25%		

These trend assumptions are based on a model circulated by the Society of Actuaries. The model considers current trends in health care costs, the potential impacts of the Affordable Care Act (including an excise tax scheduled to apply to high-cost plans beginning in 2020), and long-term constraints on trend such as growth in per capita income and percentage of income that health care costs will ultimately represent.

4. **Annual Salary Increases**

2.75%, compounded annually for purposes of attributing individual costs under the Entry Age Normal Actuarial Cost Method.

5. **Annual Payroll Increases**

2.00%, compounded annually for purposes of amortizing the unfunded AAL.

DEMOGRAPHIC ASSUMPTIONS

1. **Healthy Mortality**

RP-2014 Annuitant and Non-Annuitant Mortality Tables with Blue Collar Adjustment set forward 1 year for males and set forward 2 years for females. This assumption includes a margin for future mortality improvement based on recent plan experience.

2. **Disabled Mortality**

RP-2014 Disability Mortality Tables for males and females.

3. Withdrawal

The rates of assumed future withdrawal from active service for reasons other than death, disability or retirement at select ages are shown below.

Years of Service	Annual Rates Male	Annual Rates Female
Less than 1	5.0%	14.0%
1-6	2.5%	3.0%
7-9	1.5%	3.0%
10+	0.5%	1.0%

4. Retirement

All active employees are assumed to retire by age 70. A certain percentage of active employees are assumed to elect retirement beginning at age 55. The rates of retirement are as follows:

Age	Annual Rates	Age	Annual Rates
55-56	4.0%	63	20.0%
57	7.5%	64	25.0%
58-60	11.0%	65	30.0%
61	20.0%	66-69	40.0%
62	35.0%	70+	100.0%

5. Disablement

The rates of disablement used in this valuation are 70% of the 1985 Pension Disability Table, Class 3, Unisex (for nonhazardous light manual workers). Rates at select ages are shown below.

Age	Annual Rates
30	0.2%
35	0.3%
40	0.4%
45	0.6%
50	0.9%
55	1.5%
60	2.2%

6. Future Retiree and Spouse Coverage

All active members eligible for health care coverage are assumed to elect coverage upon retirement or disability. 58% of male members and 32% of female members who elect coverage upon retirement are assumed to elect spouse coverage.

7. **Spouse Age**

   Females are assumed to be two years younger than males.

DATA PROCESSING

The census data provided by TriMet was essentially complete. Data deficiencies, if any, which we deemed could be material to the overall valuation results were reported to TriMet with a request to fix the deficiencies.

CHANGES TO ASSUMPTIONS SINCE THE PRIOR VALUATION

The following items have changed since our prior valuation:

- Health care claims costs and trend rates were updated.

SUMMARY OF PARTICIPANT DATA

The following is a summary of participant data used in our analysis as of January 1, 2017, and is based on information provided by TriMet. All data for valuation purposes was accepted without audit.

	Count	Average Age
Active	2,457	49.0
Healthy Retiree – Under 65	225	62.2
Healthy Retiree – Over 65	893	72.4
Disabled Retiree – Under 65	133	58.2
Disabled Retiree – Over 65	91	69.1
Surviving Spouse – Under 65	34	53.1
Surviving Spouse – Over 65	103	76.6
Total	3,936	
Spouses of Retirees	792	66.1

Average Service – Actives

Service to Valuation Date	10.3
Expected Future Service	12.5

DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND SERVICE

	Years of Service							
AGE	0 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24	25 TO 29	30 & Up	Total
Under 25	29	0	0	0	0	0	0	29
25 to 29	107	6	0	0	0	0	0	113
30 to 34	135	43	3	0	0	0	0	181
35 to 39	125	56	15	11	1	0	0	208
40 to 44	150	62	37	35	7	0	0	291
45 to 49	167	66	41	61	54	4	1	394
50 to 54	143	65	66	65	50	24	8	421
55 to 59	121	67	37	69	56	32	31	413
60 to 64	64	44	36	65	32	13	42	296
65 & Up	12	21	17	24	17	6	14	111
Total	1053	430	252	330	217	79	96	2,457

SUMMARY OF BENEFITS VALUED

The following summary is intended only to describe our understanding of the essential features of the postemployment benefits other than pensions (OPEB) provided to current and future Non-Union retirees of TriMet as of January 1, 2017. All eligibility requirements and benefit amounts shall be determined in strict accordance with the relevant plan documents. To the extent that this summary does not accurately reflect any OPEB provisions, the results of this valuation may need to be revised.

There are two categories of OPEB valued under GASB 45: explicit employer benefits and implicit employer subsidies. Explicit employer benefits are paid from the employer to the retiree or from the employer to a benefits provider on behalf of the retiree. Implicit employer subsidies arise from offering benefits to retirees.

Explicit employer benefits under GASB 45 include retiree medical, dental, vision and life insurance coverage, where the employer pays for all or a portion of such coverage. Termination benefits, such as payout of unused sick leave or conversion of such payout to an individual account, are not accounted for under GASB 45.

Implicit employer subsidies under GASB 45 represent the difference between the premiums charged for coverage and the expected claims resulting from that coverage. One common implicit subsidy in Oregon comes from offering pre-Medicare health care insurance coverage to retirees based on the same gross premium rates as are charged to active employees. Health care premiums, priced only for retirees who on average incur higher health care claims costs than younger active employees, would be more expensive than health care premiums that are priced to cover the average costs of both actives and retirees combined. GASB 45 states that this implicit subsidy must be included in the liabilities and costs reported on the entity's financial statements. The liability from the explicit employer benefits plus the implicit employer subsidies equals the total Actuarial Accrued Liability (AAL) under GASB 45.

Unless changed by new legislation, beginning in 2020, an excise tax of 40% is scheduled to apply to the portion of group health care plan costs that exceeds thresholds set under law. While many details of this excise tax are still unknown, its overall structure is clear enough that actuaries are generally making an estimate of its potential impact when performing OPEB valuations. We have modeled the impact of the excise tax in this valuation. The effect of the excise tax can be observed by the increase in trend rates beginning in 2028 for pre-65 medical benefits, and in 2042 for post-65 medical benefits.

GASB 75 will replace GASB 45 and become effective for employer fiscal years beginning after June 15, 2017. Therefore, only accounting calculations for the fiscal year ending June 30, 2017 are presented in this GASB 45 valuation report.

To our knowledge, the summary below covers all OPEB for Non-Union retirees of TriMet which result in material AAL under GASB 45. If additional retiree benefits may result in AAL under GASB 45, the results of this valuation may need to be revised.

Eligibility

Retirees who were employees immediately prior to retirement at or after attaining age 55 are eligible for OPEB benefits after they meet the following requirements:

- Tier 1 – Hired prior to April 27, 2003
    - 5 years of credited service as a Non-Union employee
- Tier 2 – Hired from April 27, 2003 through April 30, 2009
    - 10 years of credited service as a Non-Union employee
- Tier 3 – hired on or after May 1, 2009
    - 10 years of credited service as a Non-Union employee

Health Care Benefits

Medical, prescription drug, dental and vision benefits are provided to all covered retirees, spouses and domestic partners. Dependents receive all benefits.

Benefits are payable over the life of the retiree and spouse or domestic partner while both are alive. Following the retiree's death, benefits continue to the surviving spouse or domestic partner and qualified dependent(s) until the earlier of the survivor's death or 10 years after the retiree's death.

Retirees and their dependents under age 65, and non-Medicare may continue to receive the same health care coverage received prior to retirement. Health insurance premiums for retirees who are not eligible for one of TriMet's Medicare Advantage plans are underwritten together with active employees. Retirees must enroll in a Medicare Advantage plan upon reaching Medicare eligibility.

Retiree health benefits cease for Tier 3 retirees when the employee becomes eligible for coverage under Medicare.

Retirees pay a portion of the health care premium according to the following table.

Employee Class	Percent of Premium
Grandfathered Retiree (retired prior to January 1, 1988)	0%
Hired before May 1, 2009	
Full-time active or retiree	6%
Part-time active or retiree (worked 30-37.4 hours/week)	6%
Part-time active or retiree (worked 20-29 hours/week)	25%
Hired on or after May 1, 2009	100%

The implicit employer subsidy is measured as the expected health care cost per retiree and dependent, less the gross premiums charged by the insurance carrier for that coverage.

We are not aware of any additional implicit employer OPEB subsidies that result in GASB 45 AAL.

Life Insurance Benefits

Eligible retirees are provided a $10,000 whole life insurance benefit fully paid by TriMet.

Changes since the Prior Valuation

The portion of the health care premium part-time active employees or retirees (30-37.4 hours/week) pay decreased from 10% to 6%.

As of January 1, 2017 Regence plans are self-funded.

OPEB COSTS AND PREMIUMS

The following methods were used to establish costs and premiums for purposes of measuring the OPEB liability.

Health Care Premiums per Month

Current total health insurance premiums charged by providers are shown below. Premiums are the same for full-time and part-time employees.

Provider / Covered Group	January – December 2017		
	Retired after 1987		Retired prior to 1988
Regence PPO			
Retiree Only	$ 629.78		$ 740.66
Retiree & Spouse/Domestic Partner	1,322.48		1,484.56
Retiree & Child(ren)	1,102.08		1,327.24
Family	1,763.28		2,008.94
Regence HDHP/HSA PPO	HDHP	HSA	
Retiree Only	$ 487.46	$ 62.50	N/A
Retiree & Spouse/Domestic Partner	1,023.64	125.00	N/A
Retiree & Child(ren)	853.16	125.00	N/A
Family	1,364.88	125.00	N/A
United Healthcare PPO	$ 437.81		N/A
Kaiser Permanente			
Retiree Only	$ 571.06		N/A
Retiree & Spouse/Domestic Partner	1,142.12		N/A
Retiree & Child(ren)	1,027.90		N/A
Family	1,713.16		N/A
Medicare, Single*	391.30		N/A
Moda Dental			
Retiree Only	$ 68.78		$ 68.78
Retiree & Spouse/Domestic Partner	129.96		129.96
Retiree & Child(ren)	130.68		130.68
Family	196.02		196.02
Kaiser Dental			
Retiree Only	$ 55.84		$ 55.84
Retiree & Spouse/Domestic Partner	105.52		105.52
Retiree & Child(ren)	106.08		106.08
Family	159.12		159.12

** Over age 65 members with Medicare Part A and B coverage*

Expected Health Care Costs Per Person per Month

Expected health care costs were developed using a composite of the premiums due for active and retired members electing coverage as of December 31, 2016. The effective date of the premiums provided as of the valuation date was January 1, 2017.

Expected dental costs for Moda Dental and Kaiser Dental were blended based on expected election rates by plan and tier as shown below:

Covered Group	Moda	Kaiser
Retiree Only	95%	5%
Retiree and Spouse/Domestic Partner	90%	10%

Milliman's Health Cost Guidelines were used to allocate costs by age and gender. Retirees' costs include a load for expected health status of retirees relative to active employees and spouses.

Jeff Bradley, FSA and health consultant with Milliman, assisted in the development of the per capita claims costs.

For the period January 1, 2017 – December 31, 2017:

Regence – Retired after 1987				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$ 822.28	$ 869.03	$ 693.35	$ 775.50
60	999.97	984.35	847.28	878.75
64	1,245.26	1,132.36	1,046.43	995.20

Kaiser – Under 65 – Retired after 1987				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$ 826.95	$ 873.97	$ 824.68	$ 907.08
60	1,005.66	989.94	979.80	1,011.05
64	1,252.34	1,138.79	1,180.65	1,128.28

Kaiser – 65 and Older – Retired after 1987				
	Retiree		Spouse	
Age	Male	Female	Male	Female
65	$390.94	$392.03	$390.94	$392.03
70	406.74	385.17	406.74	385.17
75	422.02	378.08	422.02	378.08
80	427.58	379.27	427.58	379.27
85	423.61	362.96	423.61	362.96
90+	418.72	339.02	418.72	339.02

United Healthcare and Regence – Retired prior to 1988				
	Retiree		Spouse	
Age	Male	Female	Male	Female
65	$ 442.94	$ 444.17	$ 442.94	$ 444.17
70	460.84	436.40	460.84	436.40
75	478.15	428.37	478.15	428.37
80	484.45	429.72	484.45	429.72
85	479.96	411.23	479.96	411.23
90+	474.41	384.11	474.41	384.11

Dental				
	Retiree		Spouse	
Age	Male	Female	Male	Female
55	$62.31	$66.45	$66.03	$70.16
60	69.82	71.82	73.53	75.53
65	76.31	74.01	80.02	77.72
70+	81.14	73.76	84.84	77.47

Expected Carrier Elections

Medical and prescription drug costs for current retirees are valued based on the retiree's elected plan. For active members and retirees under age 65, post-65 coverage is valued assuming the member elects a carrier according to the percentages as shown in the following table. In the case where a retiree and spouse are on separate pre-65 and post-65 plans ("split coverage"), the pre-65 member is assumed to elect the same plan as the post-65 member at age 65.

Medical and prescription drug costs for future retirees and post-65 coverage for members currently under age 65 are valued assuming the member elects a carrier according to the percentages as shown in the following table, except in the case of split pre-65 and post-65 coverage as noted above.

Carrier	Pre-65	Carrier	Post-65
Regence PPO	70%	Kaiser Senior Advantage	30%
Regence HSA PPO	0%	United Healthcare	70%
Kaiser HMO	30%		

Life Insurance

Life insurance for current and future retirees was valued at its face amount under the valuation assumptions.

Administrative Expenses

No administrative expenses were valued.

ACTUARIAL COST METHOD

The method used for this valuation is the **Entry Age Normal Actuarial Cost Method** with Normal Cost expressed as a level percent of pay.

The **Present Value of Benefits** is the present value of projected benefits (projected costs less retiree contributions) discounted at the valuation discount rate.

The Present Value of Benefits is allocated over the service for each active employee from their date of hire to their expected retirement age, as a level percent of the employee's pay. This level percent times pay is referred to as the **Normal Cost**, and is that portion of the Present Value of Benefits attributable to an employee's service in the current year. The Normal Cost equals $0 for retired members.

The **Actuarial Accrued Liability (AAL)** is the Present Value of Benefits less the actuarial present value of future Normal Costs and represents the liabilities allocated to service up to the valuation date. For retirees, the Actuarial Accrued Liability is equal to the Present Value of Benefits.

The **Annual Required Contribution (ARC)** is the amount TriMet would be required to report as an expense for a given fiscal year under GASB 45. The ARC is equal to the Normal Cost plus an amount to amortize the unfunded AAL as a level percentage of payroll over 21 years as of December 31, 2016 on a closed basis. Note, the ARC represents an accounting expense, but TriMet is not required to contribute the ARC to a separate trust. If TriMet does not set aside funds equal to the ARC each year, then the ARC (less actual benefit payments) will accumulate as a liability (Net OPEB Obligation) on its balance sheet.

ACTUARIAL ASSUMPTIONS

This section of the report describes the assumptions used for the Non-Union Plan. These assumptions have been chosen on the basis of recent experience of the Plan, published actuarial tables and on current and future expectations. Please see our letters regarding the assumptions for the Actuarial Valuation for the TriMet Defined Benefit Retirement Plan for Management and Staff Employees dated May 14, 2015 and February 18, 2016 for additional detail regarding the development of the demographic assumptions not related to Plan coverage.

The assumptions are intended to estimate the future experience of the participants of the Plan and of the Plan itself in areas which affect the projected benefit flow. Any variations in future experience from that expected from these assumptions will result in corresponding changes in the estimated costs of the Plan's benefits.

ECONOMIC ASSUMPTIONS

1. **Discount Rate**

   3.50%. The discount rate is based on long-term expectations of investment return for the Oregon Local Government Investment Pool or similar investments, which are representative of TriMet's general financial assets. In our professional judgment the selected discount rate is reasonable and is not expected to have any significant bias.

2. **Inflation**

   2.50% per annum compounded annually.

3. **Health Care Cost Trend**

   Health care cost trend affects both the projected health care costs as well as the projected health care premiums. Jeff Bradley, FSA and health consultant with Milliman, assisted in the development of the trend rates.

   Dental: 5.0% per year.

   Medical and prescription drugs:

Pre-65			Post-65	
Year	Trend Rate		Year	Trend Rate
2017	8.25%		2017	8.50%
2018	6.25%		2018	6.00%
2019	5.75%		2019	5.75%
2020-2024	5.25%		2020-2024	5.25%
2025-2027	5.00%		2025-2031	5.00%
2028-2031	5.25%		2032-2040	5.25%
2032	5.50%		2041	5.00%
2033-2040	6.00%		2042	5.50%
2041-2044	5.75%		2043-2052	5.25%
2045-2052	5.50%		2053	5.00%
2053-2064	5.25%		2054	5.25%
2065-2066	5.00%		2055	5.75%

Pre-65			Post-65	
Year	Trend Rate		Year	Trend Rate
2067-2069	4.75%		2056-2064	5.50%
2070-2073	4.50%		2065-2066	5.25%
2074+	4.25%		2067-2069	5.00%
			2070-2071	4.75%
			2072-2085	4.50%
			2086+	4.25%

These trend assumptions are based on a model circulated by the Society of Actuaries. The model considers current trends in health care costs, the potential impacts of the Affordable Care Act (including an excise tax scheduled to apply to high-cost plans beginning in 2020), and long-term constraints on trend such as growth in per capita income and percentage of income that health care costs will ultimately represent.

4. **Annual Salary Increases**

   2.75%, compounded annually for purposes of attributing individual costs under the Entry Age Normal Actuarial Cost Method.

5. **Annual Payroll Increases**

   2.00%, compounded annually for purposes of amortizing the unfunded AAL.

DEMOGRAPHIC ASSUMPTIONS

6. **Healthy and Disabled Mortality**

   For healthy participants, RP-2014 Healthy Annuitant Mortality Table with White Collar adjustment for males and females, projected 10 years past the valuation date using Scale BB. This assumption includes a margin for future mortality improvement.

   For disabled participants, RP-2014 Disability Mortality table for males and females, projected 10 years past the valuation date using Scale BB.

   No pre-retirement mortality is assumed.

7. **Withdrawal**

   Rates are shown below:

Years of Service	Annual Rates Male & Female	Years of Service	Annual Rates Male & Female
0-2	12.0%	7-10	3.5%
3-4	9.0%	11-15	2.5%
5-6	5.0%	16+	1.0%

8. **Retirement**

Rates are shown below:

Age	Annual Rates	Age	Annual Rates
55-57	2%	62	35%
58-60	7%	63-66	30%
61	15%	67	100%

9. **Disablement**

None.

10. **Future Retiree and Spouse Coverage**

All active members hired before May 1, 2009 and eligible for health care coverage are assumed to elect coverage upon retirement or disability. 79% of male members and 56% of female members who elect coverage upon retirement are assumed to elect spouse coverage.

50% of active members hired on or after May 1, 2009 and eligible for health care coverage are assumed to elect coverage upon retirement or disability. 70% of male members and 35% of female members who elect coverage upon retirement are assumed to elect spouse coverage.

11. **Spouse Age**

Males are assumed to be 3 years older than their spouses or domestic partners and female participants are assumed to be 2 years younger than their spouses or domestic partners.

12. **Lapse Rates**

Members hired before May 1, 2009 are not assumed to subsequently decline coverage after retirement. The probability of members hired on or after May 1, 2009 to decline renewal of coverage after retirement is 3% per year.

DATA PROCESSING

The census data provided by TriMet was essentially complete. Data deficiencies, if any, which we deemed could be material to the overall valuation results were reported to TriMet with a request to fix the deficiencies.

CHANGES TO ASSUMPTIONS SINCE THE PRIOR VALUATION

The following items have changed since our prior valuation:

- Health care claims costs and trend rates were updated.

SUMMARY OF PARTICIPANT DATA

The following is a summary of participant data used in our analysis as of January 1, 2017, and is based on information provided by TriMet. All data for valuation purposes was accepted without audit.

	Count	Average Age
Active	431	48.7
Healthy Retiree – Under 65	33	62.7
Healthy Retiree – Over 65	123	72.5
Disabled Retiree – Under 65	4	60.5
Disabled Retiree – Over 65	2	65.5
Surviving Spouse – Under 65	1	63.0
Surviving Spouse – Over 65	4	81.8
Total	598	
Spouses of Retirees	104	67.7

Average Service – Actives

Service to Valuation Date	11.4
Expected Future Service	13.2

DISTRIBUTION OF ACTIVE MEMBERS BY AGE AND SERVICE

	Years of Service							
			Hired prior to 4/27/03					
AGE	Hired after 5/1/09	Hired 4/27/03 to 4/30/09	11 TO 14	15 TO 19	20 TO 24	25 TO 29	30 & Up	Total
Under 25	0	0	0	0	0	0	0	0
25 to 29	9	0	0	0	0	0	0	9
30 to 34	36	3	0	0	0	0	0	39
35 to 39	35	14	1	4	0	0	0	54
40 to 44	21	20	3	12	2	0	0	58
45 to 49	30	13	3	13	10	1	0	70
50 to 54	19	16	1	11	12	9	1	69
55 to 59	22	4	2	11	12	7	5	63
60 to 64	12	6	2	7	7	6	11	51
65 & Up	3	4	1	2	5	2	1	18
Total	187	80	13	60	48	25	18	431