Pension Plan for Bargaining Unit Employees of TriMet

July 1, 2016 GASB 67 and 68 Valuation

Prepared by:

Milliman, Inc.

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August 2016

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August 15, 2016

Ms. Dee Brookshire
Executive Director of Finance and Administration
TriMet
1800 SW 1st Avenue, Suite 300
Portland, Oregon 97201

Dear Dee:

As requested, we performed an actuarial valuation of the Pension Plan for Bargaining Unit Employees of TriMet as of July 1, 2016. Our findings are set forth in this actuary's report.

In preparing this report, we relied, without audit, on information (some oral and some in writing) supplied by TriMet. This information includes, but is not limited to, benefit provisions, member census data, and financial information. We found this information to be reasonably consistent and comparable with information used for other purposes. The valuation results depend on the integrity of this information. If any of this information is inaccurate or incomplete our results may be different and our calculations may need to be revised.

All costs, liabilities, and other factors for the Plan have been determined on the basis of actuarial assumptions and methods which are individually reasonable (taking into account the experience of the Plan and reasonable expectations); and which, in combination, offer a reasonable estimate of anticipated experience affecting the Plan. The assumptions used for the valuation were selected by TriMet and the Plan's Board of Trustees, including the assumption for the long term expected return on plan assets of 6.75%. TriMet and the Plan's Board of Trustees have the final decision regarding the appropriateness of the assumptions.

This valuation report is only an estimate of the Plan's financial condition as of a single date. It can neither predict the Plan's future condition nor guarantee future financial soundness. Actuarial valuations do not affect the ultimate cost of Plan benefits. 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.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of our assignment, we did not perform an analysis of the potential range of future measurements.

Actuarial computations presented in this report are for purpose of fulfilling TriMet's financial accounting and reporting requirements under GASB 67 and 68. The calculations enclosed in this report have been made on a basis consistent with our understanding of the Plan, TriMet's funding policy and GASB 67 and 68. Determinations for purposes other than meeting financial reporting requirements may be significantly different than the results contained in this report. Accordingly, additional determinations may be needed for other purposes, such as judging benefit security or meeting employer funding requirements.

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.

The signing actuary is independent of the plan sponsor. I am not aware of any relationship that would impair the objectivity of our work.

On the basis of the foregoing, I hereby certify that, to the best of my knowledge and belief, this report is complete and accurate and has been prepared in accordance with generally recognized and accepted actuarial principles and practices. I am a member of the American Academy of Actuaries and meet the Qualification Standards to render the actuarial opinion contained herein.

Sincerely,

Nina Lantz

Nina Lantz, FSA, EA, MAAA
Principal and Consulting Actuary

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PENSION PLAN FOR BARGAINING UNIT EMPLOYEES OF TRIMET

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SECTION 1
Purpose and Summary

Purpose

This report presents the results of our actuarial valuation of the Plan as of July 1, 2016. The purpose of this report is to develop the actuarial disclosure information required by the Government Accounting Standards Board (GASB) Statements No. 67 and 68 as of June 30, 2016.

The assumptions used for the valuation were selected by TriMet and the Plan's Board of Trustees, including the assumption for the long term expected return on plan assets of 6.75%. Performing the valuation using other assumptions will yield different results.

The figures in this report are only intended for financial reporting under GASB 67 and 68. Funding calculations as of July 1, 2016 have not yet been completed, but may be based in part on the findings in this report.

Plan Benefits Valued

Plan provisions used were based on the Amended and Restated Plan effective July 1, 2013, as amended through Amendment 2 and the Working and Wage Agreement between TriMet and ATU 757 in effect from December 1, 2012 through November 30, 2016. The provisions are summarized in Appendix A.

- Amendment 2 clarified the definition of continuous service, specified instances when a participant can recommence participation upon rehire or transfer, updated the benefit rates and cleaned up some administrative provisions. These changes did not impact Plan liabilities.

Actuarial Methods and Assumptions

Appendix B summarizes the assumptions and methods used for the valuation. Changes from the July 1, 2015 actuarial valuation are listed below.

- The long-term expected return on plan assets was lowered from 7.00% to 6.75% to reflect updated economic expectations.

- The healthy mortality tables were updated to reflect recent experience and more current published mortality tables. The new tables are the 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.

- The disability mortality tables were updated to reflect more current published mortality tables. The new tables are the RP-2014 Disability Mortality Tables for males and females.

- The inflation assumption was lowered from 2.75% to 2.50% to reflect updated economic expectations. The assumed post-retirement benefit increases and the factors used to annualize benefits were updated to reflect the change in the inflation assumption.

The net effect of lowering the long-term expected return assumption and the lowering the inflation assumption was an increase in total pension liability of about $3.7 million. The changes to the mortality assumptions increased total pension liability by about $15.1 million.

Participant Statistics

The following is a summary of the more important figures developed in this valuation, together with comparable figures from the prior valuation report. The participant data that was supplied to us is summarized in more detail in Appendix C.

	July 1, 2015	July 1, 2016
Active Participants	1,706	1,580
Average Age	51.8	52.2
Average Years of Vesting Service	14.6	15.2
Management Transfers	64	64
Vested Terminations	133	122
Retirees, Disabled & Beneficiaries	1,611	1,701
Average Age	68.7	69.1
Average Monthly Benefit	$1,632	$1,623
Total Participants	3,514	3,467
Ratio of Inactives to Actives	99%	111%

GASB Summary

A summary of the key figures disclosed under the new GASB standards for fiscal years ending June 30, 2015 and June 30, 2016 are shown below.

	June 30, 2015	June 30, 2016
Total Pension Liability	$ 625,232,678	$ 656,436,988
Fiduciary Net Position	465,814,951	472,829,115
Net Pension Liability	$ 159,417,727	$ 183,607,873
Funded Percentage	74.50%	72.03%
Pension Expense	$ 23,028,018	$ 29,193,028
Discount Rate	7.00%	6.75%
Long-term Expected Return on Plan Assets	7.00%	6.75%
Actuarially determined contribution	$ 31,925,575	$ 28,030,416
Actual employer contribution*	36,200,926	38,026,735
Contribution deficiency (excess)	$ (4,275,351)	$ (9,996,319)

* *Excluding contributions for Medicare reimbursement payments.*

The annual pension expense reflects changes in the net pension liability from the prior year to the current year, with limited smoothing for investment gains and losses, economic and demographic gains and losses and assumption changes.

Experience Gains and Losses

Experience gains and losses occur due to Plan experience that is different from the actuarial assumptions used to value the Plan's liabilities and assets. Since actual experience will never exactly match the Plan's assumptions, it is certain that the Plan will experience actuarial gains and losses each year. These gains and losses arise from three sources: investment experience, expense experience, and demographic experience. During the 2015-2016 plan year, the total experience loss was approximately $21.8 million.

Investment Experience

The investment rate of return on the fiduciary net position for the plan year ending June 30, 2016 was about 0.42%. Compared to the 7.0% return assumed for the 2015-2016 plan year, there was an investment loss of approximately $30.8 million.

Expense Experience

There was an experience gain of about $18,000 due to lower administrative expenses than the $300,000 assumed during the 2015-2016 plan year.

Demographic Experience

Demographic gains and losses occur when the Plan's actual demographic experience differs from our valuation assumptions. The Plan experienced a net gain on the total pension liability of approximately $9.0 million from demographic experience different than assumed.

Cost-of-living adjustments (COLAs) during the 2015-2016 plan year were below the valuation assumption (2.75% for participants who retired before August 1, 2012 and 2.475% for participants who retired on or after August 1, 2012). The actual COLA was 0% for all participants. These lower than expected increases made up the majority of the $9.0 million gain.

Sensitivity of Results

The results presented in this report are dependent upon the actuarial assumptions being realized in the future. To the extent that actual Plan experience differs from the assumptions, future actuarial costs will differ from those presented in this report.

SECTION 2
Discussion of the Valuation

Implementation of GASB 67 and 68

GASB released new accounting standards for public pension plans and employers in June 2012. These standards, GASB Statements No. 67 and 68, substantially revised the accounting requirements previously mandated under GASB Statements No. 25 and 27. GASB 67 applies to financial reporting for public pension plans and is effective for plan fiscal years beginning after June 15, 2014. GASB 68 governs the accounting for pension plan obligations for public employers and is effective for employer fiscal years beginning after June 15, 2015.

TriMet elected to apply both of the new GASB accounting standards effective beginning with the fiscal year ending June 30, 2014.

A summary of the historical measurements is shown on Exhibit 7.

Discount Rate

Under GASB 67 and 68, the discount rate is a single rate that reflects the long-term expected rate of return on the fiduciary net position to the extent those assets plus future contributions in excess of normal costs are sufficient to pay projected benefits, and a 20-year tax-exempt, high quality general obligation municipal bond yield or index rate to the extent that assets and future contributions are not sufficient.

Further, the standards provide that professional judgment should be used in projecting contributions for this solvency projection. Contributions established by statute or contract or any formal, written policy related to contributions should be reflected. The most recent five years of contributions made by the employer should also be considered as a key indicator of future contributions. TriMet adopted a formal, written funding policy which should be considered in conjunction with their recent contribution practice for purposes of developing the discount rate.

Exhibit 1 describes the techniques and assumptions used for the depletion date projection. Exhibit 2 shows the projection of the fiduciary net position assuming all assumptions are met and describes the discount rate. Exhibit 3 shows the discount rate as of June 30, 2015 and June 30, 2016.

Net Pension Liability

The net pension liability is measured as the total pension liability minus the fiduciary net position.

Total pension liability is determined using the entry age normal actuarial cost allocation method. In addition, GASB 67 and 68 require that the allocation of costs for accounting purposes be made as a level percentage of employees' projected pay, including future anticipated pay increases. The Plan's total pension liability reflects a 2.75% long-term annual salary increase assumption.

The fiduciary net position is equal to the market value of assets as of the valuation date.

Exhibit 3 shows the net pension liability as of June 30, 2015 and June 30, 2016. The changes in the net pension liability from June 30, 2015 to June 30, 2016 are shown on Exhibit 4. The 10-year schedule of changes in the net pension liability and related ratios are provided in Exhibit 7. This 10-year schedule is shown on a prospective basis from June 30, 2011 as allowed under GASB 67 and 68.

Sensitivity Analysis

Exhibit 4 shows what the net pension liability would be using a discount rate that is 1 percentage point lower and 1 percentage point higher than the rate used as of June 30, 2016.

Deferred Inflows and Outflows

Under GASB 68, gains and losses which are amortized over future years are referred to as deferred inflows (gains) and deferred outflows (losses).

- Investment gains and losses are recognized over a closed five year period.
- Economic and demographic gains and losses and changes in the total pension liability due to changes in assumptions are recognized over the closed period equal to the average expected remaining service lives of all covered active and inactive employees, determined as of the beginning of the measurement period.

  The amortization period is calculated as the weighted average of expected remaining service lives assuming zero years for all inactive employees. Active employees include management transfers and inactive employees include terminated vested and disabled employees, retirees and beneficiaries.

  The amortization period for the June 30, 2015 to June 30, 2016 measurement period was 5.0, based on the following statistics.

As of June 30, 2015	Expected Remaining Service Lives	Employee Count
Active employees	9.882	1,770
Inactive employees	0.000	1,744

Exhibit 5 shows the total deferred inflows and outflows of resources as of June 30, 2016 along with a schedule showing the amounts that will be recognized in future years. All outstanding deferred inflows and outflows as of June 30, 2016 are shown on Exhibit 6.

Pension Expense

The annual pension expense reflects changes in the net pension liability from the prior year to the current year, with limited smoothing for deferred items. Because GASB requires that a portion of the changes in the net pension liability due to gains and losses and assumption changes be reflected during the current fiscal year, the final pension expense for any year will not be known until after the fiscal year end. Exhibit 5 shows the pension expense for the fiscal year ending June 30, 2016.

Schedule of Employer Contributions

Exhibit 8 is a 10-year schedule of the actuarially determined contribution, contributions made in relation to the actuarially determined contribution and related ratios. It also summarizes the significant methods and assumptions that were used to develop the actuarially determined contribution.

Money-Weighted Rate of Return

Exhibit 9 is calculation of the money-weighted rate of return net of investment expenses for the fiscal year ending June 30, 2016 assuming monthly cash flows occur at the end of each month.

Long-Term Expected Rate of Return by Asset Class

Exhibit 10 provides the expected real rate of return for each asset class, excluding inflation. It is based on the capital market assumptions developed by Milliman's investment consulting practice as of December 31, 2015 and the Plan's investment policy adopted by the Plan's Board of Trustees and last amended December 8, 2015.

Notes and Required Supplementary Information

GASB 67 and 68 require additional information be presented in the notes to the financial statements and required supplementary information (RSI). The attached exhibits relate to the actuarial disclosures of the Plan. Additional information related to the Plan provisions, census data, and assumptions and methods used for the actuarial disclosures may be found in the respective actuarial valuation reports for the applicable plan years.

Exhibit 1

Depletion Date Projection

In order to determine if the Plan's fiduciary net position is projected to be sufficient to make projected benefit payments, we have prepared a depletion date projection using the following techniques and assumptions:

- Benefit payments are projected based on the Plan provisions summarized in Appendix A and the actuarial assumptions and methods described in Appendix B. Projected benefit payments are shown in Appendix D.

- Administrative expenses are assumed to be $300,000 for the 2016-2017 fiscal year, increasing 3% per year for each year benefit payments increase, and decreasing 2% per year thereafter.

- TriMet is assumed to contribute the actuarially determined contribution each year. The funding policy used to determine the actuarially determined contribution is assumed to not change in the future.

  On February 26, 2014, TriMet's Board of Directors approved Resolution 14-02-06, formally adopting a pension funding policy for the Plan. This policy provides for an actuarially determined contribution based on the following parameters:

  - Use of the entry age normal, level percentage of payroll actuarial cost allocation method

  - Five year smoothing of market value investment gains and losses, with the resulting smoothed asset value within 20% of market value

  - Long-term average annual investment return on plan assets (to be reviewed and updated as appropriate at least every 2 years).

  - Initial amortization period of 15 years, reducing one year annually until 5 years is reached.

- The 15-year amortization period was effective July 1, 2014. The amortization period as of July 1, 2016 is 13 years.

- All cash flows are assumed to occur on average halfway through the year.

- The long-term expected rate of return on pension plan investments is 6.75%.

- The assumed tax-exempt, high-quality general obligation municipal bond index rate is 2.85%.

Future projections will yield different results as actual Plan experience becomes known.

Exhibit 2

Projection of Fiduciary Net Position and Discount Rate

Fiscal Year Beginning	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings	Projected Ending Fiduciary Net Position
7/1/2016	472,829,115	28,497,521	(34,470,783)	(300,000)	31,707,700	498,263,553
7/1/2017	498,263,553	28,153,902	(37,136,043)	(309,000)	33,324,334	522,296,746
7/1/2018	522,296,746	28,276,926	(39,802,315)	(318,270)	34,861,834	545,314,921
7/1/2019	545,314,921	29,357,123	(42,405,112)	(327,818)	36,364,695	568,303,809
7/1/2020	568,303,809	30,064,901	(44,843,012)	(337,653)	37,858,680	591,046,725
7/1/2021	591,046,725	29,969,894	(47,132,225)	(347,783)	39,314,337	612,850,948
7/1/2022	612,850,948	29,875,068	(49,435,998)	(358,216)	40,706,145	633,637,947
7/1/2023	633,637,947	29,827,386	(51,593,611)	(368,962)	42,035,697	653,538,457
7/1/2024	653,538,457	29,834,690	(53,573,232)	(380,031)	43,313,135	672,733,019
7/1/2025	672,733,019	25,557,489	(55,340,675)	(391,432)	44,407,714	686,966,115
7/1/2026	686,966,115	21,947,490	(57,084,994)	(403,175)	45,190,301	696,615,737
7/1/2027	696,615,737	18,878,350	(58,568,934)	(415,270)	45,690,091	702,199,974
7/1/2028	702,199,974	16,284,042	(59,877,089)	(427,728)	45,937,056	704,116,255
7/1/2029	704,116,255	14,073,016	(61,004,182)	(440,560)	45,955,157	702,699,686
7/1/2030	702,699,686	12,191,745	(61,988,353)	(453,777)	45,763,970	698,213,271
7/1/2031	698,213,271	10,574,141	(62,951,438)	(467,390)	45,375,009	690,743,593
7/1/2032	690,743,593	9,183,004	(63,618,018)	(481,412)	44,802,027	680,629,194
7/1/2033	680,629,194	8,003,331	(63,990,022)	(495,854)	44,067,311	668,213,960
7/1/2034	668,213,960	6,991,068	(64,121,710)	(510,730)	43,190,811	653,763,399
7/1/2035	653,763,399	6,095,047	(64,081,282)	(500,515)	42,187,333	637,463,982
7/1/2036	637,463,982	5,312,854	(63,828,019)	(490,505)	41,069,895	619,528,207
7/1/2037	619,528,207	4,647,420	(63,329,641)	(480,695)	39,854,009	600,219,300
7/1/2038	600,219,300	4,063,335	(62,664,287)	(471,081)	38,553,675	579,700,942
7/1/2039	579,700,942	3,554,749	(61,796,592)	(461,659)	37,180,921	558,178,361
7/1/2040	558,178,361	3,118,458	(60,716,622)	(452,426)	35,749,823	535,877,594
7/1/2041	535,877,594	2,740,205	(59,469,126)	(443,377)	34,273,679	512,978,975
7/1/2042	512,978,975	2,410,386	(58,046,448)	(434,509)	32,764,599	489,673,003
7/1/2043	489,673,003	2,120,101	(56,545,970)	(425,819)	31,231,911	466,053,226
7/1/2044	466,053,226	1,866,969	(54,941,234)	(417,303)	29,682,731	442,244,389
7/1/2045	442,244,389	1,644,776	(53,204,318)	(408,957)	28,126,198	418,402,088
7/1/2046	418,402,088	1,452,447	(51,390,908)	(400,778)	26,570,933	394,633,782
7/1/2047	394,633,782	1,283,923	(49,535,554)	(392,762)	25,022,839	371,012,228
7/1/2048	371,012,228	1,137,196	(47,588,279)	(384,907)	23,488,421	347,664,659
7/1/2049	347,664,659	1,014,302	(45,541,421)	(377,209)	21,976,589	324,736,920
7/1/2050	324,736,920	913,029	(43,436,441)	(369,665)	20,495,738	302,339,581
7/1/2051	302,339,581	825,927	(41,309,856)	(362,272)	19,051,872	280,545,252

Note: Years on and after July 1, 2052 and before July 1, 2086 have been omitted from this table.

Exhibit 2

Projection of Fiduciary Net Position and Discount Rate

Fiscal Year Beginning	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings	Projected Ending Fiduciary Net Position
7/1/2086	640,292	187,884	(253,826)	(178,628)	35,100	430,822
7/1/2087	430,822	182,983	(179,984)	(175,055)	23,368	282,134
7/1/2088	282,134	178,326	(125,044)	(171,554)	15,118	178,980
7/1/2089	178,980	173,895	(85,036)	(168,123)	9,450	109,166
7/1/2090	109,166	169,673	(56,545)	(164,761)	5,655	63,188
7/1/2091	63,188	165,643	(36,744)	(161,466)	3,184	33,805
7/1/2092	33,805	161,788	(23,331)	(158,237)	1,625	15,650
7/1/2093	15,650	158,090	(14,468)	(155,072)	676	4,876
7/1/2094	4,876	154,539	(8,751)	(151,971)	124	(1,183)
7/1/2095	(1,183)	151,172	(5,161)	(148,932)	(177)	(4,281)
7/1/2096	(4,281)	148,000	(2,973)	(145,953)	(320)	(5,527)
7/1/2097	(5,527)	144,825	(1,664)	(143,034)	(369)	(5,769)
7/1/2098	(5,769)	141,699	(896)	(140,173)	(368)	(5,507)
7/1/2099	(5,507)	138,651	(474)	(137,370)	(345)	(5,045)
7/1/2100	(5,045)	135,690	(244)	(134,623)	(313)	(4,535)
7/1/2101	(4,535)	132,818	(114)	(131,931)	(280)	(4,042)
7/1/2102	(4,042)	130,030	(53)	(129,292)	(250)	(3,607)
7/1/2103	(3,607)	127,322	(26)	(126,706)	(224)	(3,241)
7/1/2104	(3,241)	124,691	(10)	(124,172)	(202)	(2,934)
7/1/2105	(2,934)	122,130	(3)	(121,689)	(184)	(2,680)
7/1/2106	(2,680)	119,634	(1)	(119,255)	(168)	(2,470)
7/1/2107	(2,470)	117,200	-	(116,870)	(156)	(2,296)

<u>Projection Results:</u> The Plan’s fiduciary net position is projected to become insolvent during the 2094-2095 plan year. Nearly all of the Plan’s benefits are expected to have been paid out by this time. Assuming a municipal bond rate of 2.85% after this year, the single effective discount rate would be 6.749988%.

<u>Discount Rate:</u> The discount rate for purposes of calculating liabilities in this report is equal to the expected long-term expected rate of return on plan assets, 6.75%.

Exhibit 3

Net Pension Liability

Net Pension Liability	June 30, 2015	June 30, 2016
Total pension liability	$ 625,232,678	$ 656,436,988
Fiduciary net position	465,814,951	472,829,115
Net pension liability	$ 159,417,727	$ 183,607,873
Fiduciary net position as a % of total pension liability	74.50%	72.03%
Covered payroll	$ 116,555,801	$ 117,666,306
Net pension liability as a % of covered payroll	136.77%	156.04%

The total pension liability was determined by an actuarial valuation as of the valuation date, calculated based on the discount rate and actuarial assumptions below.

Discount Rate

The Plan's fiduciary net position plus anticipated future contributions in adherence with the funding policy is projected to become insolvent during the years shown below. Nearly all of the Plan's benefits are expected to have been paid out by this time. The single effective discount rate for purposes of calculating liabilities in this report is equal to the expected long-term expected rate of return on plan assets.

Year of insolvency	2098-2099	2094-2095
Discount rate	7.00%	6.75%
Long-term expected rate of return (net of investment expenses)	7.00%	6.75%

Other Key Actuarial Assumptions

Valuation date	July 1, 2015	July 1, 2016
Measurement date	June 30, 2015	June 30, 2016
Inflation	2.75%	2.50%
Salary Increases	2.75%	2.75%
Cost-of-Living Adjustments		
Benefit Multiplier	Inflation	Salary Increases
If retired prior to August 1, 2012, Disability Benefits	Inflation	Inflation
If retired on or after August 1, 2012	90% of Inflation	90% of Inflation
Mortality	RP-2000 Combined Healthy Mortality Table with Blue Collar Adjustment for males and females, projected to 2010 using Scale AA	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
Actuarial cost method	Entry Age Normal as Level % of Pay	Entry Age Normal as Level % of Pay

Exhibit 4

Changes in Net Pension Liability
(June 30, 2015 to June 30, 2016)

	Increase (Decrease)		
Changes in Net Pension Liability	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances as of June 30, 2015	$625,232,678	$465,814,951	$159,417,727
Changes for the year:			
Service cost	10,702,574		10,702,574
Interest on total pension liability	43,371,673		43,371,673
Effect of plan changes	0		0
Effect of economic/demographic (gains) or losses	(8,966,475)		(8,966,475)
Effect of assumptions changes or inputs	18,776,392		18,776,392
Benefit payments*	(32,679,854)	(32,679,854)	0
Administrative expenses		(281,539)	281,539
Member contributions		0	0
Net investment income		1,948,822	(1,948,822)
Employer contributions*		38,026,735	(38,026,735)
Balances as of June 30, 2016	$656,436,988	$472,829,115	$183,607,873

* *Medicare reimbursements are excluded in the benefit payment and employer contribution amounts above.*

Sensitivity Analysis

The following presents the net pension liability of the Plan, calculated using the discount rate of 6.75%, as well as what the Plan's net pension liability would be if it were calculated using a discount rate that is 1 percentage point lower (5.75%) or 1 percentage point higher (7.75%) than the current rate.

	1% Decrease 5.75%	Current Discount Rate 6.75%	1% Increase 7.75%
Total pension liability	$733,435,966	$656,436,988	$591,315,762
Fiduciary net position	472,829,115	472,829,115	472,829,115
Net pension liability	$260,606,851	$183,607,873	$118,486,647

Exhibit 5

Pension Expense

Pension Expense	July 1, 2015 to June 30, 2016
Service cost	$10,702,574
Interest on total pension liability	43,371,673
Effect of plan changes	0
Administrative expenses	281,539
Member contributions	0
Expected investment return net of investment expenses	(32,704,133)
Recognition of Deferred (Inflows)/Outflows of Resources	
Recognition of economic/demographic (gains) or losses	(3,992,965)
Recognition of assumption changes or inputs	8,287,965
Recognition of investment (gains) or losses	3,246,375
Pension Expense	$29,193,028

As of June 30, 2016, the deferred inflows and outflows of resources are as follows:

Deferred Inflows / Outflows of Resources	Deferred Inflows of Resources*	Deferred Outflows of Resources*
Differences between expected and actual experience	$ (15,921,267)	$ 1,505,942
Changes of assumptions or inputs	(10,425,699)	34,536,614
Net difference between projected and actual earnings	0	17,783,625
Contributions made subsequent to measurement date	0	0
Total	$ (26,346,966)	$ 53,826,181

* *Deferred outflows of resources are presented as positive amounts. Deferred inflows of resources are presented as negative amounts.*

Other amounts currently reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	Annual Recognition*
2017	$ 3,216,914
2018	5,996,724
2019	11,419,170
2020	6,846,407
2021	0
Thereafter	0

** Note that future deferred inflows and outflows of resources may impact these numbers.*

Exhibit 6

Schedule of Deferred Inflows and Outflows of Resources

	Original Amount	Date Established	Original Recognition Period*	Amount Recognized in Expense 06/30/2016	Balance of Deferred Inflows 06/30/2016	Balance of Deferred Outflows 06/30/2016
Investment (gains) or losses	$ 30,755,311	06/30/2016	5.0	$ 6,151,062	$ 0	$ 24,604,249
	19,269,512	06/30/2015	5.0	3,853,902	0	11,561,708
	(36,496,410)	06/30/2014	5.0	(7,299,282)	(14,598,564)	0
	(18,918,832)	06/30/2013	5.0	(3,783,766)	(3,783,768)	0
	21,622,299	06/30/2012	5.0	4,324,459	0	0
				$ 3,246,375	$ (18,382,332) **	$ 36,165,957**
Economic/demographic (gains) or losses	$ (8,966,475)	06/30/2016	5.0	$ (1,793,295)	$ (7,173,180)	$ 0
	(541,183)	06/30/2015	5.4	(100,219)	(340,745)	0
	(11,294,241)	06/30/2014	5.8	(1,947,283)	(5,452,392)	0
	(8,583,422)	06/30/2013	6.1	(1,407,118)	(2,954,950)	0
	7,780,692	06/30/2012	6.2	1,254,950	0	1,505,942
				$ (3,992,965)	$ (15,921,267)	$ 1,505,942
Assumption changes or inputs	$ 18,776,392	06/30/2016	5.0	$ 3,755,278	$ 0	$ 15,021,114
	(16,558,463)	06/30/2015	5.4	(3,066,382)	(10,425,699)	0
	29,476,059	06/30/2014	5.8	5,082,079	0	14,229,822
	15,353,638	06/30/2013	6.1	2,516,990	0	5,285,678
				$ 8,287,965	$ (10,425,699)	$ 34,536,614

* *Investment (gains)/losses are recognized in pension expense over a period of five years; economic/demographic (gains)/losses and assumption changes or inputs are recognized over the weighted average of expected remaining service lives for all active and inactive participants.*

** *In accordance with paragraph 33b of GASB 68, the balances of deferred inflows and outflows have been combined for reporting purposes (see Exhibit 5).*

Exhibit 7

Schedule of Changes in Total Pension Liability, Fiduciary Net Position and Related Ratios

	Fiscal Year Ending June 30,									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Pension Liability										
Service cost	$10,702,574	$11,756,232	$11,406,016	$11,122,166	$11,030,625	$0	$0	$0	$0	$0
Interest on total pension liability	43,371,673	43,025,200	42,869,939	41,827,133	40,065,267	0	0	0	0	0
Effect of plan changes	0	0	0	0	(10,616,209)	0	0	0	0	0
Effect of assumption changes or inputs	18,776,392	(16,558,463)	29,476,059	15,353,638	0	0	0	0	0	0
Effect of economic/demographic (gains) or losses	(8,966,475)	(541,183)	(11,294,241)	(8,583,422)	7,780,692	0	0	0	0	0
Benefit payments*	(32,679,854)	(30,677,192)	(28,845,723)	(27,372,519)	(23,863,800)	0	0	0	0	0
Net change in total pension liability	31,204,310	7,004,594	43,612,050	32,346,996	24,396,575	0	0	0	0	0
Total pension liability, beginning	625,232,678	618,228,084	574,616,034	542,269,038	517,872,463	0	0	0	0	0
Total pension liability, ending (a)	$656,436,988	$625,232,678	$618,228,084	$574,616,034	$542,269,038	$517,872,463	0	0	0	0
Fiduciary Net Position										
Employer contributions*	$38,026,735	$36,200,926	$47,261,301	$70,379,741	$18,823,691	$0	$0	$0	$0	$0
Member contributions	0	0	0	0	0	0	0	0	0	0
Investment income net of investment expenses	1,948,822	12,275,500	64,460,966	42,348,566	792,478	0	0	0	0	0
Benefit payments*	(32,679,854)	(30,677,192)	(28,845,723)	(27,372,519)	(23,863,800)	0	0	0	0	0
Administrative expenses	(281,539)	(363,267)	(486,934)	(222,824)	(289,032)	0	0	0	0	0
Net change in plan fiduciary net position	7,014,164	17,435,967	82,389,610	85,132,964	(4,536,663)	0	0	0	0	0
Fiduciary net position, beginning	465,814,951	448,378,984	365,989,374	280,856,410	285,393,073	0	0	0	0	0
Fiduciary net position, ending (b)	$472,829,115	$465,814,951	$448,378,984	$365,989,374	$280,856,410	$285,393,073	0	0	0	0
Net pension liability, ending = (a) - (b)	$183,607,873	$159,417,727	$169,849,100	$208,626,660	$261,412,628	$232,479,390	$0	$0	$0	$0
Fiduciary net position as a % of total pension liability	72.03%	74.50%	72.53%	63.69%	51.79%	55.11%	N/A	N/A	N/A	N/A
Covered payroll	$117,666,306	$116,555,801	$124,695,531	$125,143,307	$125,142,143	$119,165,798	$0	$0	$0	$0
Net pension liability as a % of covered payroll	156.04%	136.77%	136.21%	166.71%	208.89%	195.09%	N/A	N/A	N/A	N/A

* *Medicare reimbursements are excluded in the benefit payment and employer contribution amounts above.*

This schedule is presented to illustrate the requirement to show information for 10 years. However, recalculations of prior years are not required, and if prior years are not calculated in accordance with the current GASB standards, they should not be reported.

Exhibit 8

Schedule of Employer Contributions
(Dollar Amounts in Thousands)

	Fiscal Year Ending June 30,									
	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially determined contribution	$ 28,030	$ 31,926	$ 35,553	$ 34,638	$ 32,224	$ 34,028	$ 28,051	$ 26,154	$ 26,177	$ 25,511
Actual employer contribution*	38,027	36,201	47,261	70,379	18,824	47,428	28,051	26,154	26,177	25,511
Contribution deficiency (excess)	(9,996)	(4,275)	(11,708)	(35,741)	13,400	(13,400)	0	0	0	0
Covered payroll	117,666	116,556	124,696	125,143	125,142	119,166	121,124	123,784	116,418	111,877
Contribution as a % of covered payroll	32.32%	31.06%	37.90%	56.24%	15.04%	39.80%	23.16%	21.13%	22.49%	22.80%
Valuation Date	7/1/2015	7/1/2014	7/1/2012	7/1/2011	7/1/2010	7/1/2009	7/1/2008	7/1/2007	7/1/2006	7/1/2005
Investment Rate of Return Assumption	7.00%	7.00%	7.75%	7.75%	8.00%	8.00%	8.00%	8.00%	8.00%	8.00%

* *Medicare reimbursements are excluded in the actual employer contribution amounts above.*

Notes to Schedule – *The assumptions below reflect those used for valuations up through July 1, 2015.*

Valuation Date	Effective July 1, 2014:	Actuarially determined contribution (ADC) calculated using the valuation for the current fiscal year
	Effective July 1, 2006:	ADC calculated as of the July 1 the year prior to fiscal year in which contributions are reported
Methods and assumptions used to determine contribution rates		
Actuarial Cost Method	Effective July 1, 2014:	Individual entry age normal, level percent of pay
	Effective July 1, 2004:	Individual entry age normal, level dollar
Amortization Method	Effective July 1, 2014:	Closed 15-year amortization, level percent of pay, decreasing by 1 each year until 5 is reached
	Effective July 1, 2006:	Open 20-year amortization, level dollar
	Effective July 1, 2005:	Open 21-year amortization, level dollar
	Effective July 1, 2004:	Open 22-year amortization, level dollar
Asset Valuation Method	Market value gains and losses smoothed over 5 years, with result not less than 80% or greater than 120% of market value	
Healthy Mortality	Effective July 1, 2010:	RP-2000 Combined Healthy Mortality with Blue Collar Adjustment, projected to 2010 using Scale AA
	Effective July 1, 2004:	RP-2000 Combined Healthy Mortality with Blue Collar Adjustment
Inflation and Pay Increases	Effective July 1, 2015:	2.75%
	Effective July 1, 2004:	3.00%
Cost of Living Adjustments	Effective July 1, 2004	
Benefit Multiplier and Disability Benefits	Inflation	
If retired prior to August 1, 2012	Inflation	
If retired on or after August 1, 2012	90% of inflation (valuation dates on and after July 1, 2012), 100% of inflation (valuation dates prior to July 1, 2012)	

Exhibit 9

Money-Weighted Rate of Return
(Fiscal Year Ending June 30, 2016)

The money-weighted rate of return is the internal rate of return on plan assets based on the amounts and timing of actual cash flows. External cash flows (contributions, benefit payments and administrative expenses) are determined on a monthly basis and are assumed to occur at the end of each month. External cash inflows are netted with external cash outflows, resulting in a net external cash flow in each month. The money-weighted rate of return is calculated net of investment expenses. For these calculations, Medicare reimbursements have been excluded from both contributions and benefit payments.

	Net External Cash Flows	Periods Invested	Period Weight	Net External Cash Flows With Interest
Beginning Value - July 1, 2015	$465,814,951	12.00	1.00	$467,756,542
Monthly net external cash flows:				
July	364,964	11.00	0.92	366,363
August	355,497	10.00	0.83	356,726
September	282,029	9.00	0.75	282,910
October	330,367	8.00	0.67	331,289
November	309,175	7.00	0.58	309,922
December	253,847	6.00	0.50	254,375
January	320,824	5.00	0.42	321,385
February	293,768	4.00	0.33	294,172
March	249,832	3.00	0.25	250,092
April	289,060	2.00	0.17	289,264
May	293,661	1.00	0.08	293,759
June	1,722,316	0.00	0.00	1,722,316
Ending Value - June 30, 2016				$472,829,115
Money-Weighted Rate of Return	0.42%			

Schedule of Investment Returns

Fiscal Year Ending June 30,	Money-Weighted Rate of Return Net of Investment Expenses
2016	0.42%
2015	2.73%
2014	17.28%
2013	N/A
2012	N/A
2011	N/A
2010	N/A
2009	N/A
2008	N/A
2007	N/A
2006	N/A

Exhibit 10

Long-Term Expected Rate of Return by Asset Class

The best-estimate range for the long-term expected rate of return is determined by adding expected inflation to expected long-term real returns and reflecting expected volatility and correlation. The capital market assumptions shown are one-year arithmetic averages, excluding inflation, developed by Milliman's investment consulting practice as of December 31, 2015. The Plan's investment policy adopted by the Plan's Board of Trustees was last amended December 8, 2015.

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Fixed Income	10%	2.1%
U.S. Large-Mid Cap Equities	27%	5.2%
U.S. Small Cap Equities	3%	6.1%
Non-US Equities	22%	6.1%
Tactical Asset Allocation*	8%	4.0%
Absolute Return	15%	2.2%
Private Real Estate	10%	4.0%
Private Equity	3%	9.1%
Private Credit**	2%	4.3%

* *Tactical Asset Allocation Strategies were assumed to be split 60% in Global Equity and 40% in Investment Grade Fixed Income.*

** *Private Credit was assumed to have similar expected returns, volatility, and correlations as High Yield Bonds.*

Appendix A

Plan Provisions

Plan Provisions

Plan provisions used were based on the Amended and Restated Plan effective July 1, 2013, as amended through Amendment 2 and the Working and Wage Agreement between TriMet and ATU 757 in effect from December 1, 2012 through November 30, 2016.

Name

Pension Plan for Bargaining Unit Employees of TriMet.

Effective Date

The Plan was originally adopted in 1979 and was last restated effective July 1, 2013.

Eligibility

All ATU 757 bargaining unit employees of TriMet (TriMet Union employees) hired before August 1, 2012. TriMet Union employees who transfer to a management position continue to earn service for vesting purposes and retirement eligibility. However, no additional benefits are earned for continuous service as a management employee.

TriMet Union employees hired on or after August 1, 2012 are not eligible to participate in this Plan.

Participants who are re-employed as an eligible employee on or after August 1, 2012 may recommence participation if the rehire date is before the earlier of (1) 36 months following termination or (2) the date their break in service exceeds their continuous service before the break in service.

Participants who transfer from an eligible employee to an ineligible employee may recommence participation if they transfer back to an eligible employee on or after August 1, 2012 and they did not have a termination date between transfers.

Continuous Service

All periods of service during which the employee is a member of the bargaining unit represented by ATU 757, working either as a full-time employee or mini-run operator, is entitled to payment for services rendered to TriMet and is eligible to participate in this Plan. Continuous service includes periods of layoff due to reduction in force of less than five years, authorized leave of absences if certain requirements are met, and time while serving as an officer of the ATU 757.

Continuous service is measured using elapsed time. Each twelve month period of continuous service equals one year of continuous service and partial years are based on the number of days worked divided by 365.25.

Vesting Service

All continuous service plus any period of service (not already counted as continuous service) when an employee is entitled to payment for services rendered to TriMet, excluding service preceding a permanent break in service.

Normal Retirement

(a) Eligibility

For participants who earn at least 10 years of vesting service, the Normal Retirement Age is determined from the following schedule:

Severance from Service Date	Normal Retirement Age
December 1, 1994 to November 30, 1998	62
December 1, 1998 to November 30, 2000	61
December 1, 2000 to November 30, 2002	60
December 1, 2002 to November 30, 2004	59
On or after December 1, 2004	58

(b) Benefit

The normal retirement benefit for participants retiring or terminating after February 1, 1992 is determined by multiplying continuous service times the benefit rate in effect on the date of retirement or termination of employment, whichever is earlier. Mini-run operators receive 75% of the benefit rate shown below.

Effective Beginning	Benefit Rate	Effective Beginning	Benefit Rate
February 1, 1992	$ 42.00	September 1, 2004	$ 62.45
September 1, 1992	43.26	September 1, 2005	64.33
September 1, 1993	44.13	September 1, 2006	66.26
September 1, 1994	44.57	September 1, 2007	68.25
September 1, 1995	47.02	September 1, 2008	70.84
September 1, 1996	48.43	September 1, 2009	72.96
September 1, 1997	50.27	February 1, 2010	72.96
September 1, 1998	51.93	February 1, 2011	75.52
September 1, 1999	53.49	February 1, 2012	78.97
September 1, 2000	55.49	February 1, 2013	78.97
September 1, 2001	57.15	February 1, 2014	78.97
September 1, 2002	58.87	February 1, 2015	81.34
September 1, 2003	60.64	February 1, 2016	83.78

Beginning December 1, 2009, benefit rates are adjusted on February 1 each year by the amount of any specified general wage adjustment under the Working and Wage Agreement during the preceding twelve months.

A benefit derived from unused sick leave is added to the above benefit as described in (c) below.

(c) Unused Sick Leave

Vested participants who terminate after becoming eligible for early retirement will have unused accumulated sick leave up to the maximum accumulated sick leave converted to a monthly benefit at a rate of $.25 per hour for each hour of unused accrued sick leave.

Severance from Service Date	Maximum Accumulated Sick Leave
December 1, 1998	1,400 hours
December 1, 2003	1,450 hours
December 1, 2004	1,500 hours
December 1, 2005	1,550 hours
December 1, 2006	1,600 hours
December 1, 2007	1,650 hours
December 1, 2008	1,700 hours

Early Retirement

(a) Eligibility

A participant may retire prior to his normal retirement date if he has 10 years of vesting service and is at least 55 years of age.

30 & Out: From December 1, 2003 to December 1, 2009, an active participant may retire with unreduced benefits after he has earned 30 years of continuous service, regardless of age.

(b) Benefit

The normal retirement benefit will be reduced according to the following table:

	Percent Reduction from Normal Retirement Age				
	62	61	60	59	58
Age at Retirement / Effective	12/01/1994 through 11/30/1998	12/01/1998 through 11/30/2000	12/01/2000 through 11/30/2002	12/01/2002 through 11/30/2004	12/01/2004 to Current
62	0.00%	0.00%	0.00%	0.00%	0.00%
61	10.12	0.00	0.00	0.00	0.00
60	19.06	9.95	0.00	0.00	0.00
59	26.98	18.76	9.78	0.00	0.00
58	34.01	26.59	18.48	9.63	0.00
57	40.28	33.56	26.22	18.21	9.49
56	45.87	39.78	33.13	25.87	17.97
55	50.87	45.34	39.31	32.72	25.55

Forms of Payment

(a) Single Life Annuity

(b) 66 2/3% Joint and Survivor Annuity

Disability Benefit

(a) Eligibility

An active participant who becomes disabled after 10 years of continuous service may receive a disability benefit if he becomes permanently disabled from performing the participant's occupation while employed with TriMet prior to reaching Social Security retirement age (62). Disability benefits are paid from the Plan until the participant reaches age 62.

(b) Benefit

A benefit payable during the period of disability is determined from the table below. If the participant is entitled to disability benefits under Social Security, the benefits shown below are doubled. Participants who are mini-run operators on the date they become permanently disabled will receive 75% of the amounts below.

Effective	10 Years of Continuous Service	15 Years of Continuous Service	20 Years of Continuous Service
February 1, 1992	$388.60	$468.38	$544.07
February 1, 1993	400.26	482.43	560.39
February 1, 1994	408.27	492.08	571.60
February 1, 1995	434.80	524.06	608.75
February 1, 1996	441.76	532.45	618.49
February 1, 1997	457.22	551.08	640.14
February 1, 1998	472.31	569.27	661.26
February 1, 1999	481.76	580.66	674.49
February 1, 2000	502.72	605.92	703.83
February 1, 2001	519.71	626.40	727.62
February 1, 2002	533.90	643.50	747.48
February 1, 2003	545.01	656.88	763.03
February 1, 2004	569.92	686.90	797.90
February 1, 2005	586.50	706.89	821.12
February 1, 2006	602.28	725.91	843.21
February 1, 2007	620.47	747.83	868.67
February 1, 2008	643.37	775.42	900.72
February 1, 2009	669.62	807.06	937.47
February 1, 2010	674.51	812.95	944.31
February 1, 2011	698.19	841.49	977.46
February 1, 2012	730.10	879.95	1,022.13
May 1, 2013	745.43	898.43	1,043.59
May 1, 2014	755.64	910.74	1,057.89
May 1, 2015	766.98	924.40	1,073.76
May 1, 2016	766.98	924.40	1,073.76

Disability benefits increase at the same time and percentage as post-retirement benefit increases for participants who retired before August 1, 2012.

The disabled participant's retirement benefit at age 62 is calculated using service that includes continuous service during disability as if the participant remained in active employment from the date of disability to age 62, and the benefit rate in effect at age 62.

Vesting

A participant who terminates employment with at least ten years of vesting service as of the date of termination will be 100% vested.

Contributions

Contributions are made to the Trust Fund by TriMet. There are no participant contributions. The Working and Wage Agreement between the ATU and TriMet establishes a minimum amortization period of 40 years. The necessary amount will be determined in accordance with accepted actuarial principles.

Pre-retirement Death Benefit

(a) Married Employee or Domestic Partner

If a vested participant, the participant's spouse or domestic partner will receive 50% of the accrued benefit. The benefit is paid to the spouse when the spouse attains age 62 (or, if later, the date of the participant's death). The payment to the domestic partner must commence no later than the December 31 of the calendar year following the participant's death. If the domestic partner is younger than age 62, the benefit is actuarially reduced to reflect the age of the domestic partner on the date of benefit commencement.

(b) Disability

If a participant receiving disability benefits dies on or after age 55 but prior to age 62, the surviving spouse or domestic partner may elect to receive either the benefits in (a) above or the survivor portion of the 66 2/3% joint and survivor annuity.

Post-Retirement Benefit Increases

Prior to August 1, 2012, post-retirement benefits were increased each February 1 by the aggregate amount of any specified general wage adjustment under the Working and Wage Agreement during the preceding twelve months.

Effective August 1, 2012, post-retirement benefits are increased each May 1 during the period of the agreement as follows:

- For participants who retired before August 1, 2012, the post-retirement benefit increase is 100% of the percentage increase in the U.S. Urban Wage Earners and Clerical Workers Consumer Price Index (CPI-W) (annual average) for the previous calendar year. Annual increases will not be more than 7% per year.

- For participants who retire on or after August 1, 2012, the post-retirement benefit increase is 90% of the percentage increase in the U.S. Urban Wage Earners and Clerical Workers Consumer Price Index (CPI-W) (annual average) for the previous calendar year. Annual increases will not be more than 7% per year.

Plan Amendments since the Prior Valuation

Amendment 2 clarified the definition of continuous service, specified instances when a participant can recommence participation upon rehire or transfer, updated the benefit rates and cleaned up some administrative provisions. These changes did not impact Plan liabilities.

Appendix B

Actuarial Assumptions and Cost Methods

Actuarial Assumptions and Cost Method

This section of the report describes the actuarial procedures and assumptions used in this valuation. These procedures and 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 dated February 18, 2016 for additional detail regarding the development of these assumptions.

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.

Records and Data

The data used in the valuation consist of employee data and financial information furnished by TriMet. All data for valuation purposes was accepted without audit.

Adjustment for Incomplete Data

If necessary, active participant records missing hire date are assumed to have a hire age equal to the average hire age of the active participants with complete data. Records missing spouse gender assume the spouse is the opposite sex of the participant. Records missing spouse date of birth assume females are two years younger than their spouses.

Actuarial Cost Method (Effective July 1, 2014)

The accruing costs of all benefits are measured by the individual entry age normal actuarial cost method. The normal cost expressed as a level percentage of payroll.

Under this method, the total actuarial present value of projected benefits is allocated over the service for each active participant from their date of entry into the Plan until their assumed date of exit from the Plan, as a level percent of payroll. This level percent times payroll is referred to as the normal cost, and is calculated for each active participant. It is calculated by dividing each participant's total actuarial present value of projected benefits at entry age by the actuarial present value of projected salaries at entry age and multiplying this percentage by the participant's anticipated salary for the current plan year. The normal cost equals $0 for non-active participants. The sum of the individual normal costs is the normal cost for the Plan.

The Plan's total pension liability is equal to the total actuarial present value of projected benefits less the actuarial present value of future normal costs. Net pension liability is equal to total pension liability minus the Plan's fiduciary net position.

Fiduciary Net Position (effective July 1, 2014)

The Plan's fiduciary net position is equal to the fair market value of the Plan's assets, as provided by TriMet.

Long-term Expected Return on Plan Assets (effective July 1, 2016)

6.75% per annum compounded annually, net of investment management and custodial fees.

Inflation (effective July 1, 2016)

2.50% per annum compounded annually.

Administrative Expenses (effective July 1, 2015)

Annual administrative expenses of $300,000 payable midyear are assumed.

Annualized Pay (effective July 1, 2014)

Rates of pay for each active Union participant and salaries for each Management Transfer are provided by TriMet. Annual pay for active Union participants are calculated by multiplying the pay rate by 2,080 hours (40 hours per week) for full time participants and 1,560 hours (30 hours per week) for mini-run participants.

Pay Increases (effective July 1, 2015)

Annualized pay is assumed to increase 2.75% per year.

Pre- and Post-Retirement Benefit Increases

The benefit multiplier is assumed to increase 2.75%, the same as pay increases. Temporary disability benefits for active participants who become disabled after the valuation date are assumed to increase with inflation (2.50%).

For terminations, disabilities and retirements assumed to occur in the 2016-2017 plan year, the benefit rates used in the valuation are as shown below.

	2016 – 2017
Benefit Multiplier	$ 86.08
Disability Benefit	
10 Years of Continuous Service	$ 786.15
15 Years of Continuous Service	947.51
20 Years of Continuous Service	1,100.60

Benefits for participants who retired prior to August 1, 2012 are assumed to increase 2.50% per year into the future.

Benefits for participants who retire on or after August 1, 2012 are assumed to increase 2.25% (90% of 2.50%) per year into the future.

Mortality

Healthy Lives Mortality (effective July 1, 2016)

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.

Disabled Lives Mortality (effective July 1, 2016)

RP-2014 Disability Mortality Tables for males and females.

Future Service Credits

Active and disabled participants are assumed to earn one year of vesting service and one year of continuous service credit each year into the future. Management transfers are assumed to earn one year vesting service and no continuous service each year in the future.

Mini-Run to Full Time (effective July 1, 2014)

Active mini-run participants are assumed to transfer to full time based on the following schedule:

Years of Vesting Service	Annual Rate
Less than 4	40%
4 or more	5%

Form of Benefit (effective July 1, 2014)

All non-retired participants with a spouse or domestic partner are assumed to elect the following form of payment at retirement:

Probability	Form of Payment
33 1/3%	Single Life Annuity
66 2/3%	66 2/3% Joint & Survivor Annuity

Retired participants are valued according to the benefit form elected at retirement.

Retirement from Active Status (effective July 1, 2014)

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

Age	Annual Rate	Age	Annual Rate
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

Retirement from Inactive Status

Terminated vested participants are assumed to retire at their earliest unreduced retirement age. Disabled participants are assumed to retire at age 62.

Disablement (effective July 1, 2014)

70% of the 1985 Pension Disability Table – Class 3 – Unisex (for nonhazardous light manual workers). Sample rates of disablement used in this valuation are illustrated below.

Age	Number of Participants Becoming Disabled During the Year (per 1,000 Actives)
30	2
35	3
40	4
45	6
50	9
55	15
60	22

It is assumed that 75% of disabled participants will become eligible for Social Security disability benefits.

Tabular disability benefits are assumed to be paid to age 62. At age 62, the benefit is converted to a retirement benefit based on the participant's projected service and projected benefit level at age 62.

Disabled participants who have not yet retired are assumed to have fully accrued their projected age 62 retirement benefit at the date of their disability.

Withdrawal (effective July 1, 2014)

Participants are assumed to leave active employment for reasons other than retirement, disability and death. Sample withdrawal rates are shown below:

Years of Vesting Service	Number of Participants Withdrawing During the Year (per 1,000 Actives)	
	Males	Females
Less than 1	50	140
1-6	25	30
7-9	15	30
10 and more	5	10

Unused Sick Leave Benefits (effective July 1, 2014)

Active participants are assumed to accumulate a percentage of the maximum accumulated sick leave hours in effect at retirement, based on the following schedule:

Years of Vesting Service	Sick Hours Percentage
Less than 10	0%
10	20%
11 – 15	25%
16 – 18	35%
19 – 20	40%
21 – 23	50%
24 and more	55%

Active Management Transfers are not assumed to return to the Union Plan following their transfer date and are not assumed to receive the unused sick leave benefit. (effective July 1, 2012)

The schedule of maximum accumulated sick leave hours is shown in Appendix A.

Spouse's Age (effective July 1, 2014)

Females are assumed to be two years younger than their spouses or domestic partners.

Probability of Marriage/Domestic Partner (effective July 1, 2014)

66 2/3% of participants are assumed to be married or have a domestic partner.

Annualization of Benefits (effective July 1, 2016)

Benefits for participants who retired prior to August 1, 2012 are annualized using a factor of 12.05 to incorporate the anticipated 2.50% post-retirement benefit increase occurring May 1.

Benefits for participants who retire on or after August 1, 2012 annualized using a factor of 12.045 to incorporate 90% of the anticipated 2.50% retiree post-retirement benefit increase occurring May 1.

Changes in Actuarial Methods and Assumptions

The long-term expected return on plan assets was lowered from 7.00% to 6.75%.

The healthy mortality tables were updated to reflect recent experience and more current published mortality tables. The previous tables were the RP-2000 Combined Healthy Mortality Table with Blue Collar Adjustment for males and females, projected to 2010 using Scale AA.

The disability mortality tables were updated to reflect more current published mortality tables. The previous tables were blended, 75% of the Post-1994 Disability Mortality developed by the IRS (in IRS Revenue Ruling 96-7) for participants who become eligible for Social Security disability benefits, plus 25% of the RP 2000 Combined Healthy Mortality Table with Blue Collar Adjustment for males and females.

The inflation assumption was lowered from 2.75% to 2.50% to reflect updated economic expectations. The assumed post-retirement benefit increases and the factors used to annualize benefits were updated to reflect the change in the inflation assumption.

Appendix C

Participant Information

Participant Information

The current actuarial valuation was based upon the participant data provided by TriMet.

The following table shows the number of participants included in the current actuarial valuation and the comparable numbers from the previous valuation.

	July 1, 2016	July 1, 2015	Change
Active			
Vested Participants	998	1,055	- 5.4%
Non-Vested Participants	582	651	- 10.6%
Management Transfers*	64	64	0.0%
TOTAL ACTIVE	1,644	1,770	- 7.1%
Inactive			
Retirees & Beneficiaries**	1,701	1,611	5.6%
Vested Terminations***	122	133	- 8.3%
TOTAL INACTIVE	1,823	1,744	4.5%
TOTAL PARTICIPANTS	3,467	3,514	- 1.3%

More detailed information on current plan participants is shown on the following pages.

* *These participants no longer accrue continuous service under the Plan but continue to accrue service for vesting purposes.*

** *Includes participants receiving a disability benefit.*

*** *Includes deferred beneficiaries.*

The following is a summary of the significant data for the participants included in this valuation, together with comparable figures from the last two years.

	July 1, 2016	July 1, 2015	July 1, 2014
Active Full-Time Participants			
Number	1,469	1,580	1,674
Average Age	52.0	51.6	51.1
Average Years of Continuous Service	15.4	14.8	14.2
Active Mini-Run Participants			
Number	111	126	143
Average Age	55.1	53.9	53.2
Average Years of Continuous Service	12.8	12.0	11.0
Management Transfers			
Number	64	64	60
Average Age	53.7	53.6	52.8
Vested Terminations (including deferred beneficiaries)			
Number	122	133	140
Average Age	53.1	53.1	53.2
Average Monthly Benefit payable at the Participant's applicable Normal Retirement Age	$ 791	$ 763	$ 725
Retirees and Beneficiaries (including disabled)			
Number in pay status	1,701	1,611	1,518
Average Age	69.1	68.7	68.4
Average Monthly Benefit	$ 1,623	$ 1,632	$ 1,619

Active Participants

Summary by Age and Years of Continuous Service as of July 1, 2016

YEARS OF CONTINUOUS SERVICE

AGE	UNDER 1	1 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24
Under 25	0	0	0	0	0	0
25 to 29	0	8	7	0	0	0
30 to 34	0	27	37	2	0	0
35 to 39	0	20	46	13	11	0
40 to 44	0	22	61	34	35	6
45 to 49	0	24	69	38	60	49
50 to 54	0	24	69	57	69	48
55 to 59	0	23	67	35	78	53
60 to 64	0	5	46	38	69	36
65 & Up	0	3	24	20	30	24
Totals	0	156	426	237	352	216

YEARS OF CONTINUOUS SERVICE

AGE	25 TO 29	30 TO 34	35 TO 39	40 AND OVER	ALL YEARS
Under 25	0	0	0	0	0
25 to 29	0	0	0	0	15
30 to 34	0	0	0	0	66
35 to 39	0	0	0	0	90
40 to 44	0	0	0	0	158
45 to 49	5	0	0	0	245
50 to 54	23	8	0	0	298
55 to 59	37	26	6	0	325
60 to 64	19	32	12	4	261
65 & Up	5	6	5	5	122
Totals	89	72	23	9	1,580
Active Participants without Complete Data					0
Grand Total					1,580

Active Management Transfers

Summary by Age and Years of Continuous Service as of July 1, 2016

YEARS OF CONTINUOUS SERVICE

AGE	UNDER 1	1 TO 4	5 TO 9	10 TO 14	15 TO 19	20 TO 24
Under 25	0	0	0	0	0	0
25 to 29	0	0	0	0	0	0
30 to 34	0	0	1	0	0	0
35 to 39	0	0	4	1	0	0
40 to 44	0	0	0	1	2	0
45 to 49	0	0	0	1	1	2
50 to 54	0	0	2	2	3	7
55 to 59	0	0	0	1	3	4
60 to 64	0	0	1	0	1	3
65 & Up	0	0	0	0	0	1
Totals	0	0	8	6	10	17

YEARS OF CONTINUOUS SERVICE

AGE	25 TO 29	30 TO 34	35 TO 39	40 AND OVER	ALL YEARS
Under 25	0	0	0	0	0
25 to 29	0	0	0	0	0
30 to 34	0	0	0	0	1
35 to 39	0	0	0	0	5
40 to 44	0	0	0	0	3
45 to 49	0	0	0	0	4
50 to 54	3	1	0	0	18
55 to 59	4	2	2	0	16
60 to 64	2	2	3	3	15
65 & Up	0	0	0	1	2
Totals	9	5	5	4	64

Retirees and Beneficiaries
(July 1, 2016)

Service Retirees

Age	Number	Total Monthly Benefit
Under 55	3	$ 1,629
55 to 59	46	67,027
60 to 64	234	372,941
65 to 69	459	795,062
70 to 74	301	482,259
75 to 79	167	291,728
80 to 84	71	110,705
85 & Up	41	73,907
Total	1,322	$ 2,195,258

Disability

Age	Number	Total Monthly Benefit
Under 55	29	$ 46,947
55 to 59	46	88,044
60 to 64	45	80,128
65 to 69	32	63,836
70 to 74	30	64,142
75 to 79	1	2,427
80 to 84	0	0
85 & Up	0	0
Total	183	$ 345,524

Survivors & Beneficiaries

Age	Number	Total Monthly Benefit
Under 55	5	$ 5,392
55 to 59	12	14,813
60 to 64	25	28,383
65 to 69	36	41,436
70 to 74	40	43,879
75 to 79	36	36,516
80 to 84	21	20,277
85 & Up	21	29,220
Total	196	$ 219,916

New Retirees and Disabilities
(July 1, 2016)

Service Retirees*

Age at Retirement	Number	Total Monthly Benefit
Under 55	0	$ 0
55	1	616
56	1	704
57	2	3,321
58	10	16,391
59	5	5,284
60	1	1,639
61	7	13,563
62	21	32,633
63	13	25,363
64	7	10,136
65	6	11,457
66	17	30,400
67	4	8,080
68	1	1,508
69	3	5,051
70 & Up	3	5,025
Total	102	$ 171,171

*Excludes beneficiaries and QDROs

Disability

Age at Disability	Number	Total Monthly Benefit
Under 50	3	$ 3,698
50	0	0
51	0	0
52	0	0
53	2	2,773
54	1	924
55	1	1,534
56	0	0
57	2	3,996
58	1	1,849
59	0	0
60	0	0
61	0	0
62	0	0
Total	10	$ 14,774

Vested Terminated Participants*
(July 1, 2016)

Age	Number	Total Monthly Benefit**
Under 40	1	$ 613
40 to 44	12	10,893
45 to 49	16	12,453
50 to 54	41	36,127
55 to 59	38	28,511
60 & Up	14	7,850
Total	122	$ 96,447

* *Includes deferred beneficiaries.*

** *Amounts shown are payable at the Participant's applicable Normal Retirement Age.*

Appendix D

Estimated Benefit Payments

Projected Benefit Payments*
July 1, 2016

Fiscal Year Beginning July 1,	Benefit Payment	Fiscal Year Beginning July 1,	Benefit Payment	Fiscal Year Beginning July 1,	Benefit Payment
2016	$34,470,783	2049	$45,541,421	2082	$832,589
2017	37,136,043	2050	43,436,441	2083	635,119
2018	39,802,315	2051	41,309,856	2084	476,351
2019	42,405,112	2052	39,145,118	2085	350,978
2020	44,843,012	2053	36,966,966	2086	253,826
2021	47,132,225	2054	34,787,096	2087	179,984
2022	49,435,998	2055	32,630,625	2088	125,044
2023	51,593,611	2056	30,503,483	2089	85,036
2024	53,573,232	2057	28,414,645	2090	56,545
2025	55,340,675	2058	26,380,122	2091	36,744
2026	57,084,994	2059	24,407,260	2092	23,331
2027	58,568,934	2060	22,498,938	2093	14,468
2028	59,877,089	2061	20,664,514	2094	8,751
2029	61,004,182	2062	18,906,485	2095	5,161
2030	61,988,353	2063	17,229,444	2096	2,973
2031	62,951,438	2064	15,635,288	2097	1,664
2032	63,618,018	2065	14,126,080	2098	896
2033	63,990,022	2066	12,702,780	2099	474
2034	64,121,710	2067	11,366,362	2100	244
2035	64,081,282	2068	10,116,921	2101	114
2036	63,828,019	2069	8,954,255	2102	53
2037	63,329,641	2070	7,877,415	2103	26
2038	62,664,287	2071	6,885,134	2104	10
2039	61,796,592	2072	5,975,352	2105	3
2040	60,716,622	2073	5,145,974	2106	1
2041	59,469,126	2074	4,394,535	2107	0
2042	58,046,448	2075	3,718,353	2108	0
2043	56,545,970	2076	3,114,896	2109	0
2044	54,941,234	2077	2,581,304	2110	0
2045	53,204,318	2078	2,114,271	2111	0
2046	51,390,908	2079	1,710,170	2112	0
2047	49,535,554	2080	1,364,994		
2048	47,588,279	2081	1,074,104		

* *This is a closed group projection of benefit payments based on the plan participants as of the valuation date.*