Alameda County Employees' Retirement Association

GASB Statement No. 43 (OPEB) and non-OPEB Actuarial Valuation of the Benefits Provided by the Supplemental Retiree Benefits Reserve, Including Sufficiency of Funds, as of December 31, 2016

Segal Consulting

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September 27, 2017

Board of Retirement
Alameda County Employees' Retirement Association
475 14th Street, Suite 1000
Oakland, CA 94612

Dear Members of the Board:

We are pleased to submit this report on our actuarial valuation of sufficiency of funds for benefits provided by the Supplemental Retiree Benefits Reserve (SRBR) and to satisfy ACERA's accounting disclosure requirements under Statement No. 43 of the Governmental Accounting Standards Board (GASB) for retiree health benefits. (This is the last disclosure report that ACERA has to perform in compliance with the requirements under GASB Statement No. 43 before ACERA switches to the new accounting disclosure requirements under Statement No. 74 effective as of December 31, 2017.) ACERA's accounting disclosure requirements under GASB Statement No. 67 for non-vested supplemental COLA and retired member death benefits provided by the SRBR were included in our GASB 67 report dated May 3, 2017, together with the statutory pension benefits.

The December 31, 2016 census and financial information was prepared by ACERA. We gratefully acknowledge that assistance. The actuarial projections were based on the assumptions and methods described in Exhibit I and on the plan of benefits as summarized in Exhibit II.

The actuarial calculations were completed under the supervision of Eva Yum, FSA, MAAA, Enrolled Actuary and Thomas Bergman, ASA, MAAA, Enrolled Actuary. The undersigned are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

We look forward to discussing this material with you at your convenience.

Sincerely,

Segal Consulting, a Member of The Segal Group, Inc.

By:

Andy Yeung	Eva Yum	Thomas Bergman
Andy Yeung, ASA, MAAA, FCA, EA	*Eva Yum, FSA, MAAA, EA*	*Thomas Bergman, ASA, MAAA, EA*
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SECTION 1

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PURPOSE

I. Other Postemployment Benefits (OPEB)

This report presents the results of our actuarial valuation as of December 31, 2016 of the Alameda County Employees' Retirement Association (ACERA) postretirement medical, dental and vision benefits provided through ACERA's 401(h) account. ACERA has allocated a portion of the Supplemental Retiree Benefits Reserve (SRBR) to be treated as pension contributions if the employers make contributions to the 401(h) account. The results have been prepared with the goal of conforming to those disclosures required by Statement No. 43 of the Governmental Accounting Standards, which establishes accounting requirements for all "Other Postemployment Benefit" (OPEB) Plans of state and local governments. Among its other requirements, GASB Statement No. 43 prescribes an accrual methodology for accumulating the value of OPEB over participants' active working lifetimes.

The actuarial calculations used to prepare this report have been made on a basis consistent with our understanding of GASB Statement No. 43 and the "substantive plan designs" of the OPEB Plan provided by ACERA using guidelines provided by the Board. Actuarial calculations for other purposes may differ significantly from the results reported here.

The most important plan design assumption incorporated in our valuation is that the future monthly medical allowance (MMA) will increase at one-half of our anticipated medical trend assumptions for all years after 2018. However, the SRBR OPEB Plan will reimburse the fully indexed premium required for dental, vision, and enrollment in the Medicare Part B program.

It should be noted that GASB Statement No. 74 will replace Statement No. 43 effective with the next valuation report as of December 31, 2017. As part of the transition to the new financial reporting requirements under GASB Statement No. 74, the Association's auditor recommended that the liabilities of the OPEB no longer be limited by the current SRBR assets, and that recommendation has been approved by the Board. Accordingly, we have changed our summary of OPEB results in Section 2 of this report to show the unlimited liabilities. However, for comparison purposes with last year's report, we have provided in a footnote the OPEB liabilities if limited by the current SRBR assets. Using a similar liability roll forward that is currently in place for the non-OPEB liabilities under GASB Statement No. 67, the unlimited liabilities in this report will be used as the basis when we roll forward the liabilities for the first GASB 74 valuation report to be based on a measurement date of December 31, 2017.

II. Non-OPEB Benefits

The SRBR currently provides benefits in addition to those that qualify as OPEB. These "non-OPEB" benefits include supplemental COLAs and death benefits related to the underlying statutory defined benefit pension plan. It is our understanding that GASB requires such benefits to be reported under GASB Statement No. 67 together with the underlying statutory defined benefit pension plan and, accordingly, they have been included in our December 31, 2016 GASB 67 report dated May 3, 2017.

Similar to the OPEB, we have changed our summary of non-OPEB results in Section 2 of this report to show the unlimited liabilities and to provide (for comparison purpose) the limited liabilities in a footnote. The unlimited liabilities in this report will be used as the basis when we roll forward the liabilities for the next GASB 67 valuation report as of December 31, 2017.

Special Note Pertaining to OPEB and Non-OPEB Benefits

The calculation of benefit obligations pursuant to prescribed accounting requirements does not, in and of itself, imply that ACERA has any legal liability to provide the benefits valued.

Actuarial valuations involve estimates of benefit amounts and assumptions about the probability of their payment far into the future, and the actuarially determined amounts are subject to continual revision as actual results are compared to past expectations and new estimates are made about the future.

ACCOUNTING REQUIREMENTS

OPEB

The Governmental Accounting Standards Board (GASB) has issued Statement Number 43 -- *Financial Reporting for Postemployment Benefit Plans Other Than Pension Plans.* This statement provides the financial reporting requirements for all plans of state and local government entities that provide OPEB. The effective date of these requirements for ACERA is in its financial statement for the year ended December 31, 2006.[1]

Statement No. 43 applies to plans that provide postemployment benefits such as health, prescription drug, dental, vision and life insurance coverage for retirees; long-term care coverage, life insurance and death benefits that are *not* offered as part of a pension plan; and long-term disability insurance for employees. These benefits, referred to as OPEB, are typically financed on a pay-as-you-go basis. GASB No. 43 introduces an accrual-basis accounting requirement; thereby recognizing OPEB cost over an employee's working career. The standard applies accounting requirements for OPEB plans consistent with those that previously applied to pension plans under GASB Statement No. 25.

The total cost of providing future postemployment benefits is projected, taking into account various actuarial assumptions such as plan demographics (e.g., turnover, mortality, disability, and retirement) and health care trends. The future cost is then discounted to determine an actuarial present value of projected benefits (APB). The actuarial accrued liability (AAL) is the portion of the present value of the total projected benefits allocated to years of employment prior to the measurement date. The unfunded actuarial accrued liability (UAAL) is the difference between the AAL and actuarial value of assets in the Plan allocated to these benefits.

Non-OPEB

The accounting standard that governs the non-OPEB benefits (i.e. GASB No. 67) is the same standard that currently governs the statutory retirement benefit.

When measuring pension liability under GASB No. 67, the Total Pension Liability (TPL) is determined on generally the same basis as ACERA's AAL measure used for measuring liabilities for statutory pension benefits. However, the Plan's Fiduciary Net Position is equal to the market value of assets and therefore, the Net Pension Liability (NPL) measure, which is equal to the difference between the TPL and the Plan's Fiduciary Net Position, is very similar to a UAAL calculated on a market value basis.

[1] *As noted earlier, GASB Statement No. 74 will replace Statement No. 43 effective with the next valuation report as of December 31, 2017.*

Important Information about Actuarial Valuations

An actuarial valuation is a budgeting tool with respect to the financing of future projected obligations of an OPEB and non-OPEB plan. It is an estimated forecast – the actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.

In order to prepare an actuarial valuation, Segal Consulting ("Segal") relies on a number of input items. These include:

- **Plan of benefits** Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary in this report (as well as the plan summary included in our funding valuation report) to confirm that Segal has correctly interpreted the plan of benefits.
- **Participant data** An actuarial valuation for a plan is based on data provided to the actuary by the Association. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. It is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
- **Assets** This valuation is based on the market value of assets as of the valuation date, as provided by the Association.
- **Actuarial assumptions** In preparing an actuarial valuation, Segal projects the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This projection requires actuarial assumptions as to the probability of death, disability, termination, and retirement of each participant for each year. In addition, the benefits projected to be paid for each of those events in each future year reflect actuarial assumptions as to health care trends and member enrollment in retiree health benefits for the OPEB plan, and actuarial assumptions as to salary increases and cost-of-living adjustments for the non-OPEB plan. The projected benefits are then discounted to a present value, based on the assumed rate of return that is expected to be achieved on the plan's assets. There is a reasonable range for each assumption used in the projection and the results may vary materially based on which assumptions are selected. It is important for any user of an actuarial valuation to understand this concept. Actuarial assumptions are periodically reviewed to ensure that future valuations reflect emerging plan experience. While future changes in actuarial assumptions may have a significant impact on the reported results, that does not mean that the previous assumptions were unreasonable.

The user of Segal's actuarial valuation (or other actuarial calculations) should keep the following in mind:

- The valuation is prepared at the request of the Board to assist the sponsors of the Fund in preparing items related to the OPEB and non-OPEB plan in their financial reports. Segal is not responsible for the use or misuse of its report, particularly by any other party.
- An actuarial valuation is a measurement of the plan's assets and liabilities at a specific date. Accordingly, except where otherwise noted, Segal did not perform an analysis of the potential range of future financial measures. The actual long-term cost of the plan will be determined by the actual benefits and expenses paid and the actual investment experience of the plan.
- If the Association is aware of any event or trend that was not considered in this valuation that may materially change the results of the valuation, Segal should be advised, so that we can evaluate it.
- Segal does not provide investment, legal, accounting, or tax advice. Segal's valuation is based on our understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Board should look to their other advisors for expertise in these areas.

As Segal Consulting has no discretionary authority with respect to the management or assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Retirement Association.

HIGHLIGHTS OF THE VALUATION

- The actuarial assumptions used in this study are consistent with those assumptions applied by the Retirement Board for the December 31, 2016 pension valuation, including the use of a 7.60% investment return assumption.
- In the last SRBR valuation, we utilized the following medical trend assumptions:
  - All non-Medicare plans and Medicare Advantage plans: starting at 6.75% for 2016 to 2017, reduced by 0.25% for each year until it reaches 5.00%.

  For this valuation, we have recommended to the Board in our letter dated April 25, 2017 that the medical trend assumptions be revised to the following:
  - All non-Medicare plans and Medicare Advantage plans: starting at 6.50% for 2017 to 2018[2], reduced by 0.25% for each year until it reaches 4.50%.
- The Board acted to leave the 2017 MMA unchanged for 2018. The maximum MMA for ACERA sponsored plans and individual (out-of-area) non-Medicare plans remains at $540.44 and the maximum MMA for individual Medicare plans remains at $414.00, for 2018[3].
- For years after 2018, we have assumed that the MMA will increase with 50% of medical trend.
- These and the other OPEB assumptions are provided in Exhibit I.
- The determination of the "substantive plan" underlying ACERA's OPEB was based upon prior directions provided by ACERA, its auditors, as well as the administrative staff, auditors and consultants representing the County of Alameda, along with changes to the plan adopted by the Board on July 19, 2012 to allow retirees to select medical benefits available through the Medicare Exchange. These directions are provided in Exhibit III.
- Based on action taken by the Board in February 2014, we continue to exclude the non-OPEB lump sum retiree death benefit from the pension valuation and have included this death benefit in the results presented herein.
- For this valuation, the Association has continued to provide to us the breakdown of the OPEB and non-OPEB assets as of December 31, 2016.
- The terminal year of the SRBR was determined by projecting how long the SRBR can provide for all non-OPEB and OPEB benefits under the substantive plan outlined in Exhibit III. OPEB benefits can be paid through 2039[4], while non-OPEB benefits can be paid through 2034[4]. Last year, it was projected that OPEB benefits could be paid through 2038 and non-OPEB benefits could be paid through 2035.

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[2] *After we released our preliminary high-level summary letter dated April 26, 2017, the Association approved premiums for 2018. We have used those actual 2018 premiums in this study in lieu of estimating those premiums by using the 6.50% assumption.*

[3] *In 2013, the Board adopted a monthly subsidy of $400 for retirees with 20 or more years of service, $300 for retirees with 15-19 years of service, and $200 for retirees with 10-14 years of service. These amounts were increased by 3.5% in 2016 to $414.00, $310.50, and $207.00, respectively, and remained at these levels for 2017 and 2018. These amounts are used as the MMA for members enrolled in the individual Medicare plans.*

[4] *Assets would only be sufficient to pay benefits for a part of the year indicated.*

The main reasons that the terminal year of the SRBR for OPEB benefits is projected to be one year later than it was in last year's study is the smaller than expected implicit subsidy for retirees,[5] and the Board's decision to maintain the 2017 MMA unchanged for 2018, offset somewhat by the rate of return on the SRBR assets of about 7.2%[6], which was less than the expected return of 7.6% assumed in the December 31, 2015 SRBR valuation for 2016, and a net decrease in the sufficiency period due to assumption changes.[7]

Note that the OPEB sufficiency period did not change from that shown in our April 26, 2017 preview letter. Our preview letter estimated medical plan premiums for 2018 and future years using our trend assumption. Subsequent to our issuing of the preview letter, ACERA reported the 2018 medical plan premium renewals and we have used the actual 2018 premiums in our updated projection shown herein. On average, the premium increases were lower than our expected 6.50% increase from 2017 to 2018. While reflecting actual 2018 premiums in our updated projections lowered the projected payments, the terminal year remained at 2039. However, the partial OPEB payment available in the terminal year increased from \$11.2 million in the preview letter to \$105.8 million shown herein.

- The main reasons the terminal year of the SRBR for non-OPEB benefits is projected to be one year earlier than last year's study are: (a) the rate of return on the SRBR assets of about 7.2%, which was less than the expected return of 7.6% assumed in the December 31, 2015 SRBR valuation for 2016, and (b) the loss due to the actual inflation of 3.50% for 2016 being more than the assumed inflation rate of 3.25%, which increased the expected supplemental COLA benefits projected to be paid (effective April 1, 2017).
- The funded ratio of the OPEB liabilities is 92.0%. The funded ratio of the non-OPEB liabilities is 19.1%. The comparable funded ratios were 91.3% and 21.0% for the OPEB and non-OPEB liabilities, respectively, as of December 31, 2015.
- The terminal years the SRBR can be paid as well as the funding ratios have been developed to reflect only the actuarial value of assets allocated to the SRBR through December 31, 2016. As we indicated on page 6 of our December 31, 2016 actuarial valuation report for the Pension Plan, the Association had deferred investment losses of \$343.9 million that were not yet recognized in determining the combined actuarial value of assets for the Pension Plan and the SRBR Plan as of that date. The deferred losses of \$343.9 million represent 4.9% of the market value of assets as of December 31, 2016, and will

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[5] *The decrease in the estimated implicit subsidy amounts from \$8.9 million in 2016 to \$5.8 million in 2017, both provided by ACERA, lengthened the projected sufficiency period by about two years. For consistency purposes, we have not used the finalized 2016 implicit subsidy amount of \$8.8 million in our calculations, since the estimated amount was used in our December 31, 2016 valuation to approximate the net assets available for the Pension Plan after reimbursement for the 2016 implicit subsidy. We note that the continued used of the estimated transfer amount herein does not have an impact on the projected year that the OPEB assets would be exhausted.*

[6] *Estimated based on a June 30, 2016 interest crediting rate of 3.4268% and a December 31, 2016 interest crediting rate of 3.6527% for the SRBR.*

[7] *Higher medical enrollment assumption for retirees attaining age 65, and higher first year Medicare Part B premium reimbursement trend.*

decrease the rate of return on the actuarial value of assets over the next few years.

- The funding ratio for the non-OPEB benefits is lower than for OPEB benefits because the Actuarial Value of Assets was initially allocated based on the benefit outflows for the OPEB and non-OPEB benefits. The benefit outflows for non-OPEB (in particular, the supplemental COLA) are "back loaded", i.e., they are expected to be larger in later years than in earlier years. This results in a smaller asset allocation relative to liabilities for the non-OPEB benefits.
- Note that in preparing the 401(h) contribution letter for 2017/2018, we had included an additional allocation for expense related to the administration of the health benefits for retirees. However, as we previously demonstrated to the Association during our discussion with the Board on SB 1479, the values in both the employer reserves and the SRBR would remain unchanged relative to the values prior to that allocation, through the operation of SB 1479. For that reason, we have not included the explicit payment of administrative expense out of the 401(h) in preparing the cash flow requirements of the SRBR.
- The projected payments do not include any excise tax that may be imposed in 2020 (implementation deferred from 2018) by the Affordable Care Act and related statutes. Under these acts, health plans that provide a subsidy above certain thresholds beginning in 2018 may be subject to a 40% excise tax. We have not included any excise tax because the MMA subsidy is expressed in terms of a dollar amount (and not as a percent of the premium required to obtain medical coverage) and the future MMA, when adjusted by 50% of medical trend, would result in an amount that would fall below the cost thresholds for a "Cadillac" plan (i.e., a plan subject to the excise tax) for all future years.
- As stated earlier in this report, it is our understanding that GASB requires the non-OPEB benefits to be reported under GASB Statement No. 67 together with the underlying statutory defined benefit pension plan and accordingly they have been included in our GASB 67 report dated May 3, 2017.

SUMMARY OF GASB NO. 43 (OPEB) VALUATION RESULTS

	December 31, 2016[1]	December 31, 2015
Without Limiting Liabilities to Current Assets[2]		
Actuarial Present Value of Projected Benefits		
Medical	$1,004,652,000	$1,018,945,000
Dental and Vision	110,010,000	115,920,000
Total	$1,114,662,000	$1,134,865,000
Actuarial Accrued Liability		
Medical[3]	$821,416,000	$808,496,000
Dental and Vision[4]	88,940,000	92,485,000
Total	$910,356,000	$900,981,000
Actuarial Value of Assets (Exhibit B)	837,185,000	822,858,000
Unfunded Actuarial Accrued Liability	73,171,000	78,123,000
Funded Ratio	92.0%	91.3%
Year Current Assets will be Exhausted[5]	2039	2038

(1) *These results will be used as the basis for the first GASB 74 valuation report based on a measurement date of December 31, 2017.*

(2) *When the actuarial accrued liabilities were limited to the current assets, the UAALs as of both December 31, 2016 and 2015 were $0. Similarly, the funded ratios as of both December 31, 2016 and 2015 were 100%.*

(3) *Of the amount shown, $470.7 million is attributable to members currently receiving this benefit as of December 31, 2016 and $436.5 million is attributable to members receiving this benefit as of December 31, 2015.*

(4) *Of the amount shown, $49.6 million is attributable to members currently receiving this benefit as of December 31, 2016 and $50.4 million is attributable to members receiving this benefit as of December 31, 2015.*

(5) *Full benefits will be paid through the year prior to the year shown in the table. Full benefits will be paid for part of the year indicated.*

Note: The above results have been calculated using our understanding of the "substantive plan" as described in Exhibit III. The liabilities provided in this report will have to be revised if our understanding of the "substantive plan" is inaccurate.

SUMMARY OF NON-OPEB VALUATION RESULTS

	December 31, 2016[1]	December 31, 2015
Without Limiting Liabilities to Current Assets[2]		
Actuarial Present Value of Projected Benefits		
Supplemental COLA	$235,100,000	$212,386,000
Retiree Death Benefit	4,088,000	3,954,000
Total	$239,188,000	$216,340,000
Actuarial Accrued Liability		
Supplemental COLA[3]	$185,782,000	$164,025,000
Retiree Death Benefit	3,761,000	3,626,000
Total	$189,543,000	$167,651,000
Actuarial Value of Assets (Exhibit B)	36,162,000	35,194,000
Unfunded Actuarial Accrued Liability	153,381,000	132,457,000
Funded Ratio	19.1%	21.0%
Year Current Assets will be Exhausted[4]	2034	2035

(1) *These results will be used as the basis for the next GASB 67 valuation report based on a measurement date of December 31, 2017.*

(2) *When the actuarial accrued liabilities were limited to the current assets, the UAALs as of both December 31, 2016 and 2015 were $0. Similarly, the funded ratios as of both December 31, 2016 and 2015 were 100%.*

(3) *Of the amount shown, $6.6 million is attributable to members currently receiving this benefit as of December 31, 2016 and $7.3 million is attributable to members receiving this benefit as of December 31, 2015.*

(4) *Full benefits will be paid through the year prior to the year shown in the table. Full benefits will be paid for part of the year indicated.*

PROJECTED CASH FLOW AND PRESENT VALUE OF PROJECTED BENEFITS PROVIDED BY THE SUPPLEMENTAL RETIREE BENEFITS RESERVE AS OF DECEMBER 31, 2016

	Annual Benefit Cash Flows			Present Value as of December 31, 2016 of Projected Benefits through Year End		
Year Ending December 31	Medical[1]	Dental and Vision	Non-OPEB[2]	OPEB[3]	Non-OPEB	Total
2017	$ 41,388,332	$ 4,281,170	$ 1,278,555	$ 44,027,106	$ 1,232,575	$ 45,259,681
2018	45,124,964	4,495,616	1,244,644	88,484,442	2,347,707	90,832,149
2019	48,324,374	4,819,833	1,218,021	132,735,662	3,361,909	136,097,571
2020	51,728,705	5,157,556	1,216,794	176,757,122	4,303,525	181,060,647
2021	55,334,683	5,506,467	1,244,170	220,513,583	5,198,323	225,711,906
2022	58,994,531	5,872,398	1,278,288	263,870,246	6,052,723	269,922,969
2023	62,853,043	6,249,402	1,328,792	306,795,577	6,878,147	313,673,724
2024	66,528,592	6,632,699	1,382,629	349,032,213	7,676,350	356,708,563
2025	69,923,631	7,026,775	1,668,158	390,318,574	8,571,370	398,889,944
2026	73,295,427	7,425,598	2,374,622	430,568,964	9,755,442	440,324,406
2027	76,698,103	7,843,132	3,711,754	469,746,736	11,475,529	481,222,265
2028	79,979,736	8,252,301	5,471,014	507,746,876	13,831,808	521,578,684
2029	83,291,682	8,668,697	7,247,764	544,555,311	16,732,827	561,288,138
2030	86,719,070	9,090,228	9,258,162	580,195,664	20,176,795	600,372,459
2031	89,942,345	9,501,713	11,462,540	614,575,271	24,139,602	638,714,873
2032	93,005,446	9,910,562	13,841,354	647,642,113	28,586,820	676,228,933
2033	96,065,933	10,311,407	16,403,872	679,406,952	33,485,103	712,892,055
2034	98,716,730	10,703,147	9,646,878[4]	709,772,524	36,162,249	745,934,773
2035	101,089,393	11,083,170	-	738,703,269	36,162,249	774,865,518
2036	103,170,014	11,457,268	-	766,178,966	36,162,249	802,341,215
2037	105,001,865	11,813,729	-	792,201,480	36,162,249	828,363,729
2038	106,780,716	12,153,413	-	816,824,576	36,162,249	852,986,825
2039	94,868,724[4]	10,946,541[4]	-	837,184,316	36,162,249	873,346,565

[1] *Includes Medicare Part B and Implicit Subsidy Reimbursement made to the County.*

[2] *Includes Supplemental COLA and $1,000 Lump Sum Death Benefit.*

[3] *Includes Medical, Dental, and Vision.*

[4] *Full benefits will be paid through the year prior to the year shown in the table. Full benefits will be paid for part of the year indicated.*

ACTUARIAL CERTIFICATION

September 27, 2017

This is to certify that Segal Consulting has conducted an actuarial valuation of certain benefit obligations of the Alameda County Employees' Retirement Association provided by the Supplemental Retiree Benefits Reserve for the year ending December 31, 2016, in accordance with generally accepted actuarial principles and practices. The actuarial calculations presented in this report have been made on a basis consistent with our understanding of GASB Statement No. 43.

The actuarial valuation is based on the plan of benefits verified by the ACERA and on participant, claims and expense data provided by the ACERA.

The actuarial computations made are for purposes of fulfilling plan accounting requirements based on GASB Statement No. 43. Determinations for purposes other than meeting financial accounting requirements may be significantly different from the results reported here. Accordingly, additional determinations may be needed for other purposes such as judging benefit security at plan termination.

To the best of our knowledge, this report is complete and accurate and in our opinion presents the information necessary to comply with the plan's GASB Statement No. 43 requirements with respect to the benefit obligations addressed. The undersigned are members of the American Academy of Actuaries and meet the qualification standards of the American Academy of Actuaries to render the actuarial opinion herein.

Eva Yum, FSA, MAAA, EA	Thomas Bergman, ASA, MAAA, EA
Associate Actuary	Associate Actuary

EXHIBIT A

Table of Plan Coverage – Members Receiving SRBR Benefits as of December 31, 2016

	Current Retirees
Category 1 – Medical	
Number	6,018
Average in force monthly medical reimbursements for 2017 (excluding Medicare Part B)	$389
Average maximum (based on service at retirement) monthly medical reimbursements for 2017 (excluding Medicare Part B)	$469
Monthly Medicare Part B premium reimbursements for 2017	$109
Category 1 - Supplemental COLA	
Number	342
Average monthly supplemental COLA for 2017(1)	$312
Category 2 – Dental and Vision	
Number	7,068
Average monthly medical reimbursements for 2017	$47
Category 2 – Retiree Death Benefit	
Number(2)	Not Available
Average lump sum benefits for 2017	$1,000

(1) *Estimate of supplemental COLA payable as of December 31, 2016. The average benefit does not take into account any adjustments to the members' COLA banks as of April 2017.*

(2) *Beneficiaries who received the $1,000 lump sum retiree death benefit were not separately identified in the data provided for the pension valuation.*

EXHIBIT B

Determination of Actuarial Value of Assets

	December 31, 2016		December 31, 2015	
Reserves Supporting SRBR Benefits				
401(h) Account (Allocated to OPEB)		$ 7,827,000		$ 9,534,000
Supplemental Retiree Benefits Reserve				
OPEB	$829,358,000(1)		$813,324,000(2)	
Non-OPEB	36,162,000		35,194,000	
SRBR Total		$865,520,000		$848,518,000
Total		**$873,347,000**		**$858,052,000**
Present Value of Projected OPEB Payable Through Terminal Year of the SRBR				
Medical		$758,539,000		$744,545,000
Dental and Vision		78,646,000		78,313,000
Total		$837,185,000		$822,858,000
Present Value of Projected Non-OPEB Payable Through Terminal Year of the SRBR				
Supplemental COLA		$ 33,426,000		$ 32,435,000
Retiree Death Benefit		2,736,000		2,759,000
Total		$ 36,162,000		$ 35,194,000
Total Present Value of Projected SRBR Benefits Payable Through Terminal Year of the SRBR		$873,347,000		$858,052,000

(1) *Adjusted to reflect estimated transfer of $8,865,275 (provided by ACERA) from SRBR to employer advance reserve for reimbursement of implicit retiree health benefit subsidy for calendar year 2016.*

(2) *Adjusted to reflect estimated transfer of $5,324,502 (provided by ACERA) from SRBR to employer advance reserve for reimbursement of implicit retiree health benefit subsidy for calendar year 2015.*

EXHIBIT I

Actuarial Assumptions and Actuarial Cost Method

Data:	Detailed census data and summary plan descriptions for postretirement benefits were provided by ACERA.
Rationale for Assumptions:	The information and analysis used in selecting each assumption that has a significant effect on this actuarial valuation is shown in the December 1, 2010 through November 30, 2013 Actuarial Experience Study report dated September 9, 2014, and in our letter dated April 25, 2017 regarding the assumptions recommended for the December 31, 2016 SRBR retiree health actuarial valuation. In addition, the Board adopted a 7.60% investment return assumption for this valuation. Unless otherwise noted, all actuarial assumptions and methods shown below apply to all tiers. These assumptions were adopted by the Board.
Post-Retirement Mortality Rates	
Healthy:	For General members and all beneficiaries: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set back one year for males and females. For Safety members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, with no setback for males and set back two years for females.
Disabled:	For General members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set forward seven years for males and set forward four years for females. For Safety members: RP-2000 Combined Healthy Mortality Table projected with Scale BB to 2020, set forward six years for males and set forward three years for females.

The above mortality tables contain a margin of about 10% for General and Safety members and beneficiaries combined, based on actual to expected deaths, as a provision to reflect future mortality improvement, based on a review of mortality experience as of the measurement date.

Termination Rates Before Retirement:

	Rate (%) Mortality			
	General		Safety	
Age	Male	Female	Male	Female
25	0.04	0.02	0.04	0.02
30	0.04	0.02	0.04	0.02
35	0.07	0.04	0.07	0.04
40	0.10	0.06	0.10	0.06
45	0.13	0.10	0.14	0.09
50	0.19	0.15	0.20	0.14
55	0.30	0.22	0.34	0.21
60	0.53	0.37	0.59	0.33
65	0.90	0.68	1.00	0.60

All pre-retirement deaths are assumed to be non-service connected.

Termination Rates Before Retirement (continued):

	Rate (%) Disability	
Age	General[(1)]	Safety[(2)]
20	0.00	0.00
25	0.01	0.03
30	0.03	0.23
35	0.08	0.41
40	0.13	0.48
45	0.21	0.65
50	0.31	1.35
55	0.38	1.90
60	0.43	2.15

(1) 60% of General disabilities are assumed to be service connected disabilities. The other 40% are assumed to be non-service connected disabilities.

(2) 100% of Safety disabilities are assumed to be service connected disabilities.

Termination Rates Before Retirement (continued):

	Rate (%) Termination (< 5 Years of Service)[1]	
Years of Service	**General**	**Safety**
0	10.00	5.00
1	9.00	4.00
2	7.00	3.00
3	6.00	2.00
4	5.00	1.00

	Termination (5+ Years of Service)[2]	
Age	**General**	**Safety**
20	5.00	2.00
25	5.00	2.00
30	5.00	1.70
35	4.40	1.20
40	3.40	1.00
45	2.70	1.00
50	2.50	1.00
55	2.50	1.00
60	2.50	0.40

(1) 60% of terminated members will choose a refund of contributions and 40% will choose a deferred vested benefit.

(2) 40% of terminated members will choose a refund of contributions and 60% will choose a deferred vested benefit. No termination is assumed after a member is eligible for retirement.

Retirement Rates:

Age	Rate (%)							
	General Tier 1	General Tier 2	General Tier 3	General Tier 4	Safety Tier 1[1]	Safety Tier 2, 2D[1]	Safety Tier 2C[1]	Safety Tier 4
50	4.00	2.00	6.00	0.00	35.00	15.00	4.00	4.00
51	4.00	2.00	3.00	0.00	30.00	15.00	2.00	2.00
52	4.00	2.00	5.00	4.00	25.00	15.00	2.00	2.00
53	4.00	2.00	6.00	1.50	35.00	15.00	3.00	3.00
54	4.00	2.00	6.00	1.50	45.00	15.00	6.00	6.00
55	7.00	2.00	12.00	2.50	45.00	15.00	10.00	10.00
56	9.00	3.00	13.00	2.50	45.00	20.00	12.00	12.00
57	12.00	4.00	13.00	3.50	45.00	25.00	20.00	20.00
58	12.00	4.00	14.00	4.50	45.00	25.00	10.00	10.00
59	16.00	5.00	16.00	4.50	45.00	25.00	15.00	15.00
60	24.00	6.00	21.00	4.50	100.00	30.00	60.00	60.00
61	24.00	9.00	20.00	7.50	100.00	30.00	60.00	60.00
62	40.00	18.00	30.00	19.00	100.00	30.00	60.00	60.00
63	35.00	18.00	25.00	15.00	100.00	30.00	60.00	60.00
64	35.00	20.00	25.00	17.00	100.00	100.00	100.00	100.00
65	35.00	25.00	30.00	21.00	100.00	100.00	100.00	100.00
66	35.00	25.00	25.00	20.00	100.00	100.00	100.00	100.00
67	30.00	25.00	25.00	20.00	100.00	100.00	100.00	100.00
68	25.00	30.00	25.00	30.00	100.00	100.00	100.00	100.00
69	35.00	35.00	50.00	35.00	100.00	100.00	100.00	100.00
70	100.00	100.00	100.00	100.00	100.00	100.00	100.00	100.00

(1) Retirement rate is 100% after a member accrues a benefit of 100% of final average earnings.

Retirement Age and Benefit for Deferred Vested Members:	For deferred vested members, retirement age assumptions are as follows: General Age: 60 Safety Age: 56 For future deferred vested members who terminate with less than five years of service and who are not vested, we assume that they will retire at age 70 for both General and Safety if they decide to leave their contributions on deposit. We assume that 30% of future General and 60% of future Safety deferred vested members will continue to work for a reciprocal employer. For reciprocals, we assume 4.15% and 4.45% compensation increases per annum for General and Safety, respectively.
Measurement Date:	December 31, 2016
Discount Rate:	7.60%
Future Benefit Accruals:	1.0 year of service per year of employment plus 0.005 year of additional service to anticipate conversion of unused sick leave for each year of employment.
Unknown Data for Members:	Same as those exhibited by members with similar known characteristics. If not specified, members are assumed to be male.
Inclusion of Deferred Vested Members:	All deferred vested members are included in the valuation.
Consumer Price Index:	Increase of 3.25% per year, retiree COLA increases due to CPI subject to a 3% maximum change per year for General Tier 1, General Tier 3, and Safety Tier 1 and 2% maximum change per year for General Tier 2, General Tier 4, Safety Tier 2, Safety Tier 2C, Safety Tier 2D, and Safety Tier 4.
Actuarial Cost Method:	Entry Age Cost Method.

Salary Increases:

Annual Rate of Compensation Increase (%)

Inflation: 3.25%; an additional 0.50% "across the board" salary increases (other than inflation); plus the following Merit and Promotional increases based on service.

Service	General	Safety
0-1	3.70%	6.70%
1-2	3.70	6.70
2-3	3.20	5.90
3-4	2.10	3.80
4-5	1.70	3.30
5-6	1.40	2.50
6-7	1.30	1.40
7-8	1.10	0.90
8-9	0.70	0.80
9-10	0.60	0.80
10-11	0.50	0.70
11+	0.40	0.70

Terminal Pay Assumptions: Additional pay elements are expected to be received during a member's final average earnings period. The percentages, added to the final year salary, used in this valuation are:

	Service Retirement	Disability Retirement
General Tier 1	8.0%	6.5%
General Tier 2	3.0%	1.4%
General Tier 3	8.0%	6.5%
General Tier 4	N/A	N/A
Safety Tier 1	8.5%	6.4%
Safety Tier 2	4.0%	2.1%
Safety Tier 2C	4.0%	2.1%
Safety Tier 2D	4.0%	2.1%
Safety Tier 4	N/A	N/A

Per Capita Health Costs:

The combined monthly per capita dental and vision claims cost for plan year 2017 was assumed to be $46.90. The monthly Medicare Part B premium reimbursement for 2017 is $109.00. For calendar year 2017, medical costs for a retiree were assumed to be as follows:

Medical Plan	Election Assumption	Monthly Premium	Maximum Monthly Medical Allowance*
Under Age 65			
Kaiser HMO	85%	$729.08	$540.44
United Healthcare HMO	15%	$982.06	$540.44
Age 65 and Older			
Kaiser Senior Advantage	70%	$354.73	$540.44
OneExchange Individual Insurance Exchange	30%	$278.65**	$414.00

* The Maximum Monthly Medical Allowance of $540.44 ($414.00 for retirees purchasing individual insurance from the Medicare exchange) is subject to the following subsidy schedule:

Completed Years of Service	Percentage Subsidized
10-14	50%
15-19	75%
20+	100%

**The derivation of amount expected to be paid out in 2017 from the Health Reimbursement Account for members with 20 or more years of service is provided in the table on the following page. In the table, we have also provided the amount expected to be paid for members with 10-14 and 15-19 years of service.

Per Capita Health Costs (continued):

Derivation of OneExchange Monthly Per Capita Costs

	(Years of Service Category)	10-14	15-19	20+
1.	Maximum MMA for 2016*	$207.00	$310.50	$414.00
2.	Total of Maximum MMA** (From Jan. 2016 to Dec. 2016)	$384,936	$684,032	$4,325,721
3.	Total of Actual Reimbursement (From Jan. 2016 to Dec. 2016)**	$294,309	$478,118	$2,479,490
4.	Ratio of Actual Reimbursement to Maximum 2016 MMA [(3) / (2)]	76.46%	69.90%	57.32%
5.	Average Monthly Per Capita Cost for 2016 [(1) x (4)]	$158.27	$217.03	$237.30
6.	Increased for Expected Medical Trend (6.75%) from 2016 to 2017 [(5) x 1.0675]	$168.95	$231.68	$253.32
7.	Increased for Additional 10% Margin for 2016 Expenses Incurred in 2016 but Reimbursed after December 2016 [(6) x 1.10]	**$185.84**	**$254.85**	**$278.65**

* *These are the original amounts adopted by the Board in 2013. The maximum MMA increased from $400.00 in 2015 to $414.00 in 2016, as noted on page 4.*

** *For retirees participating in OneExchange for all 12 months of 2016.*

Per Capita Health Costs (continued): Implicit Subsidy

We have estimated the average per capita premium for retirees under age 65 to be $9,204 per year. Because premiums for retirees under age 65 include active participants for purposes of underwriting, the retirees receive an implicit subsidy from the actives. Had the retirees under age 65 been underwritten as a separate group, their age-based premiums would be higher for most individuals. The excess of the age-based premium over the per capita premium charged makes up the subsidy. Below is a sample of the age-based costs for the retirees under age 65.

Average Medical

	Retiree		Spouse	
Age	**Male**	**Female**	**Male**	**Female**
50	$9,544	$10,871	$6,666	$8,729
55	11,335	11,702	8,921	10,104
60	13,461	12,614	11,942	11,718
64	15,443	13,381	15,075	13,189

Not all ACERA employers are receiving an implicit subsidy reimbursement from the Association. For SRBR sufficiency purposes, we have adjusted (by about a 10% reduction of the costs shown above) our projected implicit subsidy payments to account for this fact, based on data provided by the County of Alameda's health consultant.

For calculating the AAL, we have not applied the adjustment.

Participation and Coverage Election: Based on proportion of current retirees receiving a medical benefit subsidy, we estimate that 80% of employees under age 65, and 90% of employees age 65 and older, who are eligible to retire and receive subsidized postretirement medical coverage will elect to participate in the plan.

Health Care Cost Trend Rates: Health care trend measures the anticipated overall rate at which health plan costs are expected to increase in future years. The rates shown below are "net" and are applied to the net per capita costs shown above. The trend shown for a particular plan year is the rate that is to be applied to the premium for the shown calendar year to calculate the next calendar year's projected premium. For example, the projected 2018 calendar year premium for Kaiser (under age 65) is $735.64 per month ($729.08 increased by 0.90%).

	Non-Medicare Plans		Medicare Advantage Plan	Dental, Vision and Medicare Part B	
Calendar Year	Kaiser HMO Early Retiree	United Healthcare HMO Early Retiree	OneExchange & Kaiser Senior Advantage	Dental and Vision	Medicare Part B
2017	6.50%[1]	6.50%[1]	6.50%[1]	4.50%[1]	28.44%[2]
2018	6.25	6.25	6.25	4.50	4.50
2019	6.00	6.00	6.00	4.50	4.50
2020	5.75	5.75	5.75	4.50	4.50
2021	5.50	5.50	5.50	4.50	4.50
2022	5.25	5.25	5.25	4.50	4.50
2023	5.00	5.00	5.00	4.50	4.50
2024	4.75	4.75	4.75	4.50	4.50
2025 & Later	4.50	4.50	4.50	4.50	4.50

[1] *The actual trends are shown below, based on premium renewals for 2018 as reported by ACERA.*

Kaiser HMO Early Retiree	United Healthcare HMO Early Retiree	Kaiser Senior Advantage	Dental and Vision
0.90%	6.63%	3.52%	2.15%

[2] *The increases in Part B premium for continuing retirees from 2016 to 2017 had been limited due to relatively low Social Security cost-of-living-adjustment (COLA) and the hold-harmless provision (i.e. Medicare Part B premium dollar increases were limited to Social Security COLA dollar increases). Based on the 3.25% inflation assumption used in the pension valuation, we expect the Social Security COLA from 2017 to 2018 will be large enough to cover the dollar increases in the Medicare Part B premium for most retirees. We expect this increase to be at least $25 per month, from $109, the lowest standard Medicare Part B premium for 2017 to $134, the highest standard Medicare Part B premium. We assume that the standard premium for all retirees in 2018 will be $140 ($134 increased by 4.50%) per month.*

Assumed Increase in Annual Maximum Benefits:	For the "substantive plan design" shown in this report, we have assumed: a) Maximum medical allowance for 2018 will remain at the 2017 levels, then increase with 50% of trend for medical plans, or 3.125%, graded down to the ultimate rate of 2.25% over 7 years. b) Dental and vision premium reimbursement will increase with full trend. c) Medicare B premium reimbursement will increase with full trend.
Dependents:	Demographic data was available for spouses of current retirees. For future retirees, husbands were assumed to be three years older than their wives. Of the future retirees who elect to continue their medical coverage at retirement, 35% males and 15% females were assumed to have an eligible spouse who also opts for health coverage at that time. Please note that these assumptions are only used to determine the cost of the implicit subsidy.
Plan Design:	Development of plan liabilities was based on the plan of benefits in effect as described in Exhibit III.
Administrative Expenses:	An administrative expense load was not added to projected incurred claim costs in developing per capita health costs.
Missing Participant Data:	Any missing census items for a given participant was set to equal to the average value of that item over all other participants of the same membership status for whom the item is known.

EXHIBIT II

Summary of Benefits

This exhibit summarizes the major benefit provisions as included in the valuation. To the best of our knowledge, the summary represents the substantive plan provisions as of the measurement date. It is not intended to be, nor should it be interpreted as, a complete statement of all benefit provisions.

Eligibility:

Service Retirees: Retired with at least 10 years of service (including deferred vested members who terminate employment and receive a retirement benefit from ACERA)

Disabled Retirees: A minimum of 10[1] years of service is required for non-duty disability.

There is no minimum service requirement for duty disability.

Other Postemployment Benefits (OPEB):

1. Monthly Medical Allowance

Service Retirees: For retirees, a Maximum Monthly Medical Allowance of $540.44 per month is provided, effective January 1, 2017 and through December 31, 2017. For the period January 1, 2018 through December 31, 2018, the maximum allowance will remain at the 2017 levels for retirees who are not purchasing individual insurance through the Medicare exchange. For those purchasing individual insurance through the Medicare exchange, the Monthly Medical Allowance will be $414.00 per month for 2017 and will remain at the 2017 levels for 2018. These Allowances are subject to the following subsidy schedule:

Completed Years of Service	Percentage Subsidized
10-14	50%
15-19	75%
20+	100%

[1] *The 10 years of service requirement is only used for determining eligibility for health benefits. For pension benefits, the eligibility requirement is 5 years of service.*

Disabled Retirees: Non-duty disabled retirees receive the same Monthly Medical Allowance as service retirees.

Duty disabled retirees receive the same Monthly Medical Allowance as those service retirees with 20 or more years of service.

2. Medicare Benefit Reimbursement Plan:

The SRBR reimburses the full Medicare Part B premium to qualified retired members.

To qualify for reimbursement, a retiree must:

- Have at least 10 years of ACERA service,
- Be eligible for Monthly Medical Allowance,
- Provide proof of enrollment in Medicare Part B.

3. Dental and Vision Plans:

The SRBR provides dental and vision benefits for retirees only. The maximum combined monthly dental and vision premiums will be $46.90 in 2017 and $47.91 in 2018. The eligibility for these premiums is as follows:

Service Retirees: Retired with at least 10 years of service.

Disabled Retirees: For non-duty disabled retirees, 10 years of service is required. For grandfathered non-duty disabled retirees (with effective retirement dates on or before January 31, 2014), there is no minimum service requirement.

For duty disabled retirees, there is no minimum service requirement.

Note about Monthly Medical Allowance:

The maximum levels of subsidy are reviewed by the Board annually and are not indexed to increase automatically.

In addition, the Monthly Medical Allowance can only be used to pay for retiree medical benefits. There is no benefit payable to beneficiaries, current spouses, former spouses or dependents.

If the actual cost of coverage is less than the Monthly Medical Allowance, the difference is not paid in cash or applied towards the coverage for beneficiaries, current spouses, former spouses or dependents.

Deferred Benefit: Members who terminate employment with 10 or more years of service before reaching Pension eligibility commencement age may elect deferred MMA and/or dental/vision benefits.

Death Benefit: Surviving spouses/domestic partners of members who die before the member commences retiree health benefits may enroll in an ACERA group medical plan on the date that the member would have been eligible to commence benefits. The surviving spouse/domestic partner must pay 100% of the premium. Because premiums for surviving spouses/domestic partners under age 65 include active participants for purposes of underwriting, the surviving spouses/domestic partners receive an implicit subsidy from the actives, which creates a liability for the SRBR.

Non-OPEB Benefits:

1. Supplemental COLA

   When inflation is higher than the ACERA cost of living allowance for a year, the excess of inflation over the cost of living allowance (3% for Tier 1 and Tier 3, and 2% for Tier 2, Tier 2C, Tier 2D, and Tier 4) is banked for future years when inflation may be less than the cost of living allowance. In 1998, the Board of Retirement approved a supplemental COLA payable through the SRBR for members whose COLA banks exceeded 15%. The supplemental COLA for a year is equal to the percentage of excess of the member's COLA bank over 15% times the member's current annual retirement allowance.

   The cost of living adjustment and any supplemental COLA must be approved yearly by the ACERA Board of Retirement. For this valuation, we have assumed the Board will maintain its current level of supplemental COLA (i.e., COLA banks will not exceed 15%) during the projection period.

2. Retired Member Death Benefit

   A one-time $1,000 lump sum retiree death benefit is payable to the beneficiary of a retiree. This benefit is only paid upon the death of a retiree; it is not paid upon the death of a beneficiary.

EXHIBIT III

Assumptions About the "Substantive Plan"

The determination of the "substantive plan" underlying ACERA's OPEB was based upon prior directions provided by ACERA, its auditors, as well as the administrative staff, auditors and consultants representing the County of Alameda. Those directions are provided below.

1. *Commitment to provide benefits currently paid out of the SRBR*

We understand that health and other supplemental benefits currently paid out of the SRBR will continue to be paid as long as there are assets available in the SRBR. However, when the assets in the SRBR are fully depleted, no additional health and other supplemental benefits will be paid by the Association and the employer. To our knowledge, the employer has not made any implicit or explicit commitment to continue those benefits.

2. *Continuation of coverage in the employer's active employee medical plans for the Association's retirees*

Currently, the Association's retirees are enrolled in the same medical plans as the employer's active employees. The retiree experience is pooled and used in setting the medical plan premium rates for active employee. The Association has begun in 2007 to reimburse the employer for the adverse premium experience created by the retirees.

In this study, for purposes of determining sufficiency of funds we have included the liability associated with reimbursing the employer for the adverse premium experience but only through the period up to the exhaustion of assets in the SRBR. In other words, there may be a residual liability to the employer if the Association's retirees continue to participate, and are rated together in the employer's active employee medical plans.

3. *Fully indexed subsidies for dental, vision and Medicare Part B premium and increase at one-half of the rate of increase for monthly medical allowance (MMA)*

Following guidelines provided by the Board and ACERA, we have assumed in this study that the OPEB plan will reimburse the fully indexed premium required for dental, vision and for a retiree to enroll in Medicare Part B. In addition, we have assumed in this study that future MMA will increase at one-half of the rate of our anticipated medical inflation assumptions.

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