



TO: Ms. Donna S. Early
FROM: Findley
DATE: October 30, 2019
RE: Kentucky Legislators Retirement Plan – Addendum to July 1, 2019 Actuarial Valuation Report – Update of Annual Required Contribution for Administrative Expenses

It is our understanding that starting with the 2020-21 fiscal year, administrative and personnel expenses will begin to be paid from plan assets. Due to this change, the Annual Required Contribution amounts shown in the July 1, 2019 Actuarial Valuation Report (“Valuation Report”), dated October 1, 2019, require an adjustment to include the expenses expected to be paid out of the plan assets during the 2020-21 and 2021-22 fiscal years. This memorandum shall serve as an Addendum to the Valuation Report and documents such adjustments to the Annual Required Contributions.

This change is expected to have minimal impact on the other results shown in the Valuation Report. For the projections shown on pages 40-41 of the Valuation Report, the Annual Contribution Requirements would increase by the expected expenses in each year. However, since anticipated expenses for a particular year will be paid out during that year, this increased contribution is assumed to have no impact on the projected Unfunded Liability or Funded Ratio.

The Preliminary Annual Required Contribution as of July 1, 2019 below is the amount shown on pages 2 and 8 of the Valuation Report. Because the actual contributions, based on this July 1, 2019 measurement date calculation, will be made during the 2020-21 and 2021-22 fiscal years, one and two years after the date the requirement was calculated, the Annual Required Contribution has been increased at the interest rate assumption of 6.50%. This adjustment is being made for the time value of money (i.e., there is a time lag between the date of the calculation, July 1, 2019, and the time in which monies are actually contributed to the plan trust).

	<u>Pension</u>	+	<u>OPEB</u>	=	<u>Total</u>
1. Preliminary Annual Required Contribution as of July 1, 2019	271,666		-		271,666
<u>Annual Required Contribution for 2020-21 Fiscal Year</u>					
2a. Preliminary Annual Required Contribution for 2020-21 Fiscal Year [(1) * 1.065]	289,324		-		289,324
2b. Requested Expenses for 2020-21 Fiscal Year (split based on July 1, 2019 liability)	194,775		53,225		248,000
2c. Final Annual Required Contribution for 2020-21 Fiscal Year	484,099		53,225		537,324
<u>Annual Required Contribution for 2021-22 Fiscal Year</u>					
3a. Preliminary Annual Required Contribution for 2021-22 Fiscal Year [(1) * 1.065 * 1.065]	308,130		-		308,130
3b. Requested Expenses for 2021-22 Fiscal Year (split based on July 1, 2019 liability)	204,357		55,843		260,200
3c. Final Annual Required Contribution for 2021-22 Fiscal Year	512,487		55,843		568,330

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Kentucky Legislators Retirement Plan

Actuarial Valuation and Report

as of July 1, 2019

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Introduction

An actuarial valuation of the Kentucky Legislators Retirement Plan (“KLRP”) has been performed as of July 1, 2019. Actuarial valuations are based on the integrity of employee data, plan asset data, plan provisions and an extensive set of assumptions regarding future events. There is necessary uncertainty with any actuarial calculation based on the accuracy of the data provided, the correct interpretation of plan provisions and the realization of the assumptions made. These results were based on participant data and asset information provided by the Kentucky Judicial Form Retirement System. This information was not audited but was reviewed for reasonableness.

Detailed explanations of the actuarial assumptions and methods used in the report are contained in later sections of this report. Also included in this report is a summary of provisions of the plan as we understand them.

This report provides details on the actuarial valuation underlying the recommended contribution to the KLRP for plan years commencing in 2020 and 2021. This determination was performed pursuant to Kentucky Revised Statute (“KRS”) §21.525 for the retirement system defined in KRS §6.500 to §6.577. KRS §21.525, as well as other statutes found in KRS Chapter 21 cited hereafter, are made applicable to KLRP by KRS §6.525.

Governmental Accounting Standards Board Statement 67 (“GASB 67”) and Statement 74 (“GASB 74”) establish financial reporting standards for defined benefit pension plans and other postemployment benefit (OPEB) plans sponsored by employers that are subject to governmental accounting standards. Governmental Accounting Standards Board Statement 68 (“GASB 68”) and Statement (“GASB 75”) provide standards for reporting pension and OPEB expenditures and expense, and related liabilities and assets for such plans. The purpose of this report is to provide pertinent financial statement disclosure information for the fiscal year ending in 2019. Actuarial computations under Statements 67, 68, 74, and 75 are for purposes of fulfilling plan and employer governmental accounting requirements and may not be appropriate for other purposes. This report has been prepared on a basis consistent with our understanding of the statements and does not constitute legal, accounting, tax or investment advice.

Statements 68 and 75 sets forth a methodology for the calculation of the annual Pension Expense for the upcoming fiscal year. GASB 68 and GASB 75 provides a method for reflecting prior gains and losses from asset and plan experience, as well as other areas including plan amendments. Amounts not reflected previously or in the upcoming year are reflected in the Deferred Outflows and Inflows of Resources shown.

Findley does not have access to and is not providing information concerning liabilities other than benefits, such as for legal or accounting fees.

Findley is not aware of any significant events subsequent to the current year’s measurement date that could materially affect the information contained in this report. However, we are aware that legislation has been passed that makes substantial changes to the state-wide retirement systems, including KLRP, but that legislation has since been voided by a Kentucky Supreme Court ruling. This report does not consider this piece of legislation.

We are not aware of any relationship between the plan or plan sponsor and Findley which would impair or appear to impair our objectivity.

To the best of our knowledge, all information provided in this report is complete and accurate and disclosures for GASB purposes have been determined in accordance with generally accepted accounting principles.

Summary of Report

An actuarial valuation of the Kentucky Legislators Retirement Plan (“KLRP”) was conducted as of July 1, 2019. The purpose of the valuation is to determine the cost implications of the plan including a determination of annual funding levels for the fiscal years beginning July 1, 2020 and July 1, 2021.

In 2013 the applicable state statutes were amended to close participation in the traditional defined benefit, with all individuals first electing to participate in KLRP on or after January 1, 2014 being covered under a new hybrid cash balance tier. **This report covers only the traditional defined benefit/OPEB tier of KLRP.**

It is our understanding that this plan is a “governmental plan” as defined in Internal Revenue Code Section 414(d) and this report has been prepared on that basis.

On the basis of the valuation, it has been determined that the annual funding requirements for the State for the fiscal year beginning in 2020 for the plan, prior to adjusting with interest, as described in the Summary of Benefits section of this report, are as follows:

	Total Amount	Percent of Payroll
Annual Required Contribution	\$ 271,666	10.88%
Recommended Contribution	\$ 1,056,933	42.33%

The Annual Required Contribution is determined based on assumptions and methods set forth in the statute and established by the KLRP Investment Committee. The Recommended Contribution uses assumptions and methods that we believe produce an actuarially sound approach to funding.

The Annual Required Contribution and Recommended Contribution shown above are calculated using asset and liability values as of July 1, 2019. These amounts are used to determine contributions for the fiscal years beginning July 1, 2020 and July 1, 2021.

Due to the lag period between the calculated date and the actual contributions, we have adjusted the Annual Required Contributions and Recommended Contributions for the plan years 2020-2021 and 2021-2022 with one and two years of interest, respectively, at the interest rate assumption of 6.50%.

	2020-2021 (1 year of interest)	2021-2022 (2 years of interest)
Annual Required Contribution (with interest)	\$ 289,324	\$ 308,130
Recommended Contribution (with interest)	\$ 1,125,634	\$ 1,198,800

Summary of Selected Plan Information ¹

	Plan Year Beginning			
	7/1/2019	7/1/2017	7/1/2015	7/1/2013
Number of Participants				
Active	58	80	104	118
Terminated Vested	40	43	45	44
Retired	184	170	150	147
Beneficiaries	54	50	44	39
Total	336	343	343	348
Average Age (for actives)	60.5	58.2	57.3	55.9
Average Service (for actives)	17.3	14.5	12.8	11.8
Annual Covered Payroll	\$ 2,496,693	\$ 3,505,969	\$ 4,467,419	\$ 4,987,823
Average Salary	43,046	43,825	42,956	42,270
Accrued Liability	91,194,840	95,175,680	102,049,848	95,964,888
Actuarial Asset Value	117,636,859	104,918,440	86,847,256	67,269,660
Market Asset Value	126,677,144	110,253,979	97,264,968	78,320,971
Unfunded Accrued Liability (UAL)	(26,442,019)	(9,742,760)	15,202,592	28,695,228
Annual Funding Level ²				
State Portion of Normal Cost	\$ 355,719	\$ 699,316	\$ 1,111,574	\$ 1,070,890
Expected Employee Contributions	131,964	186,231	237,828	262,993
Total Normal Cost	487,683	885,547	1,349,402	1,333,883
State Annual Required Contribution	271,666	1,042,882	2,384,575	3,366,508
Percent of Covered Payroll	10.88%	29.75%	53.38%	67.49%

¹Our current understanding of IRS regulations is that they prohibit the use of surplus OPEB assets for retirement benefits. We recommend continuing discussions with plan council on possible options. Please refer to page 8 of this report for the asset and liabilities split between the Pension and OPEB plans.

²In accordance with KRS 21.405 (does not recognize cost of living increases effective after the most recent valuation date) and KRS 21.525 (legally prescribed funding method).

Reconciliation of Total Funding Requirement

	Accrued Liability (\$M)	Annual Recommended Contribution (\$M)
Prior Valuation ARC Calculation	95.18	1.04
+ <i>Impact of Current Year Asset Gain/Loss</i>		-0.13
+ <i>Recognition of Prior Asset Gain/Loss</i>		-0.17
+ <i>Other Gain/Loss</i>		-0.46
Current Year Calculation w/ Prior Assumptions	91.27	0.28
+ <i>Updated Discount Rate Assumption, Salary Scale, Medical Trend</i>	-0.08	-0.01
Annual Required Contribution ¹	91.19	0.27
+ <i>25 Year Amortization of Unfunded Liability</i>	+0.00	+0.00
Subtotal	91.19	0.27
+ <i>Included Full COLA Assumption</i>	+9.68	+0.79
Minimum Recommended Contribution ²	100.87	1.06

¹ In accordance with KRS 21.405 (does not recognize cost of living increases effective after the most recent valuation date) and KRS 21.525 (legally prescribed funding method).

² Without regards to KRS 21.405 or KRS 21.525, COLA's will not be granted until the plan is 100% funded (unless current year COLA is prefunded). If all future assumptions are met, ignoring future COLA's in the funding valuation will result in a funding percentage which is always less than 100% when future COLA's are assumed.

Legislative and Regulatory Background

As stated previously, state statutes were amended in 2013 such that all participants entering KLRP on or after January 1, 2014 will be covered under a hybrid cash balance/OPEB tier; those entering before that date will continue to be covered under the traditional defined benefit/OPEB tier. The legislation making this change also restricted the availability of future cost-of-living adjustments (COLA's) to plan benefits.

Actuarial Standard of Practice No. 51 (ASOP 51) is effective for actuarial valuations on or after November 1, 2018. This standard calls for explicit disclosure of risks associated with the pension plan and any recommended actions for better understanding the nature and impact of those risks. Please let us know if any additional analysis or information is desired.

Sensitivity analysis along with 20-year projections of results (before and after any assumption changes) have been included in this report pursuant to HB 238, passed in 2016.

Actuarial Soundness

A plan that has adopted a reasonable funding method, that adopts reasonable assumptions and which contributes at a rate at or above the recommended contribution rate (based on these reasonable methods and assumptions), could be considered to be actuarially sound.

In order to ensure KLRP is funded in an “actuarially sound manner”, we would recommend the following:

1. Reflect a 1.5% future COLA assumption when calculating the funding requirement for KLRP, to the extent future cost-of-living increases are expected to occur, or intended to be provided.
2. Revise the actuarial funding method to amortize all past unfunded as well as new liabilities over a period not more than 30 years (we suggest shorter periods for various sources of new liability) and amortize future gains and losses over a period not more than 15 years. (Note that GASB 68 may require the expensing of liabilities at a faster pace than these amortization periods.)
3. Contribute at least the recommended contribution each year.

Deviations from these recommendations may result in an “actuarially unsound” approach to funding KLRP and may eventually result in KLRP becoming insolvent – that is, exhausting assets at which time all future benefits would be provided on a pay as you go basis.

Although the Actuarial Standards of Practice 4 “Measuring Pension Obligations” allows for plan liabilities to be calculated under a legally prescribed method, the statement goes on to say,

“If, in the actuary’s professional judgment, such an actuarial cost method or amortization method is significantly inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming that all actuarial assumptions will be realized and that the plan sponsor or other contributing entity will make contributions when due, the actuary should disclose this.”

It is our professional actuarial opinion that the current legally prescribed method, which requires contributions of normal cost plus interest on the unfunded liability plus 1% of the unfunded liability (per KRS 21.525) and which (per KRS 21.405) does not recognize cost of living increases effective after the most recent valuation (assuming future increases are expected), is inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming all actuarial assumptions are realized. The current method of amortizing unfunded liabilities will not result in the full amortization of those liabilities.

Changes in Actuarial Assumptions

The following changes were made to the actuarial assumptions effective June 30, 2019:

	<u>Previous</u>	<u>Current</u>
Medical Trend Rates	8.00% decreasing to 5.00% over 12 years beginning July 1, 2017	7.00% level for 3 years, then 6.75% and following the Getzen model thereafter until reaching an ultimate rate of 3.94% in the year 2075

The medical trend rates change described above resulted in a decrease in liabilities and no change in the annual recommended contribution.

	<u>Previous</u>	<u>Current</u>
Medical Claims Aging Table	Claims were adjusted downward 3% for each year of age reduction from age 65 to age 55.	Claims were adjusted downward using the aging factors in the Dale Yamamoto study released by the Society of Actuaries in June 2013 for attained ages 55 to 65.

The medical claims aging table change described above resulted in a decrease in liabilities and no change in the annual recommended contribution.

Summaries of the plan provisions, actuarial assumptions and methods can be found in the Basis of Valuation section of this report.

Other Significant Changes

1. As of July 1, 2019, the monthly premium rates for Medicare eligible participants in the OPEB plan are \$297.90, a significant drop from the premium rates of \$312.79 that were effective two years ago in our actuarial valuation. The post-65 OPEB liability is approximately 5% lower than it would have been if the premium rates had not changed.

Actuarial Certification

The information contained in this document (including any attachments) is not intended by Findley to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer. The information and valuation results shown in this report are, to the best of our knowledge, complete and accurate and are based upon the following:

1. Employee census data as of July 1, 2019, submitted by the Kentucky Judicial Form Retirement System. This data was not audited by us but appears to be sufficient and reliable for purposes of the report.
2. Financial data as of June 30, 2019, submitted by the Kentucky Judicial Form Retirement System. This data was not audited by us but appears to be sufficient and reliable for purposes of the report.
3. Actuarial assumptions and methods as established either by statute or the KLRP Investment Committee. The actuarial assumptions currently adopted by the Committee appear to be reasonable, both individually and in aggregate. However, exclusion of retiree cost-of-living adjustments that can be reasonably anticipated to occur in future years (or for which there is an intent to provide in future years) does not reflect our best estimate of expected experience under the plan. As such, the valuation results presented in this report do not fully reflect the potential liability for future retiree cost-of-living adjustments. For purposes of the calculation of the Recommended Contribution, full future retiree cost-of-living adjustments have been reflected.
4. For purposes of GASB 67, 68, 74, and 75 disclosures, assets were split between pension and retiree medical liabilities on the basis of accrued liability as of July 1, 2008 and have been brought forward each year from that date based on actual cash flows and a prorata allocation of investment return. This methodology, initiated by the prior actuary, was based on guidance from the plan's auditor.

We believe the information is sufficiently complete and reliable. This report provides actuarial advice and does not constitute legal, accounting, tax or investment advice.

The actuarial valuation summarized in this report has been performed utilizing generally accepted actuarial principles. It is my opinion that the results fully and fairly disclose the actuarial position of the plan on the valuation date. I am a senior consultant for Findley, member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.


Certified by:



Matthew Widick, F.S.A., E.A., C.E.R.A., M.A.A.A.
Senior Consultant

October 1, 2019

Date



David L. Shaub, F.S.A., M.A.A.A.
Managing Consultant
(OPEB Plan Only)

October 1, 2019

Date

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Annual Required Contribution

Determination of Annual Required Contribution as of July 1, 2019

1. Accrued Liability	<u>Pension</u>	+	<u>OPEB</u>	=	<u>Total</u>
Actives					
Actives *	18,337,841		-		18,337,841
Medical Premium Supplement	-		5,810,793		5,810,793
Total Active Liability	<u>18,337,841</u>		<u>5,810,793</u>		<u>24,148,634</u>
Inactives					
Retired	42,696,195		-		42,696,195
Deferred Vested *	4,861,973		-		4,861,973
Beneficiaries	5,726,996		-		5,726,996
Medical Premium Supplement	-		13,761,042		13,761,042
Total Inactive Liability	<u>53,285,164</u>		<u>13,761,042</u>		<u>67,046,206</u>
 Total Accrued Liability	 71,623,005		 19,571,835		 91,194,840
 2. Valuation Assets	 71,173,272		 46,463,587		 117,636,859
 3. Unfunded Past Service Liability	 449,733		 (26,891,752)		 (26,442,019)
 4. Gross Normal Cost					
Retirement Related *	369,900		-		369,900
Medical Premium Supplement Related	-		117,783		117,783
Total Normal Cost	<u>369,900</u>		<u>117,783</u>		<u>487,683</u>
 5. Annual Covered Payroll	 2,496,693		 2,496,693		 2,496,693
 6. Estimated Employee Contributions for the Next 12 Months	 131,964		 -		 131,964
 7. Net Normal Cost (4 - 6)	 237,936		 117,783		 355,719
 8. Interest plus 1% of Unfunded Past Service Liability	 33,730		 (2,016,881)		 n/a
 9. Total Annual Required Contribution (max (0, 7 + 8))	 271,666		 -		 271,666
 10. Payment as a Percentage of Covered Payroll (9 / 5)	 10.88%		 0.00%		 10.88%

* includes 40% loading for non-legislative salaries

Estimated Cost of a One-Time COLA as of July 1, 2019

It is our understanding, effective July 1, 2013, that any future COLA's must be pre-funded (either by additional contributions or by excess assets). As of July 1, 2019, the plan has no available excess assets.

Approximate Cost of One Time 1.5% COLA

1. Liability In Payment	
a) Retired	42,696,195
b) Beneficiaries	5,726,996
Total Liability In Payment	<u>48,423,191</u>
2. Desired COLA Percentage	1.50%
3. Estimated Cost of One Time COLA for First Year (1 * 2)	726,348*
4. Estimated Cost of One Time COLA for Second Year (3 * 1.015)	737,243*

* Cost of 1.5% COLA increase applied to all members in pay status as of the valuation date.

Actuarial Asset Value

Determination of Actuarial Asset Value as of July 1, 2019

	2018-19 Plan Year	2017-18 Plan Year	2016-17 Plan Year	2015-16 Plan Year
Interest Return Assumption	6.50%	6.50%	7.00%	7.00%
Market Value at Beginning of Year				
Amount	\$ 117,689,624	\$ 110,253,979	\$ 99,610,610	\$ 97,264,968
Interest to End of Year	7,649,826	7,166,509	6,972,743	6,808,548
Employer Contributions				
Amount	-	2,384,500	2,384,500	3,366,500
Interest to End of Year	-	77,496	83,458	117,828
Member Contributions				
Amount	134,430	185,459	277,313	310,107
Interest to End of Year	4,369	6,027	9,706	10,854
Transfers from KERS				
Amount	-	-	86,235	-
Interest to End of Year	-	-	3,018	-
Benefits Paid				
Amount	5,495,456	5,284,095	4,963,167	4,660,118
Interest to End of Year	178,602	171,733	173,711	176,696
Expected End of Year Assets	119,804,191	114,618,142	104,290,705	103,041,991
Market Value at End of Year	126,677,144	117,689,624	110,253,979	99,610,610
Investment Gain (Loss)	6,872,953	3,071,482	5,963,274	(3,431,381)
Adjustment Percentage	80%	60%	40%	20%
Actuarial Asset Value Adjustment	(5,498,362)	(1,842,889)	(2,385,310)	686,276
Actuarial Asset Value (Market Value plus Adjustment)	\$ 117,636,859			

	Retirement	Medical Supplement
Market Value at Beginning of Year	\$72,556,149	\$45,133,475
State Contributions	-	-
Member Contributions	134,430	-
Transfers In Payments	-	-
Distributions	4,728,939	766,517
Allocated Investment Return	8,681,233	5,667,313
Market Value at End of Year	\$76,642,873	\$50,034,271
Allocation of Actuarial Asset Value	\$71,173,272	\$46,463,587

Summary of Benefits

This summary is not a Summary Plan Description or a plan document. You should not rely solely on this summary in making a determination of eligibility of benefits. Liabilities and plan provisions are based on the plan data and provisions as of July 1, 2019. This report covers only the traditional defined benefit/OPEB tier of KLRP.

Source

Sections 6.500-6.577 of the Kentucky Revised Statutes, and those statutes in KRS Chapter 21, specifically adopted by KRS 6.525.

Eligibility for Membership

Members of the General Assembly may elect to make monthly contributions within 30 days after taking office, and thereby become eligible for membership in the KLRP plan. Individuals commencing participation on or after January 1, 2014 will participate in the hybrid plan.

Employee Contributions

Members entering the plan on or after September 1, 2008 must contribute 6% of their “creditable compensation”. Members entering the plan prior to September 1, 2008 must contribute 5% of their “creditable compensation”. Once a member has earned sufficient service credit to have accrued a benefit of 100% of final average compensation, then employee contributions shall cease.

Creditable Compensation

Creditable compensation is based on actual compensation received during each year.

Normal Retirement

Condition

Members who have attained age 65 and completed at least 5 years of legislative service, or have additional service credit under other authorized state systems so that when added to legislative service credit equals at least 8 years of credit. However, the age 65 requirement shall be reduced by one year for each five years of service, and one year for each year served beyond the years of service needed to accrue a benefit of 100% of final average compensation, but with total reduction not to reduce the age requirement below 60. The full accrued benefit will also be payable upon completion of 27 years of service credit.

Benefit

A member will receive a retirement income at normal retirement date payable monthly for life equal to a percentage of final average compensation multiplied by years of service. In no event shall retirement income exceed 100% of final average compensation. (Beginning January 1, 2003, the final average compensation means the average monthly compensation of the member for his or her highest 36 months of State salary. Prior to 2003, final compensation was the average of the 60 months of legislative salary preceding retirement).

The benefit rates vary according to date of legislative service begins, as follows:

1. If a legislator was a member of the plan on July 1, 1982, and entered legislative service prior to July 1, 1978, the benefit rate is 5.00% for all KLRP service.
2. If a legislator was a member of the plan on July 1, 1982 and entered legislative service between July 1, 1978 and June 30, 1980, the benefit rate is 4.15% for all KLRP service.
3. If a legislator was a member of the plan on July 1, 1982 and entered legislative service between July 1, 1980 and June 30, 1982, the benefit rate is 3.50% for all KLRP service.
4. For legislators entering KLRP service after June 30, 1982, the benefit rate is 2.75%.

Early Retirement

A member who retires prior to normal retirement date and has met the service requirement for normal retirement has two alternatives with regard to receiving retirement income as follows:

1. Upon reaching normal retirement age, the member may be vested with the right to receive a monthly service retirement allowance computed and payable on the basis of years of service and applicable average salary, or
2. A member may elect to be paid, commencing as of the date of the election, a monthly service retirement allowance equivalent to the amount of monthly allowance that would have been paid had the member waited until reaching normal retirement age, but reduced in accordance with age at the time of election for each year under normal retirement age at the rate of 5% per year.

If the member has 27 or more years of service credit, there shall be no reduction for benefit commencement prior to normal retirement age. If the difference between the number of years of total governmental service and 27 is less than the difference between actual age and normal retirement age, the reduction shall be 5% for each year of service under 27.

Late Retirement

A legislator may continue service past normal retirement age and will continue to accrue service credits, but cannot receive a benefit in excess of 100% of final average compensation.

Disability Benefit

Condition

No service requirement.

Benefit

Upon determination of disability, a member will be eligible to receive $\frac{1}{2}$ of the monthly retirement income that would have been payable commencing at normal retirement date if this member had continued service until that date and then retired. In calculating the retirement income, average salary for the 3 years preceding disability will be used. When a disabled member reaches normal retirement date, the member may apply and start receiving the full amount of retirement income that would have been payable based upon the actual number of years of service and compensation, in lieu of the disability benefit.

Death Benefit

Upon the death of a member who at the time of death was receiving a retirement income (other than an actuarially reduced income), or was receiving a disability income, the surviving spouse (if married to the member

at the time of retirement) is entitled to receive a monthly allowance equal to $\frac{1}{2}$ of what the member was receiving for his/her lifetime.

If a member dies after retirement, and was at the time receiving an actuarially reduced allowance, or was not receiving an allowance, but had acquired a vested right to have received an allowance upon reaching normal retirement date, the surviving spouse (if married to the member at the time of retirement) is entitled to receive $\frac{1}{2}$ of the monthly allowance the member would have received at normal retirement date for his/her lifetime.

If an active member dies before retirement and before reaching normal retirement age, without regard to length of service, the surviving spouse is entitled to receive a monthly allowance payable for his/her lifetime equal to $\frac{1}{2}$ of the monthly retirement income the member would have received commencing at the member's normal retirement date as if the member had continued in service until that date and then retired, computed on the basis of final compensation at the time of death.

If a member dies before retirement and after reaching normal retirement date, the surviving spouse is entitled to receive a monthly allowance payable for his/her lifetime equal to $\frac{1}{2}$ of the monthly allowance the member would have been entitled to on the basis of years of service, had the member retired on his date of death, computed on the basis of final compensation at the time of death.

If a member is not married at the time of death, any death benefits described above to which a surviving spouse would have been entitled will be payable to the children of the deceased member until such time as the youngest child attains age 21, or for the life of a disabled child. Also, a member may designate that survivor benefits shall go in part or in total to minor children instead of the spouse.

If cumulative payments to the member and/or beneficiary do not exceed the member's total contributions to this plan, then the excess of such contributions over cumulative plan benefits paid shall be paid as an additional death benefit.

Termination Benefit

If a legislator ceases to be a member of the plan other than by death or disability prior to meeting the eligibility requirements for normal retirement, the amount of the member's accumulated contributions shall be returned to the member. If, thereafter, this individual again becomes a holder of an office qualifying for membership in this plan, this person shall not be entitled to credit for the prior period of service unless, at the time he again participates in the plan, the amount previously refunded is repaid, with interest.

Cost-of-Living Adjustment

Ad hoc cost-of-living adjustments (COLA's) have been granted as noted below:

Effective Date of Increase	Percentage Increase	Increase Applies To Benefits Based on Service Prior To
7/1/1990	5%	6/30/1990
7/1/1991	5%	6/30/1991
7/1/1992	1%	6/30/1992
7/1/1993	1%	6/30/1993
7/1/1994	5%	6/30/1994
7/1/1995	5%	6/30/1995
7/1/1996	None	N/A
7/1/1997	None	N/A
8/1/1998	2.3%	N/A
7/1/1999	1.6%	N/A
7/1/2000	2.2%	N/A
7/1/2001	3.4%	N/A
7/1/2002	2.85%	N/A
7/1/2003	1.6%	N/A
7/1/2004	2.3%	N/A
7/1/2005	2.7%	N/A
7/1/2006	3.4%	N/A
7/1/2007	3.2%	N/A
7/1/2008	2.8%	N/A
7/1/2009 and later*	1.5%	N/A

*COLA's were suspended for fiscal years beginning in 2012 and later; COLA's after 7/1/2013 are not reflected in this valuation. No further COLA's will be granted until the plan is 100% funded, unless a one-time COLA is 100% prefunded.

In addition, a provision for an on-going cost-of-living adjustment is made by statute. Effective August 1, 1998 and each July 1 thereafter, a recipient of a monthly pension shall receive a cost-of-living adjustment keyed to the Consumer Price Index. This COLA is excluded from the inviolable contract and can be repealed by the General Assembly at any time. Beginning July 1, 2009, if granted, this cost-of-living adjustment will be 1.50% for all retirees who have been retired in excess of one year and prorated for those retired less than one year.

Pursuant to statutory requirements, COLA increases are not reflected in plan liabilities until actually granted, except for any anticipated COLA adjustments under the provision as in effect prior to August 1, 1998.

Prior Service Credit

Credit in KERS or TRS, for legislative service prior to the creation of this plan on July 1, 1980, can be (and in many instances was) transferred to and become credit in this plan, upon transfer to this plan of the accumulated contributions plus interest (member's and state's) that were made to acquire the credit.

Medical Insurance Premium Supplement

Retired members, in addition to actual retirement benefits, will have a percentage of their (and their dependent's) medical insurance premium paid by the plan. The percentage will vary based on the numbers of years of service credit as follows:

<u>Years of Service Credit at Retirement</u>	<u>Percentage of Medical Insurance Premium Paid by the Plan</u>
20 or more	100%
19, but less than 20	95%
18, but less than 19	90%
17, but less than 18	85%
16, but less than 17	80%
15, but less than 16	75%
14, but less than 15	70%
13, but less than 14	65%
12, but less than 13	60%
11, but less than 12	55%
10, but less than 11	50%
4, but less than 10	25%
Less than 4	0%

The current premium rates in effect are:

	<u>Monthly Premium</u>
<i>Under age 65</i>	
Family coverage	\$ 1,767.60
Single coverage	729.34
Parent Plus coverage	1,037.08
Member and Spouse	1,589.10
<i>Age 65 or older</i>	
Medicare Advantage PPO	297.90

Premium rates are approved by the Board of Trustees.

Actuarial Assumptions

Interest

6.5% per annum – this rate was selected by the KLRP Investment Committee and Findley and the Fund Investment Manager believe this to be a reasonable long-term rate of return assumption.

The projection of cash flows used to determine the discount rate assumed that plan member contributions will be made at the current contribution rate and that employer contributions will be made at the current statutory contribution rates. Based on those assumptions, the pension plan's fiduciary net position was projected to be available to make all projected future benefit payments of current plan members. Therefore, the discount rate used for GASB purposes is also 6.50%

Mortality

RP-2000 Mortality Tables with white collar adjustment with Pre and Post Commencement Rates with projected mortality improvements after year 2000 under Projection Scale AA (male and female scales); i.e., full generational mortality.

Terminations

Table T-4 from the Actuary's Pension Handbook. Specimen rates are as follows:

<u>Age</u>	<u>Rate of Termination</u>
20	.054
25	.053
30	.051
35	.047
40	.042
45	.035
50	.025
55	.009
60	.001
65+	.000

Salary Increases

1% for the next five years and 3.5% thereafter;

Liabilities have been adjusted to reflect the potential impact of non-legislative salaries on future pension benefits. The liabilities for members (including terminated members) who could be impacted by non-legislative salaries have been increased by 40% to recognize the potential increase in plan liability.

Disability

None

Retirement Age

Retirements were assumed to occur as follow:

<u>Retirement Age</u>	<u>Percentage of Active Members Retiring</u>
NRA-5	16.67%
NRA-4	20.00%
NRA-3	25.00%
NRA-2	33.33%
NRA-1	50.00%
NRA	100.00%

NRA = Normal Retirement Age

In addition to these rates, an extra 20% rate is assumed at the age a member reaches 27 years of service credit.

Post-Retirement Death Benefit

Assumption is that 80% of the legislators would be married at retirement and the husband would be 3 years older than the wife on average.

Pre-Retirement Death Benefit

Assumption is that 80% of the legislators would be survived by a spouse upon death prior to retirement and that the husband would be 3 years older than the wife on average.

Cost-of-Living Adjustment

Pursuant to statutory requirements, COLA increases are not reflected in plan liabilities until actually granted. For the purposes of the calculation of the Recommended Contribution, a full 1.5% annual COLA has been reflected.

Medical Insurance Premium Supplement

Medical premiums will increase for each year beyond the valuation date at the rate of 7.00% for the next 3 years, then 6.75% for the next year and following the Getzen model thereafter until reaching an ultimate rate of 3.94% in the year 2075.

It was further assumed that coverage would be split among retirees as follows:

	% of Retirees	% With Spouse Coverage
<i>Pre-Medicare Coverage</i>		
Family	24%	N/A
Single	60%	N/A
Parent Plus	4%	N/A
Member and Spouse	12%	N/A
<i>Medicare Coverage</i>		
Medicare Advantage PPO	100%	75%

The assumed annual claims costs per subscriber as of July 1, 2019 are:

<u>Pre-65 Cost</u>	<u>Post-65 Cost</u>
\$ 15,582	\$ 6,256

Claims were adjusted downward using the aging factors in the Dale Yamamoto study released by the Society of Actuaries in June 2013 for attained ages 55 to 65.

Retirees are assumed to contribute the difference between the premium rate and the portion of the premium paid by the Plan. Premium rates and Plan contributions are described in the Summary of Benefits.

Non-members

Legislators electing not to participate are assumed to continue as non-members in the future.

Actuarial Methods

Funding Method

Accrued liability and normal cost calculated based on Entry Age Normal funding method. The required contribution is calculated based on KRS 21.525, which requires contributions of normal cost plus interest on the unfunded liability plus 1% of the unfunded liability.

Asset Valuation Method

The determination of the actuarial value of assets is as follows:

1. Investment gains/losses are determined for each year by comparing the expected value of assets based on the assumed interest assumption to actual market value. Expected value of assets in each year shall be determined by projecting the market value of assets from the prior year using the assumed interest rate, plus contributions less benefit payments and plan expenses (adjusted with interest at the assumed rate). If the expected value of plan assets is different than the actual market value of plan assets then the difference is treated as a gain or loss for that year.
2. The amount of any gain or loss as determined above shall be recognized evenly over the subsequent five years.
3. The actuarial value of assets on any valuation date shall be equal to the market value of assets on that date adjusted as follows:
 - Reduced by 80% of a gain or increased by 80% of a loss from the preceding year
 - Reduced by 60% of a gain or increased by 60% of a loss from the 2nd preceding year
 - Reduced by 40% of a gain or increased by 40% of a loss from the 3rd preceding year
 - Reduced by 20% of a gain or increased by 20% of a loss from the 4th preceding year
4. In no event will the actuarial value of assets be less than 80% or greater than 120% of the current market value of assets

This asset valuation method is used in the determination of funding levels. The fair market value of assets is used for disclosure purposes under GASB Statement Nos. 67, 68, 74, and 75.

For purposes of GASB Statement Nos. 67, 68, 74, and 75, the market value of assets has been allocated between retirement related and medical premium supplement liabilities. This market value allocation is carried forward each year based on the following:

1. State and member contributions, as well as transfers for purchase of additional service, are allocated pro-rata reflecting the Annual Required Contribution for that year.
2. Benefits paid reflect actual benefits paid relative to retirement related benefits separately from medical premium supplements.
3. Preliminary assets are determined by adjusting beginning value for allocated State and member contributions and actual benefits paid.
4. Net investment return is allocated pro-rata based on the preliminary assets developed in the previous step.
5. Allocated assets as of the valuation date equal the preliminary balance plus the allocated share of investment income.

Actuarial value of assets is developed initially in total and then allocated between retirement related benefits and medical premium supplement benefits on a pro-rata basis reflecting allocated share of market value as of the valuation date.

GASB Statement No. 67

Statement of Changes in Fiduciary Net Position

	<u>June 30, 2019</u>
Additions	
Contributions:	
Employer	\$0
Employee	<u>134,430</u>
Total Contributions	134,430
Transfer In Payments	0
Investment Income	8,681,233
Other	<u>0</u>
Total Additions	8,815,663
 Deductions	
Benefit Payments / Refunds	4,728,939
Administrative Expenses	0
Other	<u>0</u>
Total Deductions	<u>4,728,939</u>
Net Increase in Net Position	4,086,724
 Net Position Restricted for Pensions	
Beginning of Year Market Value of Assets	<u>72,556,149</u>
End of Year Market Value of Assets	<u><u>\$76,642,873</u></u>

Net Pension Liability

Determination of Net Pension Liability

	June 30, 2019
Total Pension Liability (6.5%)	71,623,005
Plan Fiduciary Net Position (Market Value of Assets)	(76,642,873)
Net Pension Liability	(\$5,019,868)
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	107.01%

Sensitivity of Net Pension Liability to Changes in the Discount Rate

	1% Decrease	Current Rate	1% Increase
	(5.5%)	(6.5%)	(7.5%)
Net Pension Liability	\$1,685,075	(\$5,019,868)	(\$10,742,544)

Schedule of Changes in the Net Pension Liability and Related Ratios (Dollar amounts in millions)

	fiscal year ending June 30									
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Total Pension Liability										
Service cost	\$1.0	\$1.0	\$0.9	\$0.7	\$0.6	\$0.6				
Interest	4.9	5.1	5.2	5.3	4.6	4.6				
Changes of benefit terms	0.0	0.0	0.0	0.0	0.0	0.0				
Differences between expected and actual experience	0.0	(3.4)	0.0	(6.4)	0.0	(2.8)				
Changes of assumptions	3.7	(1.5)	0.0	(0.2)	0.0	(0.3)				
Benefit Payments / Refunds	(3.5)	(3.7)	(4.0)	(4.2)	(4.5)	(4.7)				
Net Change in Total Pension Liability	\$6.1	(\$2.5)	\$2.1	(\$4.8)	\$0.7	(\$2.6)				
Total Pension Liability - beginning	72.6	78.7	76.2	78.3	73.5	74.2				
Total Pension Liability - ending (a)	\$78.7	\$76.2	\$78.3	\$73.5	\$74.2	\$71.6				
Plan Fiduciary Net Position (Market Value of Assets)										
Contributions - employer	\$1.8	\$3.4	\$3.4	\$2.4	\$2.4	\$0.0				
Contributions - employee	0.2	0.2	0.3	0.3	0.2	0.1				
Transfer In Payments	0.0	0.0	0.0	0.1	0.0	0.0				
Net investment income	7.9	5.6	2.0	7.9	6.2	8.6				
Benefit Payments / Refunds	(3.5)	(3.7)	(4.0)	(4.2)	(4.5)	(4.7)				
Administrative expenses	0.0	0.0	0.0	0.0	0.0	0.0				
Other	0.0	0.0	0.0	0.0	0.0	0.0				
Net Change in Plan Fiduciary Net Position	\$6.4	\$5.5	\$1.7	\$6.5	\$4.3	\$4.0				
Plan Fiduciary Net Position - beginning	48.2	54.6	60.1	61.8	68.3	72.6				
Plan Fiduciary Net Position - ending (b)	\$54.6	\$60.1	\$61.8	\$68.3	\$72.6	\$76.6				
Net Pension Liability - ending (a) - (b)	\$24.1	\$16.1	\$16.5	\$5.2	\$1.6	(\$5.0)				
Plan Fiduciary Net Position as a % of the Total Pension Liability	69.4%	78.9%	78.9%	92.9%	97.8%	107.0%				
Covered-employee payroll	\$5.0	\$4.5	\$4.5	\$3.5	\$3.5	\$2.5				
Net Pension Liability as a % of covered-employee payroll	483.2%	357.8%	366.7%	148.6%	45.7%	(200.0%)				
Discount Rate	6.50%	6.85%	6.85%	6.45%	6.45%	6.50%				

Schedule of Contributions

	fiscal year ending June 30									
	<u>2014</u>	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>
Actuarially determined contribution ¹	\$3.2	\$3.4	\$3.4	\$2.4	\$2.4	\$1.1				
Contributions in relation to the actuarially determined contribution	1.8	3.4	3.4	2.4	2.4	0.0				
Contribution deficiency (excess)	<u>\$1.4</u>	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$1.1</u>				
Covered-employee payroll	\$5.0	\$4.5	\$4.5	\$3.5	\$3.5	\$2.5				
Contributions as a percentage of covered-employee payroll	36.1%	75.6%	75.6%	68.6%	68.6%	0.0%				

¹ Starting with the Fiscal Year Ending June 30, 2019, due to the lag period between the calculated date and the actual contributions, the Actuarially Determined Contribution has been adjusted with interest at the funding interest rate assumption of 6.50%.

Additional Requirements Under GASB Statement No. 67

GASB Statement No. 67 also requires a Statement of Fiduciary Net Position (which includes a breakdown of current assets by type) and additional investment information, including the annual money-weighted rate of return. In order to satisfy GASB Statement No. 67, these required pieces will need to be provided by the Kentucky Judicial Form Retirement System. Findley is prepared to assist the system as needed.

GASB Statement No. 68

Schedule of Changes in NPL, Deferrals, & Pension Expense

	Increase (Decrease)					Pension Expense
	Total Pension Liability (a)	Plan Net Position (Assets) (b)	Net Pension Liability (a) - (b)	Deferred Pension Outflows of Resources	Deferred Pension Inflows of Resources	
Balances--at 06/30/18	<u>\$ 74,180,011</u>	<u>\$ 72,556,149</u>	<u>\$ 1,623,862</u>	<u>\$ 1,962,670</u>	<u>\$ 4,054,825</u>	
Changes for the Year:						
Service cost	621,005		621,005			621,005
Interest expense	4,684,866		4,684,866			4,684,866
Benefit changes						
Experience losses (gains)	(2,823,761)		(2,823,761)	-	-	(2,823,761)
Changes of assumptions	(310,177)		(310,177)	-	-	(310,177)
Contributions--State		-	-			
Contributions--Members		134,430	(134,430)			(134,430)
Transfer In Payments		-	-			
Net investment income		8,681,233	(8,681,233)			
Expected return on plan investments						(4,522,923)
Current expense of asset gain/loss						(1,860,815)
Non expensed asset gain/loss				-	3,326,648	
Refunds of contributions	-	-	-			
Benefits paid	(4,728,939)	(4,728,939)	-			
Plan administrative expenses						
Recognition of Prior Post-measurement Contribution				(1,110,669)		
Post-measurement Contribution				1,182,862		
Other changes						
Amortization of or change in beginning balances				(426,001)	(1,455,154)	
Net Changes	<u>(2,557,006)</u>	<u>4,086,724</u>	<u>(6,643,730)</u>	<u>(353,808)</u>	<u>1,871,494</u>	<u>(4,346,235)</u>
Balances--at 06/30/19	<u>\$ 71,623,005</u>	<u>\$ 76,642,873</u>	<u>\$ (5,019,868)</u>	<u>\$ 1,608,863</u>	<u>\$ 5,926,320</u>	<u>\$ (4,346,235)</u>

Pension Expense & Deferred Outflows/Inflows of Resources

For the year ended June 30, 2020, the recognized pension expense/(income) will be (\$4,346,235). At June 30, 2020, the Kentucky Judicial Form Retirement System reported deferred outflows of resources and deferred inflows of resources in relation to pensions from the following sources:

	As of June 30, 2019		Recognized in Pension Expense	As of June 30, 2020		Remaining Amort. Period
	Deferred Outflows of Resources	Deferred Inflows of Resources		Deferred Outflows of Resources	Deferred Inflows of Resources	
Experience losses (gains)						
- 6/30/2019	-	2,823,761	(2,823,761)	-	-	0.000 years
subtotal	-	2,823,761	(2,823,761)	-	-	
Change of assumptions						
- 6/30/2019	-	310,177	(310,177)	-	-	0.000 years
subtotal	-	310,177	(310,177)	-	-	
Net difference between projected and actual earnings on investments						
- 6/30/2015	-	344,677	(344,677)	-	-	0.000 years
- 6/30/2016	852,001	-	426,001	426,001	-	1.000 year
- 6/30/2017	-	2,195,283	(731,761)	-	1,463,522	2.000 years
- 6/30/2018	-	1,514,865	(378,716)	-	1,136,149	3.000 years
- 6/30/2019	-	4,158,310	(831,662)	-	3,326,648	4.000 years
subtotal	852,001	8,213,136	(1,860,815)	426,001	5,926,320	
Total	\$ 852,001	\$ 11,347,074	\$ (4,994,753)	\$ 426,001	\$ 5,926,320	

Actual investment earnings above (or below) projected earnings are amortized over 5 years. Plan experience and changes of assumptions are amortized over the average remaining service period of actives and inactive (0 years of future service is assumed for inactive for this calculation).

Amounts 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:	
2021	(1,516,139)
2022	(1,942,140)
2023	(1,210,378)
2024	(831,662)
2025	-
Thereafter	-

In addition, Governmental Accounting Standards Board Statement 71 ("GASB 71") requires contributions between the measurement date (July 1, 2019) and the disclosure date (June 30, 2020) for GASB 68 be reported as a deferred outflow of resources.

GASB Statement No. 74

Statement of Changes in Fiduciary Net Position

	<u>June 30, 2019</u>
Additions	
Contributions	
Employer	0
Employee	<u>0</u>
Total Contributions	0
Transfer In Payments	0
Investment Income	5,667,313
Other	<u>0</u>
Total Additions	<u>5,667,313</u>
 Deductions	
Benefit Payments / Refunds	766,517
Administrative Expenses	0
Other	<u>0</u>
Total Deductions	<u>766,517</u>
Net Increase in Net Position	<u>4,900,796</u>
 Net Position Restricted for OPEB	
Beginning of Year Market Value of Assets	<u>45,133,475</u>
End of Year Market Value of Assets	<u><u>\$50,034,271</u></u>

Net OPEB Liability

Determination of Net OPEB Liability

Total OPEB Liability	19,571,835
Plan Fiduciary Net Position (Market Value of Assets)	<u>(50,034,271)</u>
Net OPEB Liability	<u><u>(\$30,462,436)</u></u>
 Plan Fiduciary Net Position as a Percentage of Total OPEB Liability	 255.64%

Sensitivity of Net OPEB Liability to Changes in the Healthcare Cost Trend Rate

	1% Decrease	Current	1% Increase
	on Trend Assumption	Trend Assumption	on Trend Assumption
Net OPEB Liability	(\$32,377,908)	(\$30,462,436)	(\$28,185,603)

Sensitivity of Net OPEB Liability to Changes in the Discount Rate

	1% Decrease	Current Rate	1% Increase
	5.50%	6.50%	7.50%
Net OPEB Liability	(\$28,137,488)	(\$30,462,436)	(\$32,395,356)

Schedule of Changes in the Net OPEB Liability and Related Ratios

(Dollar amounts in millions)

	fiscal year ending June 30									
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Total OPEB Liability										
Service cost	\$0.4	\$0.3	\$0.3							
Interest	2.0	1.4	1.5							
Changes of benefit terms	0.0	0.0	0.0							
Differences between expected and actual experience	(10.6)	0.0	(4.4)							
Changes of assumptions	2.3	0.0	0.0							
Benefit Payments / Refunds	(0.7)	(0.8)	(0.8)							
Net Change in Total OPEB Liability	(\$6.6)	\$0.9	(\$3.4)							
Total OPEB Liability - beginning	28.6	22.0	23.0							
Total OPEB Liability - ending (a)	\$22.0	\$23.0	\$19.6							
Plan Fiduciary Net Position (Assets)										
Contributions - employer	\$0.0	\$0.0	\$0.0							
Contributions - employee	0.0	0.0	0.0							
Transfer In Payments	0.0	0.0	0.0							
Net investment income	4.9	3.9	5.7							
Benefit Payments / Refunds	(0.7)	(0.8)	(0.8)							
Administrative expenses	0.0	0.0	0.0							
Other	0.0	0.0	0.0							
Net Change in Plan Fiduciary Net Position	\$4.2	\$3.1	\$4.9							
Plan Fiduciary Net Position - beginning	37.8	42.0	45.1							
Plan Fiduciary Net Position - ending (b)	\$42.0	\$45.1	\$50.0							
Net OPEB Liability - ending (a) - (b)	(\$20.0)	(\$22.1)	(\$30.4)							
Plan Fiduciary Net Position as a % of the Total OPEB Liability	190.9%	196.1%	255.1%							
Covered-employee payroll	\$3.5	\$3.5	\$2.5							
Net OPEB Liability as a % of covered-employee payroll	(571.4%)	(631.4%)	(1216.0%)							
Discount Rate	6.50%	6.50%	6.50%							

Schedule of Contributions

	fiscal year ending June 30									
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Actuarially determined contribution ¹	\$0.0	\$0.0	\$0.0							
Contributions in relation to the actuarially determined contribution	0.0	0.0	0.0							
Contribution deficiency (excess)	\$0.0	\$0.0	\$0.0							
Covered-employee payroll	\$3.5	\$3.5	\$2.5							
Contributions as a percentage of covered-employee payroll	0.0%	0.0%	0.0%							

¹ Starting with the Fiscal Year Ending June 30, 2019, due to the lag period between the calculated date and the actual contributions, the Actuarially Determined Contribution has been adjusted with interest at the funding interest rate assumption of 6.50%.

Additional Requirements Under GASB Statement No. 74

GASB Statement No. 74 also requires a Statement of Fiduciary Net Position (which includes a breakdown of current assets by type) and additional investment information, including the annual money-weighted rate of return. In order to satisfy GASB Statement No. 74, these required pieces will need to be provided by the Kentucky Judicial Form Retirement System. Findley is prepared to assist the system as needed.

GASB Statement No. 75

Schedule of Changes in NOL, Deferrals, & OPEB Expense

	Increase (Decrease)			Deferred OPEB Outflows of Resources	Deferred OPEB Inflows of Resources	OPEB Expense
	Total OPEB Liability (a)	Plan Net Position (Assets) (b)	Net OPEB Liability (a) - (b)			
Balances--at 06/30/18	<u>\$ 22,961,320</u>	<u>\$ 45,133,475</u>	<u>\$(22,172,155)</u>	<u>\$ -</u>	<u>\$ 2,325,000</u>	
Changes for the Year:						
Service cost	269,596		269,596			269,596
Interest expense	1,487,174		1,487,174			1,487,174
Benefit changes						
Experience losses (gains)	(4,400,482)		(4,400,482)	-	-	(4,400,482)
Changes of assumptions	20,744		20,744	-	-	20,744
Contributions--State		-	-			
Contributions--Members		-	-			
Transfer In Payments		-	-			
Net investment income		5,667,313	(5,667,313)			
Expected return on plan investments						(2,952,670)
Current expense of asset gain/loss						(1,239,403)
Non expensed asset gain/loss				-	2,171,714	
Refunds of contributions	-	-	-			
Benefits paid	(766,517)	(766,517)	-			
Plan administrative expenses						
Recognition of Prior Post-measurement Contribution				-		
Post-measurement Contribution				-		
Other changes						
Amortization of or change in beginning balances				-	(696,474)	
Net Changes	<u>(3,389,485)</u>	<u>4,900,796</u>	<u>(8,290,281)</u>	<u>-</u>	<u>1,475,240</u>	<u>(6,815,041)</u>
Balances--at 06/30/19	<u>\$ 19,571,835</u>	<u>\$ 50,034,271</u>	<u>\$(30,462,436)</u>	<u>\$ -</u>	<u>\$ 3,800,240</u>	<u>\$ (6,815,041)</u>

OPEB Expense & Deferred Outflows/Inflows of Resources

For the year ended June 30, 2020, the recognized OPEB expense/(income) will be (\$6,815,041). At June 30, 2020, the Kentucky Judicial Form Retirement System reported deferred outflows of resources and deferred inflows of resources in relation to OPEBs from the following sources:

	As of June 30, 2019		Recognized in Pension Expense	As of June 30, 2020		Remaining Amort. Period
	Deferred Outflows of Resources	Deferred Inflows of Resources		Deferred Outflows of Resources	Deferred Inflows of Resources	
Experience losses (gains)						
- 6/30/2019	-	4,400,482	(4,400,482)	-	-	0.000 years
subtotal	-	4,400,482	(4,400,482)	-	-	
Change of assumptions						
- 6/30/2019	20,744	-	20,744	-	-	0.000 years
subtotal	20,744	-	20,744	-	-	
Net difference between projected and actual earnings on investments						
- 6/30/2017	-	1,382,680	(460,894)	-	921,786	2.000 years
- 6/30/2018	-	942,320	(235,580)	-	706,740	3.000 years
- 6/30/2019	-	2,714,643	(542,929)	-	2,171,714	4.000 years
subtotal	-	5,039,643	(1,239,403)	-	3,800,240	
Total	\$ 20,744	\$ 9,440,125	\$ (5,619,141)	\$ -	\$ 3,800,240	

Actual investment earnings above (or below) projected earnings are amortized over 5 years. Plan experience and changes of assumptions are amortized over the average remaining service period of actives and inactive (0 years of future service is assumed for inactive for this calculation).

Amounts reported as deferred outflows of resources and deferred inflows of resources related to OPEBs will be recognized in OPEB expense as follows:

Year ended June 30:	
2021	(1,239,403)
2022	(1,239,401)
2023	(778,509)
2024	(542,927)
2025	-
Thereafter	-

In addition, Governmental Accounting Standards Board Statement 71 ("GASB 71") requires contributions between the measurement date (July 1, 2019) and the disclosure date (June 30, 2020) for GASB 75 be reported as a deferred outflow of resources.

Risk Assessment

Risk Factor	Initial Risk Assessment Language
Investment	Due to the plan's substantial equity exposure, investment returns will likely be much more volatile than the measurements of plan liabilities. Therefore, there is a risk that the funded status of the plan, as well as required plan contributions, could be volatile.
Assumed Rate of Return	Due to the plan's estimated duration of 8 to 10, a 1% decrease in the assumed rate of investment return would increase the measurement of the liability by 8% to 10%.
Longevity	Since nearly all benefits are paid as annuities, the plan is sensitive to changes in overall population longevity. As a result, the liabilities will fluctuate with changes in longevity. The ratio of retired life liability to total liability is 68%, suggesting there is less sensitivity to long-term changes in overall mortality improvement than a less mature plan.
Other demographic factors	Due to the eligibility for unreduced and subsidized retirement benefits, employees continuing in service for longer than expected will accrue additional benefits which may or may not result in larger liabilities. Conversely, employees retiring sooner than anticipated will accrue smaller benefits which may or may not result in smaller liabilities.
Lump sums	No significant known risks.
Inflation	Inflation is a component of future interest rates and investment returns over a long period. As a result, changes to inflation can affect funded percentages.
Non-Legislative Salaries	Pension benefits can be increased by future non-legislative salaries and the liability for active and deferred vested participants has been increased by 40% to reflect his possibility. The effect of non-legislative salaries may have a larger or smaller impact than is reflected by the 40% load factor. Additionally, future legislation may eliminate or reduce the effect of this provision.
Other Factors	Due to recent and ongoing attempts to pass pension reform legislation at a state level, the plan could be modified in the future. Future legislation may affect benefit levels or future contribution levels and could result in increases or decreases in the plan liabilities or funding status.

Findley can perform more detailed assessments of these risks as desired by the plan sponsor to provide a better understanding of the risks.

GASB Notes

Notes to GASB 67, 68, 74, and 75 Disclosures

1. Actuarial accrued liability is based on the entry age normal funding method.
2. Market value of assets as of July 1, 2007 was allocated between pension and OPEB obligations based on proportionate share of accrued liability on that date. Allocations in subsequent years are based on prior year allocated value adjusted for contributions and benefits paid during the year, with investment return (net of expenses) allocated proportionately between retirement and OPEB obligations. Actuarial value of assets is then allocated based on the market value share of retirement and OPEB obligations.
3. Actuarial value of assets uses a 5-year asset smoothing method.
4. Information used in preparing these exhibits has been extracted from past valuation reports.
5. Interest on OPEB Obligation is based on assumed valuation interest assumption for the prior year. The interest rates for prior years are as follows: 7% beginning with 2009 valuation; 6.5% beginning with 2017 valuation.

Note: Above statements are based on information furnished by the prior actuary.

6. The tables in this report account for liabilities and assets only for the traditional defined benefit/OPEB tier under the plan; liabilities and assets pertaining to the hybrid cash balance/OPEB tier are presented in a separate report.
7. Covered payroll reflects payroll for all current plan members.
8. ADC based on full actuarial report (odd numbered years) immediately prior to each biennium. ADC amount shown is for basic valuation, without any future COLA reflected but with interest adjustment as appropriate.
9. The valuation date, disclosure date, and measurement date all fall on the same date for purposes of GASB 67.
10. It is assumed the measurement date for GASB 68 will be 12 months before the disclosure date. For the year ending June 30, 2020, the measurement date is July 1, 2019 (the valuation date).
11. The valuation date, disclosure date, and measurement date all fall on the same date for purposes of GASB 74.
12. It is assumed the measurement date for GASB 75 will be 12 months before the disclosure date. For the year ending June 30, 2020, the measurement date is July 1, 2019 (the valuation date).

Summary of Participant Data

Distribution of Active Participants with Average Compensation

Attained Age	Years of Credited Service										Total
	Under 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	Over 39	
Under 25											
25 - 29											
30 - 34			1								1
			\$39,562								\$39,562
35 - 39			2								2
			\$42,627								\$42,627
40 - 44			3	1							4
			\$41,529	\$43,001							\$41,897
45 - 49			1				1				2
			\$38,502				\$46,480				\$42,491
50 - 54			1	2	4						7
			\$45,265	\$42,646	\$45,146						\$44,449
55 - 59			1	2	1	2	1	2			9
			\$42,793	\$48,495	\$38,041	\$38,929	\$49,255	\$60,452			\$47,316
60 - 64			2	2		4	3				11
			\$40,219	\$47,450		\$42,951	\$44,589				\$43,719
65 - 69			1	5	2	4	1				13
			\$41,083	\$45,073	\$46,467	\$43,796	\$42,033				\$44,354
Over 69	1		1	1	2		2	1	1		9
	\$0		\$40,892	\$39,434	\$39,308		\$43,625	\$42,666	\$35,961		\$36,091
Total	1		13	13	9	11	7	3	1		58
	\$0		\$41,414	\$44,999	\$43,353	\$42,848	\$44,615	\$54,523	\$35,961		\$43,046

Distribution of Inactive Participants with Average Annual Benefit

Attained Age	Retired and Beneficiaries	Terminated	Total
Under 50	1	10	11
	\$22,459	\$10,498	\$11,586
50 - 54	3	8	11
	\$4,892	\$10,608	\$9,049
55 - 59	6	12	18
	\$23,457	\$10,048	\$14,518
60 - 64	17	7	24
	\$26,820	\$11,481	\$22,346
65 - 69	35	2	37
	\$31,939	\$2,871	\$30,368
70 - 74	61		61
	\$16,175		\$16,175
75 - 79	48		48
	\$18,089		\$18,089
80 - 84	42		42
	\$21,713		\$21,713
85 - 89	17	1	18
	\$15,118	\$48,451	\$16,970
90 - 94	8		8
	\$20,560		\$20,560
Over 94			
Total	238	40	278
	\$20,756	\$11,125	\$19,370

Glossary of Terms

Amortization – The process of systematically recognizing prior gains and losses as a component of the Pension Expense.

Fiduciary Net Position – The market value of assets as of a specified measurement date.

Funded Status – The difference between the Fiduciary Net Position and the Total Pension Liability as of the measurement date.

Gain/Loss – A change in the value of either the Total Pension Liability or the plan assets resulting from experience different from that assumed or from a change in an actuarial assumption.

Interest Cost – The amount recognized in a period determined as the increase in the Total Pension Liability due to the passage of time.

Pension Expense – The sum of Service Cost, Interest Cost, Expected Return on Assets and amortizations of Actuarial Gain/Loss over the average remaining service period (or the life expectancy) of plan participants expected to receive plan benefits plus a 5-year amortization of Asset Gain/Loss.

Service Cost – is the actuarial present value of benefits attributed to services rendered by employees during the measurement.

Total Pension Liability – The Entry Age Normal Accrued Liability.

Sensitivity Analysis

In accordance with HB 238, passed in 2016, we are providing the following sensitivity analysis of the valuation results to changes in certain plan assumptions. Specifically we have looked at the effect of a one percent increase and decrease to the discount rate, salary scale, and healthcare cost trend rate assumptions.

Discount Rate

	1% Decrease (5.5%)	Current Rate (6.5%)	1% Increase (7.5%)
Pension Plan			
Accrued Liability	\$78,327,948	\$71,623,005	\$65,900,329
Actuarial Value of Assets	71,173,272	71,173,272	71,173,272
Unfunded Past Service Liability	7,154,676	449,733	(5,272,943)
Funded Ratio	90.87%	99.37%	108.00%
Contribution as Percent of Salary	30.74%	10.88%	0.00%
OPEB Plan			
Accrued Liability	\$21,896,783	\$19,571,835	\$17,638,915
Actuarial Value of Assets	46,463,587	46,463,587	46,463,587
Unfunded Past Service Liability	(24,566,804)	(26,891,752)	(28,824,672)
Funded Ratio	212.19%	237.40%	263.42%
Contribution as Percent of Salary	0.00%	0.00%	0.00%
Total ¹			
Accrued Liability	\$100,224,731	\$91,194,840	\$83,539,244
Actuarial Value of Assets	117,636,859	117,636,859	117,636,859
Unfunded Past Service Liability	(17,412,128)	(26,442,019)	(34,097,615)
Funded Ratio	117.37%	129.00%	140.82%
Contribution as Percent of Salary	30.74%	10.88%	0.00%

¹Our current understanding of IRS regulations is that they prohibit the use of surplus OPEB assets for retirement benefits. We recommend continuing discussions with plan council on possible options. Please refer to page 8 of this report for the asset and liabilities split between the Pension and OPEB plans.

Salary Scale

	1% Decrease 0% for five years, 2.5% thereafter	Current Rate 1% for five years, 3.5% thereafter	1% Increase 2% for five years, 4.5% thereafter
Pension Plan			
Accrued Liability	\$71,542,053	\$71,623,005	\$71,732,091
Actuarial Value of Assets	71,173,272	71,173,272	71,173,272
Unfunded Past Service Liability	368,781	449,733	558,819
Funded Ratio	99.48%	99.37%	99.22%
Contribution as Percent of Salary	9.69%	10.88%	12.28%
OPEB Plan			
Accrued Liability	\$19,623,307	\$19,571,835	\$19,517,769
Actuarial Value of Assets	46,463,587	46,463,587	46,463,587
Unfunded Past Service Liability	(26,840,280)	(26,891,752)	(26,945,818)
Funded Ratio	236.78%	237.40%	238.06%
Contribution as Percent of Salary	0.00%	0.00%	0.00%
Total ¹			
Accrued Liability	\$91,165,360	\$91,194,840	\$91,249,860
Actuarial Value of Assets	117,636,859	117,636,859	117,636,859
Unfunded Past Service Liability	(26,471,499)	(26,442,019)	(26,386,999)
Funded Ratio	129.04%	129.00%	128.92%
Contribution as Percent of Salary	9.69%	10.88%	12.28%

¹Our current understanding of IRS regulations is that they prohibit the use of surplus OPEB assets for retirement benefits. We recommend continuing discussions with plan council on possible options. Please refer to page 8 of this report for the asset and liabilities split between the Pension and OPEB plans.

Healthcare Cost Trend Rate

	1% Decrease in Trend Assumption	Current Rate in Trend Assumption	1% Increase in Trend Assumption
Pension Plan			
Accrued Liability	\$71,623,005	\$71,623,005	\$71,623,005
Actuarial Value of Assets	71,173,272	71,173,272	71,173,272
Unfunded Past Service Liability	449,733	449,733	449,733
Funded Ratio	99.37%	99.37%	99.37%
Contribution as Percent of Salary	10.88%	10.88%	10.88%
OPEB Plan			
Accrued Liability	\$17,656,363	\$19,571,835	\$21,848,668
Actuarial Value of Assets	46,463,587	46,463,587	46,463,587
Unfunded Past Service Liability	(28,807,224)	(26,891,752)	(24,614,919)
Funded Ratio	263.15%	237.40%	212.66%
Contribution as Percent of Salary	0.00%	0.00%	0.00%
Total ¹			
Accrued Liability	\$89,279,368	\$91,194,840	\$93,471,673
Actuarial Value of Assets	117,636,859	117,636,859	117,636,859
Unfunded Past Service Liability	(28,357,491)	(26,442,019)	(24,165,186)
Funded Ratio	131.76%	129.00%	125.85%
Contribution as Percent of Salary	10.88%	10.88%	10.88%

¹Our current understanding of IRS regulations is that they prohibit the use of surplus OPEB assets for retirement benefits. We recommend continuing discussions with plan council on possible options. Please refer to page 8 of this report for the asset and liabilities split between the Pension and OPEB plans.

Projections

Pension Plan

In accordance with HB 238, we are also providing the following 20 year projection under the current plan assumptions and, if applicable, before any assumptions changes effective at the valuation date. For a list of assumptions changes effective as of July 1, 2019, please see page 6.

Year Beginning July 1	Contribution Requirement (\$M)*		Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		Funded Ratio (Assets/Liabilities)	
	Prior	Current	Prior	Current	Prior	Current	Prior	Current	Prior	Current
	Assumptions		Assumptions		Assumptions		Assumptions		Assumptions	
2019	n/a	\$ 1.2	n/a	48.1%	n/a	\$ 71.6	n/a	\$ 0.4	n/a	99%
2020	n/a	\$ 0.3	n/a	26.6%	n/a	\$ 70.0	n/a	\$ (2.1)	n/a	103%
2021	n/a	\$ 0.3	n/a	32.7%	n/a	\$ 68.3	n/a	\$ (4.5)	n/a	107%
2022	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 66.4	n/a	\$ (6.3)	n/a	109%
2023	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 64.5	n/a	\$ (7.4)	n/a	111%
2024	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 62.5	n/a	\$ (7.8)	n/a	112%
2025	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 60.5	n/a	\$ (8.2)	n/a	114%
2026	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 58.4	n/a	\$ (8.7)	n/a	115%
2027	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 56.3	n/a	\$ (9.1)	n/a	116%
2028	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 54.1	n/a	\$ (9.7)	n/a	118%
2029	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 52.0	n/a	\$ (10.2)	n/a	120%
2030	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 49.7	n/a	\$ (10.8)	n/a	122%
2031	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 47.6	n/a	\$ (11.5)	n/a	124%
2032	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 45.4	n/a	\$ (12.2)	n/a	127%
2033	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 43.2	n/a	\$ (13.0)	n/a	130%
2034	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 41.0	n/a	\$ (13.8)	n/a	134%
2035	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 38.9	n/a	\$ (14.6)	n/a	138%
2036	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 36.7	n/a	\$ (15.6)	n/a	143%
2037	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 34.6	n/a	\$ (16.6)	n/a	148%
2038	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 32.5	n/a	\$ (17.6)	n/a	154%
2039	n/a	\$ 0.0	n/a	0.0%	n/a	\$ 30.4	n/a	\$ (18.8)	n/a	162%
Sum of Contributions	n/a	\$ 1.8								

* The Contribution Requirement above is the full projected contribution requirement, adjusted with interest. The projection results are based on the assumption that 80.0% of the requirement is contributed, the average percentage of the contribution requirement that was made over the past 5 years.

OPEB Plan

Year Beginning July 1	Contribution Requirement (\$M)*		Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		Funded Ratio (Assets/Liabilities)	
	Prior	Current	Prior	Current	Prior	Current	Prior	Current	Prior	Current
	Assumptions	Current	Assumptions	Current	Assumptions	Current	Assumptions	Current	Assumptions	Current
2019	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 19.6	\$ 19.6	\$ (26.9)	\$ (26.9)	237%	237%
2020	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 19.7	\$ 19.7	\$ (29.8)	\$ (29.7)	251%	251%
2021	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 19.8	\$ 19.8	\$ (33.0)	\$ (33.0)	267%	267%
2022	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 19.8	\$ 19.8	\$ (35.9)	\$ (35.9)	281%	281%
2023	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 19.7	\$ 19.8	\$ (38.7)	\$ (38.7)	296%	295%
2024	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 19.6	\$ 19.7	\$ (41.2)	\$ (41.1)	310%	309%
2025	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 19.5	\$ 19.5	\$ (43.8)	\$ (43.7)	325%	324%
2026	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 19.3	\$ 19.4	\$ (46.5)	\$ (46.5)	341%	340%
2027	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 19.1	\$ 19.2	\$ (49.5)	\$ (49.4)	359%	357%
2028	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 18.8	\$ 18.9	\$ (52.6)	\$ (52.6)	380%	378%
2029	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 18.5	\$ 18.6	\$ (56.0)	\$ (56.0)	403%	401%
2030	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 18.1	\$ 18.3	\$ (59.6)	\$ (59.6)	429%	426%
2031	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 17.7	\$ 17.9	\$ (63.4)	\$ (63.4)	458%	454%
2032	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 17.3	\$ 17.5	\$ (67.5)	\$ (67.5)	490%	486%
2033	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 16.9	\$ 17.1	\$ (71.9)	\$ (71.8)	525%	520%
2034	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 16.4	\$ 16.6	\$ (76.5)	\$ (76.4)	566%	560%
2035	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 16.0	\$ 16.2	\$ (81.4)	\$ (81.4)	609%	602%
2036	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 15.5	\$ 15.7	\$ (86.7)	\$ (86.6)	659%	652%
2037	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 15.0	\$ 15.2	\$ (92.3)	\$ (92.2)	715%	707%
2038	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 14.5	\$ 14.7	\$ (98.3)	\$ (98.2)	778%	768%
2039	\$ 0.0	\$ 0.0	0.0%	0.0%	\$ 13.9	\$ 14.1	\$ (104.7)	\$ (104.6)	853%	842%
Sum of Contributions	\$ 0.0	\$ 0.0								

* The Contribution Requirement above is the full projected contribution requirement, adjusted with interest. The projection results are based on the assumption that 80.0% of the requirement is contributed, the average percentage of the contribution requirement that was made over the past 5 years.



TO: Ms. Donna S. Early
FROM: Findley
DATE: October 30, 2019
RE: Kentucky Legislators Retirement Plan - Hybrid Tier – Addendum to July 1, 2019 Actuarial Valuation Report – Update of Annual Required Contribution for Administrative Expenses

It is our understanding that starting with the 2020-21 fiscal year, administrative and personnel expenses will begin to be paid from plan assets. Due to this change, the Annual Required Contribution amounts shown in the July 1, 2019 Actuarial Valuation Report (“Valuation Report”), dated October 1, 2019, require an adjustment to include the expenses expected to be paid out of the plan assets during the 2020-21 and 2021-22 fiscal years. This memorandum shall serve as an Addendum to the Valuation Report and documents such adjustments to the Annual Required Contributions.

This change is expected to have minimal impact on the other results shown in the Valuation Report. For the projections shown on pages 35-36 of the Valuation Report, the Annual Contribution Requirements would increase by the expected expenses in each year. However, since anticipated expenses for a particular year will be paid out during that year, this increased contribution is assumed to have no impact on the projected Unfunded Liability or Funded Ratio.

The Preliminary Annual Required Contribution as of July 1, 2019 below is the amount shown on pages 2 and 7 of the Valuation Report. Because the actual contributions, based on this July 1, 2019 measurement date calculation, will be made during the 2020-21 and 2021-22 fiscal years, one and two years after the date the requirement was calculated, the Annual Required Contribution has been increased at the interest rate assumption of 4.00%. This adjustment is being made for the time value of money (i.e., there is a time lag between the date of the calculation, July 1, 2019, and the time in which monies are actually contributed to the plan trust).

	<u>Pension</u>	+	<u>OPEB</u>	=	<u>Total</u>
1. Preliminary Annual Required Contribution as of July 1, 2019	67,073		23,952		91,025
<u>Annual Required Contribution for 2020-21 Fiscal Year</u>					
2a. Preliminary Annual Required Contribution for 2020-21 Fiscal Year [(1) * 1.04]	69,756		24,910		94,666
2b. Requested Expenses for 2020-21 Fiscal Year (split based on July 1, 2019 liability)	26,153		7,647		33,800
2c. Final Annual Required Contribution for 2020-21 Fiscal Year	95,909		32,557		128,466
<u>Annual Required Contribution for 2021-22 Fiscal Year</u>					
3a. Preliminary Annual Required Contribution for 2021-22 Fiscal Year [(1) * 1.04 * 1.04]	72,546		25,907		98,453
3b. Requested Expenses for 2021-22 Fiscal Year (split based on July 1, 2019 liability)	27,856		8,144		36,000
3c. Final Annual Required Contribution for 2021-22 Fiscal Year	100,402		34,051		134,453

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Kentucky Legislators Retirement Plan - Hybrid Tier

Actuarial Valuation and Report

as of July 1, 2019

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Introduction

An actuarial valuation of the Kentucky Legislators Retirement Plan - Hybrid Tier (“KLRP-HT”) has been performed as of July 1, 2019. Actuarial valuations are based on the integrity of employee data, plan asset data, plan provisions and an extensive set of assumptions regarding future events. There is necessary uncertainty with any actuarial calculation based on the accuracy of the data provided, the correct interpretation of plan provisions and the realization of the assumptions made. These results were based on participant data and asset information provided by the Kentucky Judicial Form Retirement System. This information was not audited but was reviewed for reasonableness.

Detailed explanations of the actuarial assumptions and methods used in the report are contained in later sections of this report. Also included in this report is a summary of provisions of the plan as we understand them.

This report provides details on the actuarial valuation underlying the recommended contribution to the KLRP-HT for plan years commencing in 2020 and 2021. This determination was performed pursuant to Kentucky Revised Statute (“KRS”) §21.525 for the retirement system defined in KRS §6.500 to §6.577. KRS §21.402 and §21.525, as well as other statutes found in KRS Chapter 21 cited hereafter, are made applicable to KLRP-HT by KRS §6.525.

Governmental Accounting Standards Board Statement 67 (“GASB 67”) and Statement 74 (“GASB 74”) establish financial reporting standards for defined benefit pension plans and other postemployment benefit (OPEB) plans sponsored by employers that are subject to governmental accounting standards. Governmental Accounting Standards Board Statement 68 (“GASB 68”) and Statement 75 (“GASB 75”) provide standards for reporting pension and OPEB expenditures and expense, and related liabilities and assets for such plans. The purpose of this report is to provide pertinent financial statement disclosure information for the fiscal year ending in 2019. Actuarial computations under Statements 67, 68, 74, and 75 are for purposes of fulfilling plan and employer governmental accounting requirements and may not be appropriate for other purposes. This report has been prepared on a basis consistent with our understanding of the statements and does not constitute legal, accounting, tax or investment advice.

Statements 68 and 75 set forth a methodology for the calculation of the annual Pension Expense for the upcoming fiscal year. GASB 68 and GASB 75 provide a method for reflecting prior gains and losses from asset and plan experience, as well as other areas including plan amendments. Amounts not reflected previously or in the upcoming year are reflected in the Deferred Outflows and Inflows of Resources shown.

Findley does not have access to and is not providing information concerning liabilities other than benefits, such as for legal or accounting fees.

Findley is not aware of any significant events subsequent to the current year’s measurement date that could materially affect the information contained in this report. However, we are aware that legislation has been passed that makes substantial changes to the state-wide retirement systems, including KLRP-HT, but that legislation has since been voided by a Kentucky Supreme Court ruling. This report does not consider this piece of legislation.

We are not aware of any relationship between the plan or plan sponsor and Findley which would impair or appear to impair our objectivity.

To the best of our knowledge, all information provided in this report is complete and accurate and disclosures for GASB purposes have been determined in accordance with generally accepted accounting principles.

Summary of Report

An actuarial valuation of the Kentucky Legislators Retirement Plan - Hybrid Tier (“KLRP-HT”) was conducted as of July 1, 2019. The purpose of the valuation is to determine the cost implications of the plan including a determination of annual funding levels for the fiscal years beginning July 1, 2020 and July 1, 2021.

In 2013 the applicable state statutes were amended to close participation in the traditional defined benefit tier, with all individuals first electing to participate in Kentucky Legislators Retirement Plan (“KLRP”) on or after January 1, 2014 being covered under a new hybrid cash balance tier. **This report covers only the hybrid cash balance/OPEB tier of KLRP.**

It is our understanding that this plan is a “governmental plan” as defined in Internal Revenue Code Section 414(d) and this report has been prepared on that basis.

On the basis of the valuation, it has been determined that the annual funding requirements for the State for the fiscal year beginning in 2020 for the plan, prior to adjusting with interest, as described in the Summary of Benefits section of this report, are as follows:

	Total Amount	Percent of Payroll
Annual Required Contribution	\$ 91,025	4.98%
Recommended Contribution	\$ 91,025	4.98%

The Annual Required Contribution is determined based on assumptions and methods set forth in the statute and established by the KLRP Investment Committee. The Recommended Contribution is determined as the greater of the Annual Required Contribution and 4.00% of payroll.

The Annual Required Contribution and Recommended Contribution shown above are calculated using asset and liability values as of July 1, 2019. These amounts are used to determine contributions for the fiscal years beginning July 1, 2020 and July 1, 2021.

Due to the lag period between the calculated date and the actual contributions, we have adjusted the Annual Required Contributions and Recommended Contributions for the plan years 2020-2021 and 2021-2022 with one and two years of interest, respectively, at the interest rate assumption of 4.00%.

	2020-2021 (1 year of interest)	2021-2022 (2 years of interest)
Annual Required Contribution (with interest)	\$ 94,666	\$ 98,453
Recommended Contribution (with interest)	\$ 94,666	\$ 98,453

Summary of Selected Plan Information ¹

	Plan Year Beginning		
	7/1/2019	7/1/2017	7/1/2015
Number of Participants			
Active	45	23	11
Terminated Vested	3	0	0
Retired	0	0	0
Beneficiaries	0	0	0
Total	48	23	11
Average Age (for actives)	51.8	52.5	50.8
Average Service (for actives)	1.8	1.4	0.6
Annual Covered Payroll	\$ 1,828,413	\$ 897,712	\$ 419,012
Average Salary	40,631	39,031	38,092
Accrued Liability	411,195	147,911	29,753
Actuarial Asset Value	321,196	141,146	24,788
Market Asset Value	341,231	145,643	24,463
Unfunded Accrued Liability (UAL)	89,999	6,765	4,965
Annual Funding Level ²			
State Portion of Normal Cost	\$ 86,525	\$ 43,017	\$ 20,521
Expected Employee Contributions	109,705	53,863	25,141
Total Normal Cost	196,230	96,880	45,662
Annual Required Contribution	91,025	43,355	20,918
Percent of Covered Payroll	4.98%	4.83%	4.99%

¹Our current understanding of IRS regulations is that they prohibit the use of surplus OPEB assets for retirement benefits. We recommend continuing discussions with plan council on possible options. Please refer to page 7 of this report for the asset and liabilities split between the Pension and OPEB plans.

²In accordance with KRS 21.525 (legally prescribed funding method).

Legislative and Regulatory Background

As stated previously, state statutes were amended in 2013 such that all participants entering KLRP on or after January 1, 2014 will be covered under a hybrid cash balance/OPEB tier; those entering before that date will continue to be covered under the traditional defined benefit/OPEB tier. The legislation making this change also restricted the availability of future cost-of-living adjustments (COLA's) to plan benefits.

Actuarial Standard of Practice No. 51 (ASOP 51) is effective for actuarial valuations on or after November 1, 2018. This standard calls for explicit disclosure of risks associated with the pension plan and any recommended actions for better understanding the nature and impact of those risks. Please let us know if any additional analysis or information is desired.

Sensitivity analysis along with 20-year projections of results (before and after any assumption changes) have been included in this report pursuant to HB 238, passed in 2016.

Actuarial Soundness

A plan that has adopted a reasonable funding method, that adopts reasonable assumptions and which contributes at a rate at or above the recommended contribution rate (based on these reasonable methods and assumptions), could be considered to be actuarially sound.

In order to ensure KLRP-HT is funded in an “actuarially sound manner”, we would recommend the following:

1. Revise the actuarial funding method to amortize all past unfunded as well as new liabilities over a period not more than 15 years and amortize future gains and losses over a period not more than 15 years. (Note that GASB 68 may require the expensing of liabilities at a faster pace than these amortization periods.)
2. Contribute at least the recommended contribution each year.

Deviations from these recommendations may result in an “actuarially unsound” approach to funding KLRP-HT and may eventually result in KLRP-HT becoming insolvent – that is, exhausting assets at which time all future benefits would be provided on a pay as you go basis.

Although the Actuarial Standards of Practice 4 “Measuring Pension Obligations” allows for plan liabilities to be calculated under a legally prescribed method, the statement goes on to say,

“If, in the actuary’s professional judgment, such an actuarial cost method or amortization method is significantly inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming that all actuarial assumptions will be realized and that the plan sponsor or other contributing entity will make contributions when due, the actuary should disclose this.”

It is our professional actuarial opinion that the current legally prescribed method, which requires contributions of normal cost plus interest on the unfunded liability plus 1% of the unfunded liability (per KRS 21.525), is inconsistent with the plan accumulating adequate assets to make benefit payments when due, assuming all actuarial assumptions are realized.

Changes in Actuarial Assumptions

The following changes were made to the actuarial assumptions effective June 30, 2019:

	<u>Previous</u>	<u>Current</u>
Medical Trend Rates	8.00% decreasing to 5.00% over 12 years beginning July 1, 2017	7.00% level for 3 years, then 6.75% and following the Getzen model thereafter until reaching an ultimate rate of 3.94% in the year 2075

The medical trend rates change described above resulted in an increase in liabilities and annual recommended contribution.

	<u>Previous</u>	<u>Current</u>
Medical Claims Aging Table	Claims were adjusted downward 3% for each year of age reduction from age 65 to age 55.	Claims were adjusted downward using the aging factors in the Dale Yamamoto study released by the Society of Actuaries in June 2013 for attained ages 55 to 65.

The medical trend rates change described above resulted in an increase in liabilities and annual recommended contribution.

Summaries of the plan provisions, actuarial assumptions and methods can be found in the Basis of Valuation section of this report.

Actuarial Certification

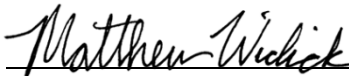
The information contained in this document (including any attachments) is not intended by Findley to be used, and it cannot be used, for the purpose of avoiding penalties under the Internal Revenue Code that may be imposed on the taxpayer. The information and valuation results shown in this report are, to the best of our knowledge, complete and accurate and are based upon the following:

1. Employee census data as of July 1, 2019, submitted by the Kentucky Judicial Form Retirement System. This data was not audited by us but appears to be sufficient and reliable for purposes of the report.
2. Financial data as of June 30, 2019, submitted by the Kentucky Judicial Form Retirement System. This data was not audited by us but appears to be sufficient and reliable for purposes of the report.
3. Actuarial assumptions and methods as established either by statute or the KLRP Investment Committee. The actuarial assumptions currently adopted by the Committee appear to be reasonable, both individually and in aggregate.
4. For purposes of GASB 67, 68, 74, and 75 disclosures, assets were split between pension and retiree medical liabilities on the basis of the employee and employer contributions allocated to each part and a prorata allocation of investment return. This methodology was based on the process used to split assets in the traditional defined benefit plan between the pension and retiree medical components.

We believe the information is sufficiently complete and reliable. This report provides actuarial advice and does not constitute legal, accounting, tax or investment advice.

The actuarial valuation summarized in this report has been performed utilizing generally accepted actuarial principles. It is my opinion that the results fully and fairly disclose the actuarial position of the plan on the valuation date. I am a senior consultant for Findley, member of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

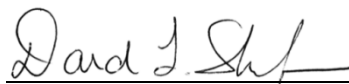
Certified by:



Matthew Widick, F.S.A., E.A., C.E.R.A., M.A.A.A.
Senior Consultant

October 1, 2019

Date



David L. Shaub, F.S.A., M.A.A.A.
Managing Consultant
(OPEB Plan Only)

October 1, 2019

Date

Findley
5301 Virginia Way, Suite 400
Brentwood, TN 37027
(615) 665-1640

Annual Required Contribution

Determination of Annual Required Contribution as of July 1, 2019

1. Accrued Liability	<u>Pension</u>	<u>OPEB</u>	<u>Total</u>
Actives			
Actives	309,206	-	309,206
Medical Premium Supplement	-	93,026	93,026
Total Active Liability	309,206	93,026	402,232
Inactives			
Retired	-	-	-
Deferred Vested	8,963	-	8,963
Beneficiaries	-	-	-
Medical Premium Supplement	-	-	-
Total Inactive Liability	8,963	-	8,963
Total Accrued Liability	318,169	93,026	411,195
2. Valuation Assets	259,109	62,087	321,196
3. Unfunded Past Service Liability	59,060	30,939	89,999
4. Gross Normal Cost			
a) Retirement Related	155,541	-	155,541
b) Medical Premium Supplement Related	-	40,689	40,689
c) Total Normal Cost	155,541	40,689	196,230
5. Annual Covered Payroll	1,828,413	1,828,413	1,828,413
6. Estimated Employee Contributions for the Next 12 Months			
a) Retirement Related	91,421	-	91,421
b) Medical Premium Supplement Related	-	18,284	18,284
c) Total Estimated Employee Contributions	91,421	18,284	109,705
7. Net Normal Cost			
a) Retirement Related (4a - 6a)	64,120	-	64,120
b) Medical Premium Supplement Related (4b - 6b)	-	22,405	22,405
c) Total Net Normal Cost (4c - 6c)	64,120	22,405	86,525
d) Net Normal Cost as Percent of Pay (7c / 5)	3.51%	1.23%	4.73%
8. Interest plus 1% of Unfunded Past Service Liability	2,953	1,547	n/a
9. Total Annual Required Contribution (max (0, 7c + 8))	67,073	23,952	91,025
10 . Payment as a Percentage of Covered Payroll (9 / 5)	3.67%	1.31%	4.98%

Actuarial Asset Value

Determination of Actuarial Asset Value as of July 1, 2019

	2018-19 Plan Year	2017-18 Plan Year	2016-17 Plan Year	2015-16 Plan Year
Interest Return Assumption	4.00%	4.00%	4.00%	4.00%
Market Value at Beginning of Year				
Amount	\$ 239,190	\$ 145,643	\$ 74,575	\$ 24,463
Interest to End of Year	9,568	5,826	2,983	979
Employer Contributions				
Amount	-	21,000	21,000	19,682
Interest to End of Year	-	420	420	394
Member Contributions				
Amount	76,675	56,776	42,202	29,524
Interest to End of Year	1,534	1,136	844	590
Transfers from KERS				
Amount	-	-	-	-
Interest to End of Year	-	-	-	-
Benefits Paid				
Amount	-	1,888	2,938	-
Interest to End of Year	-	38	59	-
Expected End of Year Assets	326,967	228,875	139,027	75,632
Market Value at End of Year	341,231	239,190	145,643	74,575
Investment Gain (Loss)	14,264	10,315	6,616	(1,057)
Adjustment Percentage	80%	60%	40%	20%
Actuarial Asset Value Adjustment	(11,411)	(6,189)	(2,646)	211
Actuarial Asset Value (Market Value plus Adjustment)	\$ 321,196			

	Retirement	Medical Supplement
Market Value at Beginning of Year	190,911	48,279
State Contributions	-	-
Member Contributions	63,897	12,778
Transfers In Payments	-	-
Distributions	-	-
Refund of Contributions	-	-
Allocated Investment Return	20,463	4,903
Market Value at End of Year	275,271	65,960
Allocation of Actuarial Asset Value	259,109	62,087

Summary of Benefits

This summary is not a Summary Plan Description or a plan document. You should not rely solely on this summary in making a determination of eligibility of benefits. Liabilities and plan provisions are based on the plan data and provisions as of July 1, 2019. This report covers only the hybrid cash balance/OPEB tier of KLRP.

Source

Sections 6.500-6.577 of the Kentucky Revised Statutes, and those statutes in KRS Chapter 21, specifically adopted by KRS 6.525. {See 2013 Senate Bill 2}.

Eligibility for Membership

Members of the General Assembly may elect to make monthly contributions within 30 days after taking office, and thereby become eligible for membership in the KLRP-HT plan. Individuals commencing participation before January 1, 2014 became participants in the KLRP.

Hypothetical Member Account

The Hypothetical Member Account for each member is credited monthly with 9% of “creditable compensation” (including a 5% employee credit and a 4% state credit), as well as interest as described below. The Hypothetical Member Account balance on June 30 each year is equal to the sum of all prior contribution credits and all prior interest credits.

Employee Contributions

All members contribute 5% of their “creditable compensation” to help fund their pension benefit. Additionally, all members contribute 1% of their “creditable compensation” towards the retiree medical benefit.

State Contributions

The state contributes actuarially determined amounts to finance benefits.

Creditable Compensation

Creditable compensation is based on actual compensation received during each year.

Interest on Hypothetical Member Account

The Hypothetical Member Account will be credited with 4% annually. The credit will be applied on each June 30 based upon the Hypothetical Member Account balance from the preceding June 30. No interest credit is provided for contribution credits made in the current year.

Additionally, if the geometric average net investment return for the prior five years (or years since the effective date of the hybrid plan, if less) exceed 4%, members who were active and participating in the prior year will have their hypothetical accounts credited with 75% of the amount of the return over 4%. This additional interest credit is applied in the same method as the interest credit in the prior paragraph.

Normal Retirement

Condition

Members who have attained age 65 and completed at least 5 years of legislative service. However, for members who are at least age 57, members may retire if age plus service equals 87 years.

Benefit

A member will receive their accumulated Hypothetical Account as either a lump sum or as one of a variety of annuity options, calculated by dividing their accumulated Hypothetical Account by an actuarial factor.

Early Retirement

A member who retires prior to normal retirement date with at least 5 years of service is eligible for a full refund of their accumulated Hypothetical Account as a lump sum.

Termination Benefit

If a legislator ceases to be a member of the plan prior to having 5 years of service, the amount of the member's accumulated contributions shall be returned to the member, including the member contributions and the interest applicable to this portion of the account. A member terminating with less than 5 years of service does not receive a refund of state contributions nor the interest applicable to this portion of the account.

Death Benefit

Upon the death of a member who at the time of death was receiving a retirement income, the named beneficiary shall receive survivor benefits based upon the form of retirement benefits being received.

If a member with at least 5 years of service dies before retirement, the named beneficiary is entitled to receive a full refund of the accumulated Hypothetical Member Account. If a member with less than 5 years of service dies before retirement, the named beneficiary is entitled to receive a refund of the member's accumulated contributions, including the member contributions and the interest applicable to this portion of the account.

Medical Insurance Premium Supplement

Retired members with at least 15 years of service, in addition to actual retirement benefits, will receive a monthly medical insurance benefit of ten dollars per year of service.

The current premium rates in effect are:

	<u>Monthly Premium</u>
<i>Under age 65</i>	
Family coverage	\$ 1,767.60
Single coverage	729.34
Parent Plus coverage	1,037.08
Member and Spouse	1,589.10
<i>Age 65 or older</i>	
Medicare Advantage PPO	297.90

Premium rates are approved by the Board of Trustees.

Actuarial Assumptions

Interest

4% per annum – this rate was selected by the KLRP Investment Committee and Findley and the Fund Investment Manager believe this to be a reasonable long-term rate of return assumption.

Mortality

RP-2000 Mortality Tables with white collar adjustment with Pre and Post Commencement Rates with projected mortality improvements after year 2000 under Projection Scale AA (male and female scales); i.e., full generational mortality.

Terminations

Table T-4 from the Actuary's Pension Handbook. Specimen rates are as follows:

<u>Age</u>	<u>Rate of Termination</u>
20	.054
25	.053
30	.051
35	.047
40	.042
45	.035
50	.025
55	.009
60	.001
65+	.000

Salary Increases

1% for the next five years, and 3.5% thereafter.

Disability

None

Retirement Age

Retirements were assumed to occur as follow:

<u>Retirement Age *</u>	<u>Percentage of Active Members Retiring</u>
60	16.67%
61	20.00%
62	25.00%
63	33.33%
64	50.00%
65	100.00%

* The plan also requires 5 years of service to be eligible to retire.

Prior to July 1, 2017, an extra 20% rate was assumed at the age a member reaches 27 years of service credit. No additional retirement rate is currently assumed.

Post-Retirement Death Benefit

Assumption is that 80% of the legislators would be married at retirement and the husband would be 3 years older than the wife on average.

Pre-Retirement Death Benefit

Assumption is that 80% of the legislators would be survived by a spouse upon death prior to retirement and that the husband would be 3 years older than the wife on average.

Form of Benefit

All participants are assumed to receive a lump sum.

Medical Insurance Premium Supplement

Medical premiums will increase for each year beyond the valuation date at the rate of 7.00% for the next 3 years, then 6.75% for the next year and following the Getzen model thereafter until reaching an ultimate rate of 3.94% in the year 2075.

An annual COLA of 1.5% is applied to the monthly insurance benefit, beginning at retirement.

100% of eligible retirees are assumed to elect the benefit. It was further assumed that coverage would be split among retirees as follows:

	% of Retirees	% With Spouse Coverage
<i>Pre-Medicare Coverage</i>		
Family	24%	N/A
Single	60%	N/A
Parent Plus	4%	N/A
Member and Spouse	12%	N/A
<i>Medicare Coverage</i>		
Medicare Advantage PPO	100%	75%

The assumed annual claims costs per subscriber as of July 1, 2019 are:

<u>Pre-65 Cost</u>	<u>Post-65 Cost</u>
\$ 15,852	\$ 6,256

Claims were adjusted downward using the aging factors in the Dale Yamamoto study released by the Society of Actuaries in June 2013 for attained ages 55 to 65.

Retirees are assumed to contribute the difference between the premium rate and the portion of the premium paid by the Plan. Premium rates and Plan contributions are described in the Summary of Benefits.

Non-members

Legislators electing not to participate are assumed to continue as non-members in the future.

Actuarial Methods

Funding Method

Accrued liability and normal cost calculated based on Entry Age Normal funding method. The required contribution is calculated based on KRS 21.525, which requires contributions of normal cost plus interest on the unfunded liability plus 1% of the unfunded liability.

Asset Valuation Method

The determination of the actuarial value of assets is as follows:

1. Investment gains/losses are determined for each year by comparing the expected value of assets based on the assumed interest assumption to actual market value. Expected value of assets in each year shall be determined by projecting the market value of assets from the prior year using the assumed interest rate, plus contributions less benefit payments and plan expenses (adjusted with interest at the assumed rate). If the expected value of plan assets is different than the actual market value of plan assets then the difference is treated as a gain or loss for that year.
2. The amount of any gain or loss as determined above shall be recognized evenly over the subsequent five years.
3. The actuarial value of assets on any valuation date shall be equal to the market value of assets on that date adjusted as follows:
 - Reduced by 80% of a gain or increased by 80% of a loss from the preceding year
 - Reduced by 60% of a gain or increased by 60% of a loss from the 2nd preceding year
 - Reduced by 40% of a gain or increased by 40% of a loss from the 3rd preceding year
 - Reduced by 20% of a gain or increased by 20% of a loss from the 4th preceding year
4. In no event will the actuarial value of assets be less than 80% or greater than 120% of the current market value of assets

This asset valuation method is used in the determination of funding levels. The fair market value of assets is used for disclosure purposes under GASB Statement Nos. 67, 68, 74, and 75.

For purposes of GASB Statement Nos. 67, 68, 74, and 75, the market value of assets has been allocated between retirement related and medical premium supplement liabilities. This market value allocation is carried forward each year based on the following:

1. State and member contributions, are allocated pro-rata reflecting the ARC for that year.
2. Benefits paid reflect actual benefits paid relative to retirement related benefits separately from medical premium supplements.
3. Preliminary assets are determined by adjusting beginning value for allocated State and member contributions and actual benefits paid.
4. Net investment return is allocated pro-rata based on the preliminary assets developed in the previous step.
5. Allocated assets as of the valuation date equal the preliminary balance plus the allocated share of investment income.

Actuarial value of assets is developed initially in total and then allocated between retirement related benefits and medical premium supplement benefits on a pro-rata basis reflecting allocated share of market value as of the valuation date.

GASB Statement No. 67

Statement of Changes in Fiduciary Net Position

	<u>June 30, 2019</u>
Additions	
Contributions:	
Employer	\$0
Employee	<u>63,897</u>
Total Contributions	63,897
Transfer In Payments	0
Investment Income	20,463
Other	<u>0</u>
Total Additions	84,360
Deductions	
Benefit Payments / Refunds	0
Administrative Expenses	0
Other	<u>0</u>
Total Deductions	<u>0</u>
Net Increase in Net Position	84,360
Net Position Restricted for Pensions	
Beginning of Year Market Value of Assets	<u>190,911</u>
End of Year Market Value of Assets	<u><u>\$275,271</u></u>

Net Pension Liability

Determination of Net Pension Liability

	June 30, 2019
Total Pension Liability (4.00%)	318,169
Plan Fiduciary Net Position (Market Value of Assets)	(275,271)
Net Pension Liability	\$42,898
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	86.52%

Sensitivity of Net Pension Liability to Changes in the Discount Rate

	1% Decrease (3.00%)	Current Rate (4.00%)	1% Increase (5.00%)
Net Pension Liability	\$58,898	\$42,898	\$27,794

Schedule of Changes in the Net Pension Liability and Related Ratios (Dollar amounts in thousands)

	fiscal year ending June 30									
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Total Pension Liability										
Service cost	\$0.0	\$36.2	\$36.2	\$76.9	\$76.9					
Interest	0.0	2.4	3.8	7.5	10.9					
Changes of benefit terms	21.7	0.0	0.0	0.0	0.0					
Differences between expected and actual experience	0.0	0.0	17.9	0.0	35.9					
Changes of assumptions	0.0	0.0	(3.3)	0.0	0.0					
Benefit Payments / Refunds	0.0	0.0	(2.9)	(1.9)	0.0					
Net Change in Total Pension Liability	\$21.7	\$38.6	\$51.7	\$82.5	\$123.7					
Total Pension Liability - beginning	0.0	21.7	60.3	112.0	194.5					
Total Pension Liability - ending (a)	\$21.7	\$60.3	\$112.0	\$194.5	\$318.2					
Plan Fiduciary Net Position (Market Value of Assets)										
Contributions - employer	\$8.8	\$14.5	\$15.4	\$15.4	\$0.0					
Contributions - employee	11.0	24.6	35.1	47.4	63.9					
Transfer In Payments	0.0	0.0	0.0	0.0	0.0					
Net investment income	0.1	0.7	8.6	14.1	20.5					
Benefit Payments / Refunds	0.0	0.0	(2.9)	(1.9)	0.0					
Administrative expenses	0.0	0.0	0.0	0.0	0.0					
Other	0.0	0.0	0.0	0.0	0.0					
Net Change in Plan Fiduciary Net Position	\$19.9	\$39.8	\$56.2	\$75.0	\$84.4					
Plan Fiduciary Net Position - beginning	0.0	19.9	59.7	115.9	190.9					
Plan Fiduciary Net Position - ending (b)	\$19.9	\$59.7	\$115.9	\$190.9	\$275.3					
Net Pension Liability - ending (a) - (b)	\$1.8	\$0.6	(\$3.9)	\$3.6	\$42.9					
Plan Fiduciary Net Position as a % of the Total Pension Liability	91.7%	99.0%	103.5%	98.1%	86.5%					
Covered-employee payroll	\$419	\$419	\$898	\$907	\$1,828					
Net Pension Liability as a % of covered-employee payroll	0.4%	0.1%	-0.4%	0.4%	2.3%					
Discount Rate	4.00%	4.00%	4.00%	4.00%	4.00%					

Schedule of Contributions

(Dollar amounts in thousands)

	fiscal year ending June 30									
	<u>2015</u>	<u>2016</u>	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>
Actuarially determined contribution ¹	\$8.8	\$14.5	\$15.4	\$15.4	\$33.3					
Contributions in relation to the actuarially determined contribution	8.8	14.5	15.4	15.4	0.0					
Contribution deficiency (excess)	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$0.0</u>	<u>\$33.3</u>					
Covered-employee payroll	\$419	\$419	\$898	\$907	\$1,828					
Contributions as a percentage of covered-employee payroll	2.1%	3.5%	1.7%	1.7%	0.0%					

¹ Starting with the Fiscal Year Ending June 30, 2019, due to the lag period between the calculated date and the actual contributions, the Actuarially Determined Contribution has been adjusted with interest at the funding interest rate assumption of 4.00%.

Additional Requirements Under GASB Statement No. 67

GASB Statement No. 67 also requires a Statement of Fiduciary Net Position (which includes a breakdown of current assets by type) and additional investment information, including the annual money-weighted rate of return. In order to satisfy GASB Statement No. 67, these required pieces will need to be provided by the Kentucky Judicial Form Retirement System. Findley is prepared to assist the system as needed.

GASB Statement No. 68

Schedule of Changes in NPL, Deferrals, & Pension Expense

	Increase (Decrease)					Pension Expense
	Total Pension Liability (a)	Plan Net Position (Assets) (b)	Net Pension Liability (a) - (b)	Deferred Pension Outflows of Resources	Deferred Pension Inflows of Resources	
Balances--at 06/30/18	<u>\$ 194,498</u>	<u>\$ 190,911</u>	<u>\$ 3,587</u>	<u>\$ 48,612</u>	<u>\$ 12,529</u>	
Changes for the Year:						
Service cost	76,915		76,915			76,915
Interest expense	10,857		10,857			10,857
Benefit changes	-		-			-
Experience losses (gains)	35,899		35,899	32,843	-	4,553
Changes of assumptions	-		-	-	-	(279)
Contributions--State		-	-			
Contributions--Members		63,897	(63,897)			(63,897)
Transfer In Payments		-	-			
Net investment income		20,463	(20,463)			
Expected return on plan investments						(8,956)
Current expense of asset gain/loss						(4,768)
Non expensed asset gain/loss					9,206	
Refunds of contributions	-	-	-			
Benefits paid	-	-	-			
Plan administrative expenses						
Recognition of Prior Post-measurement Contribution				(33,288)		
Post-measurement Contribution				34,620		
Other changes						
Amortization of or change in beginning balances				(1,731)	(2,980)	
Net Changes	<u>123,671</u>	<u>84,360</u>	<u>39,311</u>	<u>32,444</u>	<u>6,226</u>	<u>14,425</u>
Balances--at 06/30/19	<u>\$ 318,169</u>	<u>\$ 275,271</u>	<u>\$ 42,898</u>	<u>\$ 81,056</u>	<u>\$ 18,755</u>	<u>\$ 14,425</u>

Pension Expense & Deferred Outflows/Inflows of Resources

For the year ended June 30, 2020, the recognized pension expense will be \$14,425. At June 30, 2020, the Kentucky Judicial Form Retirement System reported deferred outflows of resources and deferred inflows of resources in relation to pensions from the following sources:

	As of June 30, 2019		Recognized in Pension Expense	As of June 30, 2020		
	Deferred Outflows of Resources	Deferred Inflows of Resources		Deferred Outflows of Resources	Deferred Inflows of Resources	Remaining Amort. Period
Experience losses (gains)						
- 6/30/2017	14,921	-	1,497	13,424	-	8.970 years
- 6/30/2019	35,899	-	3,056	32,843	-	10.747 years
subtotal	50,820	-	4,553	46,267	-	
Change of assumptions						
- 6/30/2017	-	2,779	(279)	-	2,501	8.970 years
subtotal	-	2,779	(279)	-	2,501	
Net difference between projected and actual earnings on investments						
- 6/30/2015	66	-	66	-	-	0.000 years
- 6/30/2016	337	-	169	169	-	1.000 year
- 6/30/2017	-	3,163	(1,054)	-	2,108	2.000 years
- 6/30/2018	-	6,587	(1,647)	-	4,940	3.000 years
- 6/30/2019	-	11,507	(2,301)	-	9,206	4.000 years
subtotal	403	21,256	(4,768)	169	16,254	
Total	\$ 51,223	\$ 24,036	\$ (494)	\$ 46,436	\$ 18,755	

Actual investment earnings above (or below) projected earnings are amortized over 5 years. Plan experience and changes of assumptions are amortized over the average remaining service period of actives and inactive (0 years of future service is assumed for inactive for this calculation).

Amounts 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:	
2021	(560)
2022	(728)
2023	326
2024	1,972
2025	4,274
Thereafter	22,398

GASB Statement No. 74

Statement of Changes in Fiduciary Net Position

	<u>June 30, 2019</u>
Additions	
Contributions	
Employer	0
Employee	<u>12,778</u>
Total Contributions	12,778
Transfer In Payments	0
Investment Income	4,903
Other	<u>0</u>
Total Additions	<u>17,681</u>
 Deductions	
Benefit Payments / Refunds	0
Administrative Expenses	0
Other	<u>0</u>
Total Deductions	<u>0</u>
Net Increase in Net Position	<u>17,681</u>
 Net Position Restricted for OPEB	
Beginning of Year Market Value of Assets	<u>48,279</u>
End of Year Market Value of Assets	<u><u>\$65,960</u></u>

Net OPEB Liability

Determination of Net OPEB Liability

Total OPEB Liability	93,026
Plan Fiduciary Net Position (Market Value of Assets)	<u>(65,960)</u>
Net OPEB Liability	<u><u>\$27,066</u></u>

Plan Fiduciary Net Position as a Percentage of Total OPEB Liability 70.90%

Sensitivity of Net OPEB Liability to Changes in the Healthcare Cost Trend Rate

	1% Decrease on Trend Assumption	Current on Trend Assumption	1% Increase on Trend Assumption
Net OPEB Liability	\$26,497	\$27,066	\$27,806

Sensitivity of Net OPEB Liability to Changes in the Discount Rate

	1% Decrease 3.00%	Current Rate 4.00%	1% Increase 5.00%
Net OPEB Liability	\$45,785	\$27,066	\$11,897

Schedule of Changes in the Net OPEB Liability and Related Ratios

(Dollar amounts in thousands)

	fiscal year ending June 30									
	2017	2018	2019	2020	2021	2022	2023	2024	2025	2026
Total OPEB Liability										
Service cost	\$9.5	\$20.0	\$20.0							
Interest	1.1	2.2	3.1							
Changes of benefit terms	0.0	0.0	0.0							
Differences between expected and actual experience	7.2	0.0	9.7							
Changes of assumptions	0.0	0.0	2.0							
Benefit Payments / Refunds	0.0	0.0	0.0							
Net Change in Total OPEB Liability	\$17.8	\$22.2	\$34.8							
Total OPEB Liability - beginning	18.2	36.0	58.2							
Total OPEB Liability - ending (a)	\$36.0	\$58.2	\$93.0							
Plan Fiduciary Net Position (Assets)										
Contributions - employer	\$5.6	\$5.6	\$0.0							
Contributions - employee	7.0	9.5	12.8							
Transfer In Payments	0.0	0.0	0.0							
Net investment income	2.2	3.5	4.9							
Benefit Payments / Refunds	0.0	0.0	0.0							
Administrative expenses	0.0	0.0	0.0							
Other	0.0	0.0	0.0							
Net Change in Plan Fiduciary Net Position	\$14.8	\$18.6	\$17.7							
Plan Fiduciary Net Position - beginning	14.9	29.7	48.3							
Plan Fiduciary Net Position - ending (b)	\$29.7	\$48.3	\$66.0							
Net OPEB Liability - ending (a) - (b)	\$6.3	\$9.9	\$27.0							
Plan Fiduciary Net Position as a % of the Total OPEB Liability	82.5%	83.0%	71.0%							
Covered-employee payroll	\$898	\$907	\$1,828							
Net OPEB Liability as a % of covered-employee payroll	0.7%	1.1%	1.5%							
Discount Rate	4.00%	4.00%	4.00%							

Schedule of Contributions

	fiscal year ending June 30									
	<u>2017</u>	<u>2018</u>	<u>2019</u>	<u>2020</u>	<u>2021</u>	<u>2022</u>	<u>2023</u>	<u>2024</u>	<u>2025</u>	<u>2026</u>
Actuarially determined contribution ¹	\$5.5	\$5.5	\$11.8							
Contributions in relation to the actuarially determined contribution	5.6	5.6	0.0							
Contribution deficiency (excess)	<u>(\$0.1)</u>	<u>(\$0.1)</u>	<u>\$11.8</u>							
Covered-employee payroll	\$898	\$907	\$1,828							
Contributions as a percentage of covered-employee payroll	0.6%	0.6%	0.0%							

¹ Starting with the Fiscal Year Ending June 30, 2019, due to the lag period between the calculated date and the actual contributions, the Actuarially Determined Contribution has been adjusted with interest at the funding interest rate assumption of 4.00%.

Additional Requirements Under GASB Statement No. 74

GASB Statement No. 74 also requires a Statement of Fiduciary Net Position (which includes a breakdown of current assets by type) and additional investment information, including the annual money-weighted rate of return. In order to satisfy GASB Statement No. 74, these required pieces will need to be provided by the Kentucky Judicial Form Retirement System. Findley is prepared to assist the system as needed.

GASB Statement No. 75

Schedule of Changes in NOL, Deferrals, & OPEB Expense

	Increase (Decrease)					OPEB Expense
	Total OPEB Liability (a)	Plan Net Position (Assets) (b)	Net OPEB Liability (a) - (b)	Deferred OPEB Outflows of Resources	Deferred OPEB Inflows of Resources	
Balances--at 06/30/18	<u>\$ 58,159</u>	<u>\$ 48,279</u>	<u>\$ 9,880</u>	<u>\$ 17,811</u>	<u>\$ 2,473</u>	
Changes for the Year:						
Service cost	19,965		19,965			19,965
Interest expense	3,125		3,125			3,125
Benefit changes	-		-			-
Experience losses (gains)	9,745		9,745	8,915	-	1,433
Changes of assumptions	2,032		2,032	1,859	-	173
Contributions--State		-	-			
Contributions--Members		12,778	(12,778)			(12,778)
Transfer In Payments		-	-			
Net investment income		4,903	(4,903)			
Expected return on plan investments						(2,146)
Current expense of asset gain/loss						(1,236)
Non expensed asset gain/loss				-	2,206	
Refunds of contributions	-	-	-			
Benefits paid	-	-	-			
Plan administrative expenses						
Recognition of Prior Post-measurement Contribution				(11,801)		
Post-measurement Contribution				12,273		
Other changes						
Amortization of or change in beginning balances				(603)	(685)	
Net Changes	<u>34,867</u>	<u>17,681</u>	<u>17,186</u>	<u>10,643</u>	<u>1,521</u>	<u>8,536</u>
Balances--at 06/30/19	<u>\$ 93,026</u>	<u>\$ 65,960</u>	<u>\$ 27,066</u>	<u>\$ 28,454</u>	<u>\$ 3,994</u>	<u>\$ 8,536</u>

Schedule of Changes in Deferred Outflows/Inflows

For the year ended June 30, 2020, the recognized OPEB expense will be \$8,536. At June 30, 2020, the Kentucky Judicial Form Retirement System reported deferred outflows of resources and deferred inflows of resources in relation to OPEBs from the following sources:

	As of June 30, 2019			Recognized in	As of June 30, 2020		
	Deferred Outflows of Resources	Deferred Inflows of Resources	OPEB Expense		Deferred Outflows of Resources	Deferred Inflows of Resources	Remaining Amort. Period
Experience losses (gains)							
- 6/30/2017	6,010	-	603	5,407	-	8.970 years	
- 6/30/2019	9,745	-	830	8,915	-	10.747 years	
subtotal	15,755	-	1,433	14,322	-		
Change of assumptions							
- 6/30/2019	2,032	-	173	1,859	-	10.747 years	
subtotal	2,032	-	173	1,859	-		
Net difference between projected and actual earnings on investments							
- 6/30/2017	-	807	(269)	-	538	2.000 years	
- 6/30/2018	-	1,666	(416)	-	1,250	3.000 years	
- 6/30/2019	-	2,757	(551)	-	2,206	4.000 years	
subtotal	-	5,230	(1,236)	-	3,994		
Total	\$ 17,787	\$ 5,230	\$ 370	\$ 16,181	\$ 3,994		

Actual investment earnings above (or below) projected earnings are amortized over 5 years. Plan experience and changes of assumptions are amortized over the average remaining service period of actives and inactive (0 years of future service is assumed for inactive for this calculation).

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in OPEB expense as follows:

Year ended June 30:

2021	370
2022	370
2023	637
2024	1,053
2025	1,606
Thereafter	8,151

In addition, Governmental Accounting Standards Board Statement 71 ("GASB 71") requires contributions between the measurement date (July 1, 2019) and the disclosure date (June 30, 2020) for GASB 75 be reported as a deferred outflow of resources.

Risk Assessment

Risk Factor	Initial Risk Assessment Language
Investment	Due to the plan's substantial equity exposure, investment returns will likely be much more volatile than the measurements of plan liabilities. Therefore, there is a risk that the funded status of the plan, as well as required plan contributions, could be volatile.
Assumed Rate of Return	Due to the plan's estimated duration of 12 to 16, a 1% decrease in the assumed rate of investment return would increase the measurement of the liability by 12% to 16%.
Longevity	Since nearly all benefits are expected to be paid as lump sums, there is little exposure to longevity risk. If a higher percentage of participants elect to receive an annuity than expected, the exposure to this risk would be higher.
Lump sums	Since lump sum benefits are equal to the cash balance account value, lump sum payments have a comparable effect on both assets and liabilities.
Inflation	Inflation is a component of future interest rates and investment returns over a long period. As a result, changes to inflation can affect funded percentages.
Other Factors	Due to recent and ongoing attempts to pass pension reform legislation at a state level, the plan could be modified in the future. Future legislation may affect benefit levels or future contribution levels and could result in increases or decreases in the plan liabilities or funding status.

Findley can perform more detailed assessments of these risks as desired by the plan sponsor to provide a better understanding of the risks.

GASB Notes

Notes to GASB 67, 68, 74, and 75 Disclosures

1. The tables in this report account for liabilities and assets only for the hybrid defined benefit/OPEB tier under the plan; liabilities and assets pertaining to the traditional defined benefit/OPEB tier are presented in a separate report.
2. Actuarial accrued liability is based on the entry age normal funding method.
3. OPEB liabilities and allocated assets have been excluded from GASB 67 and 68 disclosures and established in GASB 74 and 75 disclosures.
4. Market value of assets were split between pension and OPEB obligations based on the basis of the employee and employer contributions and distributions allocated to each part and a prorata allocation of investment return. Actuarial value of assets is then allocated based on the market value of retirement and OPEB assets.
5. Actuarial value of assets uses a 5-year asset smoothing method.
6. Information used in preparing these exhibits has been extracted from past valuation reports.
7. Covered payroll reflects payroll for all current plan members.
8. ADC based on full actuarial report (odd numbered years) immediately prior to each biennium, with interest adjustment as appropriate.
9. Interest on OPEB Obligation is based on assumed valuation interest assumption for the prior year, 4% beginning with 2015 valuation.
10. The valuation date, disclosure date, and measurement date all fall on the same date for purposes of GASB 67.
11. It is assumed the measurement date for GASB 68 will be 12 months before the disclosure date. For the year ending June 30, 2020, the measurement date is July 1, 2019 (the valuation date).
12. The valuation date, disclosure date, and measurement date all fall on the same date for purposes of GASB 74.
13. It is assumed the measurement date for GASB 75 will be 12 months before the disclosure date. For the year ending June 30, 2020, the measurement date is July 1, 2019 (the valuation date).

Summary of Participant Data

Distribution of Active Participants with Average Compensation

Attained Age	Years of Credited Service										Total
	Under 1	1 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	Over 39	
Under 25											
25 - 29											
30 - 34	4	1									5
	\$41,306	\$36,409									\$40,326
35 - 39	1	1									2
	\$40,830	\$44,817									\$42,823
40 - 44	4	1									5
	\$37,003	\$43,258									\$38,254
45 - 49	1	5	1								7
	\$41,591	\$40,177	\$38,605								\$40,155
50 - 54	4	3									7
	\$40,070	\$43,248									\$41,432
55 - 59	5	4									9
	\$40,906	\$42,244									\$41,501
60 - 64	4	1									5
	\$40,545	\$37,855									\$40,007
65 - 69	1	2									3
	\$38,929	\$41,648									\$40,742
Over 69	1	1									2
	\$38,549	\$44,440									\$41,495
Total	25	19	1								45
	\$40,005	\$41,562	\$38,605								\$40,631

Distribution of Inactive Participants with Average Lump Sum Benefit

Attained Age	Retired and Beneficiaries	Terminated	Total
<hr/>			
Under 50			
50 - 54			
55 - 59			
60 - 64		1	1
		\$3,780	\$3,780
65 - 69		2	2
		\$2,591	\$2,591
70 - 74			
75 - 79			
80 - 84			
85 - 89			
90 - 94			
Over 94			
<hr/>			
Total		3	3
		\$2,988	\$2,988

Glossary of Terms

Amortization – The process of systematically recognizing prior gains and losses as a component of the Pension Expense.

Fiduciary Net Position – The market value of assets as of a specified measurement date.

Funded Status – The difference between the Fiduciary Net Position and the Total Pension Liability as of the measurement date.

Gain/Loss – A change in the value of either the Total Pension Liability or the plan assets resulting from experience different from that assumed or from a change in an actuarial assumption.

Interest Cost – The amount recognized in a period determined as the increase in the Total Pension Liability due to the passage of time.

Pension Expense – The sum of Service Cost, Interest Cost, Expected Return on Assets and amortizations of Actuarial Gain/Loss over the average remaining service period (or the life expectancy) of plan participants expected to receive plan benefits plus a 5-year amortization of Asset Gain/Loss.

Service Cost – is the actuarial present value of benefits attributed to services rendered by employees during the measurement.

Total Pension Liability – The Entry Age Normal Accrued Liability.

Sensitivity Analysis

In accordance with HB 238, we are providing the following sensitivity analysis of the valuation results to changes in certain plan assumptions. Specifically we have looked at the effect of a one percent increase and decrease to the discount rate, salary scale, and healthcare cost trend rate assumptions.

Discount Rate

	1% Decrease (3%)	Current Rate (4%)	1% Increase (5%)
Pension Plan			
Accrued Liability	\$334,169	\$318,169	\$303,066
Actuarial Value of Assets	259,109	259,109	259,109
Unfunded Past Service Liability	75,060	59,060	43,957
Funded Ratio	77.54%	81.44%	85.50%
Contribution as Percent of Salary	4.24%	3.67%	3.13%
OPEB Plan			
Accrued Liability	\$111,745	\$93,026	\$77,857
Actuarial Value of Assets	62,087	62,087	62,087
Unfunded Past Service Liability	49,658	30,939	15,770
Funded Ratio	55.56%	66.74%	79.74%
Contribution as Percent of Salary	1.86%	1.31%	0.87%
Total ¹			
Accrued Liability	\$445,914	\$411,195	\$380,923
Actuarial Value of Assets	321,196	321,196	321,196
Unfunded Past Service Liability	124,718	89,999	59,727
Funded Ratio	72.03%	78.11%	84.32%
Contribution as Percent of Salary	6.10%	4.98%	4.00%

¹Our current understanding of IRS regulations is that they prohibit the use of surplus OPEB assets for retirement benefits. We recommend continuing discussions with plan council on possible options. Please refer to page 7 of this report for the asset and liabilities split between the Pension and OPEB plans.

Salary Scale

	1% Decrease 0% for five years, 2.5% thereafter	Current Rate 1% for five years, 3.5% thereafter	1% Increase 2% for five years, 4.5% thereafter
Pension Plan			
Accrued Liability	\$322,970	\$318,169	\$313,317
Actuarial Value of Assets	259,109	259,109	259,109
Unfunded Past Service Liability	63,861	59,060	54,208
Funded Ratio	80.23%	81.44%	82.70%
Contribution as Percent of Salary	3.65%	3.67%	3.68%
OPEB Plan			
Accrued Liability	\$99,292	\$93,026	\$86,968
Actuarial Value of Assets	62,087	62,087	62,087
Unfunded Past Service Liability	37,205	30,939	24,881
Funded Ratio	62.53%	66.74%	71.39%
Contribution as Percent of Salary	1.46%	1.31%	1.16%
Total ¹			
Accrued Liability	\$422,262	\$411,195	\$400,285
Actuarial Value of Assets	321,196	321,196	321,196
Unfunded Past Service Liability	101,066	89,999	79,089
Funded Ratio	76.07%	78.11%	80.24%
Contribution as Percent of Salary	5.11%	4.98%	4.84%

¹Our current understanding of IRS regulations is that they prohibit the use of surplus OPEB assets for retirement benefits. We recommend continuing discussions with plan council on possible options. Please refer to page 7 of this report for the asset and liabilities split between the Pension and OPEB plans.

Healthcare Cost Trend Rate

	1% Decrease in Trend Assumption	Current Rate in Trend Assumption	1% Increase in Trend Assumption
Pension Plan			
Accrued Liability	\$318,169	\$318,169	\$318,169
Actuarial Value of Assets	259,109	259,109	259,109
Unfunded Past Service Liability	59,060	59,060	59,060
Funded Ratio	81.44%	81.44%	81.44%
Contribution as Percent of Salary	3.67%	3.67%	3.67%
OPEB Plan			
Accrued Liability	\$92,457	\$93,026	\$93,766
Actuarial Value of Assets	62,087	62,087	62,087
Unfunded Past Service Liability	30,370	30,939	31,679
Funded Ratio	67.15%	66.74%	66.21%
Contribution as Percent of Salary	1.29%	1.31%	1.34%
Total ¹			
Accrued Liability	\$410,626	\$411,195	\$411,935
Actuarial Value of Assets	321,196	321,196	321,196
Unfunded Past Service Liability	89,430	89,999	90,739
Funded Ratio	78.22%	78.11%	77.97%
Contribution as Percent of Salary	4.96%	4.98%	5.01%

¹Our current understanding of IRS regulations is that they prohibit the use of surplus OPEB assets for retirement benefits. We recommend continuing discussions with plan council on possible options. Please refer to page 7 of this report for the asset and liabilities split between the Pension and OPEB plans.

Projections

Pension Plan

In accordance with HB 238, we are also providing the following 20 year projection under the current plan assumptions and, if applicable, before any assumptions changes effective at the valuation date. For a list of assumptions changes effective as of July 1, 2019, please see page 5.

Year Beginning July 1	Contribution Requirement (\$M)*		Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		Funded Ratio (Assets/Liabilities)	
	Prior	Current	Prior	Current	Prior	Current	Prior	Current	Prior	Current
	Assumptions		Assumptions		Assumptions		Assumptions		Assumptions	
2019	n/a	\$ 0.03	n/a	1.6%	n/a	\$ 0.32	n/a	\$ 0.06	n/a	81%
2020	n/a	\$ 0.07	n/a	4.0%	n/a	\$ 0.44	n/a	\$ 0.10	n/a	77%
2021	n/a	\$ 0.07	n/a	4.1%	n/a	\$ 0.59	n/a	\$ 0.11	n/a	81%
2022	n/a	\$ 0.07	n/a	4.4%	n/a	\$ 0.70	n/a	\$ 0.11	n/a	84%
2023	n/a	\$ 0.07	n/a	4.5%	n/a	\$ 0.84	n/a	\$ 0.12	n/a	86%
2024	n/a	\$ 0.06	n/a	4.6%	n/a	\$ 0.84	n/a	\$ 0.12	n/a	86%
2025	n/a	\$ 0.06	n/a	5.0%	n/a	\$ 0.88	n/a	\$ 0.13	n/a	85%
2026	n/a	\$ 0.05	n/a	4.5%	n/a	\$ 0.93	n/a	\$ 0.13	n/a	86%
2027	n/a	\$ 0.05	n/a	4.7%	n/a	\$ 0.98	n/a	\$ 0.14	n/a	86%
2028	n/a	\$ 0.04	n/a	3.9%	n/a	\$ 1.04	n/a	\$ 0.14	n/a	87%
2029	n/a	\$ 0.05	n/a	5.2%	n/a	\$ 1.07	n/a	\$ 0.15	n/a	86%
2030	n/a	\$ 0.04	n/a	4.3%	n/a	\$ 1.11	n/a	\$ 0.15	n/a	86%
2031	n/a	\$ 0.04	n/a	4.7%	n/a	\$ 1.10	n/a	\$ 0.16	n/a	85%
2032	n/a	\$ 0.04	n/a	5.3%	n/a	\$ 1.04	n/a	\$ 0.16	n/a	85%
2033	n/a	\$ 0.04	n/a	6.1%	n/a	\$ 0.96	n/a	\$ 0.16	n/a	83%
2034	n/a	\$ 0.03	n/a	5.4%	n/a	\$ 0.86	n/a	\$ 0.15	n/a	83%
2035	n/a	\$ 0.03	n/a	6.2%	n/a	\$ 0.78	n/a	\$ 0.15	n/a	81%
2036	n/a	\$ 0.02	n/a	4.5%	n/a	\$ 0.75	n/a	\$ 0.15	n/a	80%
2037	n/a	\$ 0.03	n/a	6.7%	n/a	\$ 0.79	n/a	\$ 0.15	n/a	81%
2038	n/a	\$ 0.02	n/a	4.5%	n/a	\$ 0.81	n/a	\$ 0.16	n/a	80%
2039	n/a	\$ 0.03	n/a	7.1%	n/a	\$ 0.81	n/a	\$ 0.16	n/a	80%
Sum of Contributions	n/a	\$ 0.94								

* The Contribution Requirement above is the full projected contribution requirement, adjusted with interest. The projection results are based on the assumption that 73.7% of the requirement is contributed, the average percentage of the contribution requirement that was made over the past 5 years.

OPEB Plan

Year Beginning July 1	Contribution Requirement (\$M)*		Contribution (%)		Accrued Liability (\$M)		Unfunded Liability (\$M)		Funded Ratio (Assets/Liabilities)	
	Prior	Current	Prior	Current	Prior	Current	Prior	Current	Prior	Current
	Assumptions		Assumptions		Assumptions		Assumptions		Assumptions	
2019	\$ 0.01	\$ 0.01	0.5%	0.5%	\$ 0.09	\$ 0.09	\$ 0.03	\$ 0.03	67%	67%
2020	\$ 0.02	\$ 0.02	1.1%	1.1%	\$ 0.14	\$ 0.14	\$ 0.04	\$ 0.05	71%	64%
2021	\$ 0.02	\$ 0.03	1.1%	1.7%	\$ 0.18	\$ 0.19	\$ 0.05	\$ 0.05	72%	74%
2022	\$ 0.02	\$ 0.03	1.1%	1.7%	\$ 0.23	\$ 0.24	\$ 0.05	\$ 0.05	78%	79%
2023	\$ 0.02	\$ 0.03	1.1%	1.7%	\$ 0.28	\$ 0.29	\$ 0.06	\$ 0.06	79%	79%
2024	\$ 0.02	\$ 0.03	1.1%	1.7%	\$ 0.33	\$ 0.34	\$ 0.06	\$ 0.07	82%	79%
2025	\$ 0.03	\$ 0.03	1.6%	1.6%	\$ 0.38	\$ 0.39	\$ 0.07	\$ 0.07	82%	82%
2026	\$ 0.03	\$ 0.03	1.6%	1.6%	\$ 0.44	\$ 0.45	\$ 0.07	\$ 0.08	84%	82%
2027	\$ 0.03	\$ 0.03	1.6%	1.6%	\$ 0.50	\$ 0.51	\$ 0.08	\$ 0.09	84%	82%
2028	\$ 0.03	\$ 0.03	1.5%	1.5%	\$ 0.56	\$ 0.58	\$ 0.09	\$ 0.09	84%	84%
2029	\$ 0.03	\$ 0.03	1.5%	1.5%	\$ 0.63	\$ 0.64	\$ 0.09	\$ 0.10	86%	84%
2030	\$ 0.03	\$ 0.03	1.5%	1.5%	\$ 0.70	\$ 0.71	\$ 0.10	\$ 0.11	86%	85%
2031	\$ 0.03	\$ 0.03	1.6%	1.6%	\$ 0.76	\$ 0.78	\$ 0.10	\$ 0.11	87%	86%
2032	\$ 0.03	\$ 0.03	1.6%	1.6%	\$ 0.83	\$ 0.85	\$ 0.11	\$ 0.12	87%	86%
2033	\$ 0.03	\$ 0.03	1.8%	1.8%	\$ 0.88	\$ 0.90	\$ 0.11	\$ 0.12	88%	87%
2034	\$ 0.02	\$ 0.03	1.3%	1.9%	\$ 0.93	\$ 0.96	\$ 0.11	\$ 0.12	88%	88%
2035	\$ 0.02	\$ 0.03	3.1%	4.6%	\$ 0.94	\$ 0.96	\$ 0.10	\$ 0.10	89%	90%
2036	\$ 0.01	\$ 0.01	2.2%	2.2%	\$ 0.93	\$ 0.96	\$ 0.08	\$ 0.09	91%	91%
2037	\$ 0.01	\$ 0.01	2.2%	2.2%	\$ 0.92	\$ 0.95	\$ 0.09	\$ 0.09	90%	91%
2038	\$ 0.01	\$ 0.01	2.1%	2.1%	\$ 0.92	\$ 0.94	\$ 0.09	\$ 0.10	90%	89%
2039	\$ 0.01	\$ 0.01	2.1%	2.1%	\$ 0.91	\$ 0.94	\$ 0.09	\$ 0.10	90%	89%
Sum of Contributions	\$ 0.46	\$ 0.52								

* The Contribution Requirement above is the full projected contribution requirement, adjusted with interest. The projection results are based on the assumption that 73.7% of the requirement is contributed, the average percentage of the contribution requirement that was made over the past 5 years.