

January 8, 2025

Via Email

Clayton Klenke
Executive Director
Commission on Government Forecasting and Accountability (CoGFA)
703 Stratton Office Bldg.
Springfield, IL 62706

Re: Actuarial Impact Study – House Bill 5909

Dear Clayton:

As requested, we have analyzed the impact of various benefit changes contained in House Bill 5909 (HB 5909) on projected costs of the Teachers' Retirement System (TRS), the State Employees' Retirement System (SERS), and the State Universities Retirement System (SURS). Due to limited data available, this analysis does not consider the impact of these changes for General Assembly Retirement System (GARS), Judges' Retirement System of Illinois (JRS), Illinois Municipal Retirement Fund (IMRF), Downstate Police and Firefighters Pension Funds, nor the Chicago Police, Firefighters', Teachers', Municipal Employees', Laborers', and Park Employees' Pension Funds.

The following table provides a high-level summary of the impact of the individual and combined proposed changes outlined in HB 5909 on the increase in State contribution amounts through fiscal year ending June 30, 2045 for each System. Additional details are included later in the letter (SSWB = Social Security Wage Base, FAS = Final Average Salary, and NRA = Normal Retirement Age).

(\$ in millions)	TRS	SERS	SURS	Total
Increase in Total State Contributions through FYE 2045				
Baseline	-	-	-	-
Change #1 – Tier 2 Salary Cap to SSWB ¹	\$3,852	\$1,475	\$855	\$6,182
Change #2 – Tier 2 FAS Update	524	305	290	1,119
Change #3 – Tier 2 COLA Update	2,073	1,288	1,005	4,366
Change #4 – Tier 2 NRA Update	6,940	2,431	1,882	11,253
Change #5 – Members of Depts. of Human Services, Lottery, and Juvenile Justice under Alternative Benefit	N/A	653	N/A	N/A
Combined Changes	17,103	6,673	5,986	29,762

The Combined Changes scenarios shown throughout do not necessarily sum to the accumulations of individual change components as the items therein are not additive – the combination of certain individual changes result in dissimilar amounts than those individual components summed. For example, increasing a COLA on a benefit with an increased salary cap results in a higher cost compared to increasing a COLA on the Baseline benefits.

¹ Impact on State Contributions are subject to the assumptions and caveats noted in the 'Actuarial Analysis' section of this letter.

This analysis is based on the provisions of the respective Plans. The information contained in this document, as well as the accompanying exhibits, were prepared using actuarial assumptions and methods consistent with those employed in the preliminary actuarial valuation as of June 30, 2024 for TRS (dated October 18, 2024) and those employed in the final actuarial valuations as of June 30, 2023 for SERS and SURS (dated December 22, 2023 and November 7, 2023, respectively), except as otherwise noted in this letter.

Proposed Benefit Changes

We have analyzed the following proposed benefit changes per HB 5909, as summarized below. For this analysis, we have determined the impact of each change separately, as well as the total impact of all changes combined. Due to constraints of available data, this analysis only considers the impact of benefit changes for the three Systems noted above (TRS, SERS, and SURS). All changes are effective January 1, 2025, unless otherwise noted.

1. Updates the Tier 2 salary cap to equal the Social Security Wage Base (SSWB). Earnings received on or after January 1, 2011, but before January 1, 2025, will have the Tier 2 salary cap retroactively increased to the applicable SSWB.
2. Revises the Tier 2 final average salary (FAS) definition from 8 consecutive years (or 96 consecutive months) to 4 consecutive years (or 48 consecutive months).
3. Modifies the automatic annual cost-of-living adjustment (COLA) increases for Tier 2 members to 3% per year (increases are based on a member's original benefit amount at retirement), with the first increase payable on the January 1st following the later of the 1-year anniversary of retirement or the date the participant attains normal retirement age.
4. Changes the Tier 2 age and service eligibility (i.e., unreduced retirement) to be identical to Tier 1 eligibility for current and future active members, as summarized below:

System	Tier 1 Regular Formula	Tier 2 Regular Formula	Tier 1 Alternative (Police & Fire) Formula	Tier 2 Alternative (Police & Fire) Formula
TRS	<ul style="list-style-type: none"> • Age 62 with 5 years • Age 60 with 10 years • Age 55 with 35 years 	<ul style="list-style-type: none"> • Age 67 with 10 years 	N/A	N/A
SERS	<ul style="list-style-type: none"> • Age 60 with 8 years • Any age with 35 years • Rule of 85 	<ul style="list-style-type: none"> • Age 67 with 10 years 	<ul style="list-style-type: none"> • Age 55 with 20 years • Age 50 with 25 years 	<ul style="list-style-type: none"> • Age 60 with 20 years • Age 55 with 20 years for certain positions
SURS	<ul style="list-style-type: none"> • Age 62 with 5 years • Age 60 with 8 years • Any age with 30 years 	<ul style="list-style-type: none"> • Age 67 with 10 years 	<ul style="list-style-type: none"> • Age 55 with 20 years • Age 50 with 25 years 	<ul style="list-style-type: none"> • Age 60 with 20 years

5. Allows participation in SERS Alternative Formula for Security Employees of the Department of Human Services and Investigators for the Department of the Lottery, as well as certain members of the Department of Juvenile Justice (due to expansion of Department of Juvenile Justice eligibility for creditable service by removing the bachelor's or advanced degree requirement).

Proposed Benefit Changes continued

The following proposed benefit changes contained in HB 5909 and as summarized by CoGFA are **not** reflected in this analysis due to limited available data:

- Expands the existing pension buyout programs to GARS, JRS, and CTPF
- Places Downstate Police and Firefighters' Articles of the Illinois Pension Code under the ambit of the Reciprocal Act, which affects reciprocity for vesting
- Extends eligibility for the Sheriff's Law Enforcement Personnel Formula for certain IMRF job titles
- Adds "De Facto Firefighters", changes Tier 2 disability COLA, and adjusts minimum retirement / disability / surviving spouse annuities under the Downstate Firefighters' Articles of the Illinois Pension Code
- Reverts Tier 3 and (Tier 2a, if applicable) members of Chicago Municipal, Chicago Laborers', and Chicago Park Employees' Pension Funds to Tier 2
- Adjusts amount of service credit allowed for conversion of unused sick time in SURS
- Modifies FAS Cap penalties pertaining to salary increases granted in accordance with collective bargaining increases in the TRS and SURS Articles of the Illinois Pension code

Actuarial Analysis

The analysis was based upon the census data and actuarial assumptions used in the preliminary June 30, 2024, actuarial valuations for TRS and the final June 30, 2023, actuarial valuations for SERS and SURS. For purposes of this analysis, all changes are assumed to be effective as described in the 'Proposed Benefit Changes' section.

The following assumptions and methods were implemented for the purpose of determining the impact of the benefit and/or provision changes under the various elements of HB 5909. The numbering below corresponds with the numbers under the 'Proposed Benefit Changes' section:

1. In many instances, Tier 2 member data is reported to the Systems with the salary information limited to the applicable Tier 2 cap; as such, salary amounts in excess of the cap are unknown.

For Tier 2 participants whose earnings were reported at the current salary cap (i.e., their actual earnings are not reported), their actual earnings were estimated for the Plan Year ended June 30, 2023 to be 3/4th of the way between the applicable Tier 2 cap and SSWB. This analysis does not assume any retroactive recalculation of benefits.

The analysis reflects the known Tier 2 salary limitations and SSWB as summarized below:

Applicable Year	Tier 2 Salary Cap	SSWB
2023	\$119,892	\$160,200
2024	123,489	168,600
2025	125,774	176,100

Actuarial Analysis continued

1. The current Tier 2 salary cap is assumed to annually increase by 1.25% (taking into account the System's inflation assumption) and the Social Security Wage Base is assumed to increase 4.00% per year (based on the ultimate rate of the Social Security Administration's intermediate projection assumption used in the 2024 OASDI Trustees Report).
2. No additional assumptions or methods implemented to value the change in FAS.
3. No changes were made to the Tier 2 automatic COLA method (i.e., increases are applied to the original granted annuity benefit and the first increase percentage does not consider the number of years elapsed from date of retirement to the effective date of the initial increase).
4. To reflect the proposed change in retirement ages, the same assumed retirement rates for Tier 1 members are applied to current and future Tier 2 retirements (i.e., assuming Tier 2 retirement patterns will be similar to Tier 1 after retirement eligibilities are updated).
5. The analysis assumes 100% of current and future Tier 1 and Tier 2 investigators for the Department of Lottery opt to participate in the SERS Alternative Formula as well as applicable current and future Tier 1 and Tier 2 members of the Department of Juvenile Justice (according to position codes received from CoGFA on October 1, 2024 identifying affected members).

The following actuarial assumptions are modified to value the impact for eligible Tier 2 members:

- The current age 60 retirement rate applicable for Tier 2 members eligible for Alternative Formula benefits (i.e., the age at first retirement eligibility under current provisions) is now assumed to apply at age 55; and,
- The assumed age 56-60 retirement rates are set to the same rates assumed for Tier 1 members eligible for Alternative Formula benefits.

The following tables summarize the impact of the proposed benefit changes on the System's actuarial accrued liability (AAL) and projected State contribution amounts through FYE 2045. The attached exhibits show in greater detail the projected contributions, actuarial liabilities, actuarial assets, and funded position through 2045 reflecting the changes outlined above.

This analysis has been prepared at your request and is not to be considered a recommendation by Segal. Numbers shown have been rounded to the nearest million.

(\$ in millions)

Summary of Results for All Systems¹

	TRS	SERS	SURS	Total
Projected AAL as of June 30, 2045				
Baseline	\$215,857	\$63,443	\$54,636	\$333,936
Change #1 – Tier 2 Salary Cap to SSWB	224,378	66,094	56,502	346,974
Change #2 – Tier 2 FAS Update	217,577	63,998	55,172	336,747
Change #3 – Tier 2 COLA Update	221,069	66,245	56,422	343,736
Change #4 – Tier 2 NRA Update	229,849	66,656	58,108	354,613
Change #5 – Members of Depts. of Human Services, Lottery, and Juvenile Justice under Alternative Benefit	N/A	64,333	N/A	N/A
Combined Changes	250,775	74,650	65,469	390,894
Increase in Projected AAL as of June 30, 2045				
Baseline	-	-	-	-
Change #1 – Tier 2 Salary Cap to SSWB	\$8,521	\$2,651	\$1,866	\$13,038
Change #2 – Tier 2 FAS Update	1,720	555	536	2,811
Change #3 – Tier 2 COLA Update	5,212	2,802	1,786	9,800
Change #4 – Tier 2 NRA Update	13,992	3,213	3,472	20,677
Change #5 – Members of Depts. of Human Services, Lottery, and Juvenile Justice under Alternative Benefit	N/A	890	N/A	N/A
Combined Changes	34,918	11,207	10,833	59,958
Estimated State Contributions for FYE 2027				
Baseline	\$6,651	\$2,635	\$2,333	\$11,619
Change #1 – Tier 2 Salary Cap to SSWB	6,716	2,639	2,342	11,697
Change #2 – Tier 2 FAS Update	6,674	2,648	2,345	11,667
Change #3 – Tier 2 COLA Update	6,740	2,692	2,374	11,806
Change #4 – Tier 2 NRA Update	6,974	2,753	2,414	12,141
Change #5 – Members of Depts. of Human Services, Lottery, and Juvenile Justice under Alternative Benefit	N/A	2,667	N/A	N/A
Combined Changes	7,316	2,878	2,557	12,751
Increase in Estimated State Contribution for FYE 2027				
Baseline	-	-	-	-
Change #1 – Tier 2 Salary Cap to SSWB	\$65	\$4	\$9	\$78
Change #2 – Tier 2 FAS Update	23	13	12	48
Change #3 – Tier 2 COLA Update	89	57	41	187
Change #4 – Tier 2 NRA Update	323	118	81	522
Change #5 – Members of Depts. of Human Services, Lottery, and Juvenile Justice under Alternative Benefit	N/A	32	N/A	N/A
Combined Changes	665	243	224	1,132

¹ Based on preliminary June 30, 2024 valuation results for TRS and final June 30, 2023 valuation results for SERS and SURS

(\$ in millions)

Summary of Results for All Systems¹

	TRS	SERS	SURS	Total
Total State Contributions through FYE 2045²				
Baseline	\$182,133	\$70,633	\$65,025	\$317,791
Change #1 – Tier 2 Salary Cap to SSWB	185,985	72,108	65,880	323,973
Change #2 – Tier 2 FAS Update	182,657	70,938	65,315	318,910
Change #3 – Tier 2 COLA Update	184,206	71,921	66,030	322,157
Change #4 – Tier 2 NRA Update	189,073	73,064	66,907	329,044
Change #5 – Members of Depts. of Human Services, Lottery, and Juvenile Justice under Alternative Benefit	N/A	71,286	N/A	N/A
Combined Changes	199,236	77,306	71,011	347,553
Increase in Total State Contributions through FYE 2045²				
Baseline	-	-	-	-
Change #1 – Tier 2 Salary Cap to SSWB	\$3,852	\$1,475	\$855	\$6,182
Change #2 – Tier 2 FAS Update	524	305	290	1,119
Change #3 – Tier 2 COLA Update	2,073	1,288	1,005	4,366
Change #4 – Tier 2 NRA Update	6,940	2,431	1,882	11,253
Change #5 – Members of Depts. of Human Services, Lottery, and Juvenile Justice under Alternative Benefit	N/A	653	N/A	N/A
Combined Changes	17,103	6,673	5,986	29,762
Present Value of Total State Contributions through FYE 2045²				
Baseline	\$94,132	\$35,243	\$32,818	\$162,193
Change #1 – Tier 2 Salary Cap to SSWB	95,645	35,770	33,151	164,566
Change #2 – Tier 2 FAS Update	94,379	35,519	32,951	162,849
Change #3 – Tier 2 COLA Update	95,110	35,826	33,280	164,216
Change #4 – Tier 2 NRA Update	97,492	36,379	33,693	167,564
Change #5 – Members of Depts. of Human Services, Lottery, and Juvenile Justice under Alternative Benefit	N/A	35,552	N/A	N/A
Combined Changes	102,011	38,161	35,524	175,696
Increase in Present Value of Total State Contributions through FYE 2045²				
Baseline	-	-	-	-
Change #1 – Tier 2 Salary Cap to SSWB	\$1,513	\$527	\$333	\$2,373
Change #2 – Tier 2 FAS Update	247	138	133	518
Change #3 – Tier 2 COLA Update	978	583	462	2,023
Change #4 – Tier 2 NRA Update	3,360	1,136	875	5,371
Change #5 – Members of Depts. of Human Services, Lottery, and Juvenile Justice under Alternative Benefit	N/A	309	N/A	N/A
Combined Changes	7,879	2,918	2,706	13,503

¹ Based on preliminary June 30, 2024 valuation results for TRS and final June 30, 2023 valuation results for SERS and SURS

² Reflects sum of State contributions from FYE 2024

Comments about Projections

Projections, by their nature, are not a guarantee of future results. The modeled projections are intended to serve as estimates of future financial outcomes that are based on the information available to us at the time the modeling is undertaken and completed, and the agreed-upon assumptions and methodologies described herein. Emerging results may differ significantly if the actual experience proves to be different from these assumptions or if alternative methodologies are used.

The assumptions for this projection and analysis are based on those listed in the 2024 actuarial valuation report for TRS and the 2023 actuarial valuation reports for SERS and SURS (except as otherwise noted in this letter). As noted, the results of these projections are based on all assumptions materializing as expected, including the 7.00% investment return for TRS, the 6.75% investment return for SERS, and the 6.50% investment return for SURS. To the extent there is adverse experience, the projection scenarios would generate larger required State contributions. Given the relatively low funded status of the Systems, investment returns that are less than expected represent a significant risk to the magnitude of the State's required contributions. Additionally, if actual increases in the Social Security Wage Base are greater than assumed (4.00% per year), the State contribution requirements would increase over time, resulting in further back-loading on contributions leading up to the June 30, 2045, funding target date. Furthermore, the proposed changes outlined in HB 5909 could affect actual patterns of decrement (e.g., termination, retirement) compared to the current assumptions, which may result in larger (or smaller) required State contributions.

Actual experience may differ due to such variables as demographic experience, the economy, stock market performance, and the regulatory environment. The longer the projection period, the less predictable the projections become.

Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are presented to meet regulatory, legislative, and client requirements. Deterministic cost projections are based on our proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility, and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible actuaries.

Segal is not a law firm and we cannot offer legal advice. Any party seeking a legal opinion should consult with appropriate legal counsel.

This analysis was performed under my supervision. I am a Member of the American Academy of Actuary and meet the Qualification Standards for Actuaries Issuing Statements of Actuarial Opinion in the United States of the American Academy of Actuaries to render the actuarial opinion contained herein.

Clayton Klenke
January 8, 2025
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Please let us know if you have any questions.

Sincerely,

A handwritten signature in black ink that reads "Matthew A. Strom". The signature is fluid and cursive, with a long horizontal line extending from the end of the name.

Matthew A. Strom, FSA, MAAA, EA
Senior Vice President and Actuary

Funding Projections for the Teachers' Retirement System

Based on Laws in Effect on June 30, 2024, Baseline

Actuarially Assumed Rate of Return: 7.00%

(\$ in millions)

Fiscal Year Ending 6/30	Annual State Payroll	State Contribution	State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
2024	\$11,893.2	\$6,043.2	50.8%	\$1,092.2	\$154,325.2	\$70,687.6	\$83,637.6	45.8%
2025	12,542.5	6,203.6	49.5%	1,151.9	158,427.3	75,370.1	83,057.2	47.6%
2026	12,983.0	6,495.5	50.0%	1,192.3	162,496.1	78,408.4	84,087.6	48.3%
2027	13,334.0	6,651.1	49.9%	1,224.5	166,707.5	82,601.2	84,106.3	49.5%
2028	13,681.0	6,883.2	50.3%	1,256.4	170,870.5	86,974.5	83,896.1	50.9%
2029	14,025.8	7,041.7	50.2%	1,288.1	175,037.2	91,312.7	83,724.5	52.2%
2030	14,367.9	7,185.9	50.0%	1,319.5	179,120.1	95,758.1	83,362.0	53.5%
2031	14,705.9	7,337.2	49.9%	1,350.5	183,098.5	100,316.7	82,781.8	54.8%
2032	15,038.7	7,503.5	49.9%	1,381.1	186,947.8	105,001.2	81,946.6	56.2%
2033	15,364.0	7,682.7	50.0%	1,411.0	190,638.8	109,821.8	80,817.0	57.6%
2034	15,679.7	8,450.0	53.9%	1,440.0	194,145.2	115,388.1	78,757.1	59.4%
2035	15,994.4	8,619.6	53.9%	1,468.9	197,444.0	121,131.7	76,312.3	61.3%
2036	16,305.5	8,787.3	53.9%	1,497.4	200,511.7	127,061.0	73,450.7	63.4%
2037	16,615.9	8,954.6	53.9%	1,526.0	203,328.6	133,192.4	70,136.2	65.5%
2038	16,930.9	9,124.4	53.9%	1,554.9	205,870.0	139,544.8	66,325.1	67.8%
2039	17,247.1	9,294.7	53.9%	1,583.9	208,120.0	146,146.0	61,974.0	70.2%
2040	17,571.6	9,469.6	53.9%	1,613.7	210,066.1	153,032.8	57,033.2	72.8%
2041	17,912.7	9,653.5	53.9%	1,645.0	211,712.8	160,261.7	51,451.1	75.7%
2042	18,276.9	9,849.7	53.9%	1,678.5	213,074.4	167,900.8	45,173.6	78.8%
2043	18,671.3	10,062.3	53.9%	1,714.7	214,180.4	176,038.3	38,142.1	82.2%
2044	19,099.6	10,293.1	53.9%	1,754.0	215,084.8	184,785.2	30,299.5	85.9%
2045	19,570.8	10,547.0	53.9%	1,797.3	215,857.1	194,271.4	21,585.7	90.0%
Total		\$182,133.4		\$31,941.8				

Funding Projections for the State Employees' Retirement System
 CoGFA Projections Based on Laws in Effect on June 30, 2023, Baseline
 Actuarially Assumed Rate of Return: 6.75%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
2023					\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	50.3%	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,223.0	2,552.6	48.9%	289.6	56,261.7	26,268.1	29,993.6	46.7%
2026	5,307.3	2,596.4	48.9%	292.4	57,276.8	26,651.9	30,625.0	46.5%
2027	5,391.3	2,634.7	48.9%	295.1	58,206.7	27,635.7	30,571.0	47.5%
2028	5,477.0	2,726.0	49.8%	297.8	59,052.0	28,668.1	30,383.9	48.5%
2029	5,569.8	2,750.5	49.4%	301.1	59,816.7	29,669.5	30,147.2	49.6%
2030	5,668.3	2,791.0	49.2%	304.8	60,504.5	30,661.2	29,843.3	50.7%
2031	5,772.3	2,835.5	49.1%	309.0	61,115.5	31,652.4	29,463.1	51.8%
2032	5,881.3	2,888.2	49.1%	313.2	61,648.2	32,655.4	28,992.7	53.0%
2033	5,992.3	2,947.6	49.2%	317.4	62,105.6	33,684.9	28,420.6	54.2%
2034	6,110.1	3,211.4	52.6%	321.9	62,489.8	34,960.5	27,529.3	55.9%
2035	6,231.9	3,275.4	52.6%	326.4	62,806.4	36,300.0	26,506.4	57.8%
2036	6,356.1	3,340.7	52.6%	330.9	63,055.5	37,714.4	25,341.2	59.8%
2037	6,482.8	3,407.3	52.6%	335.5	63,241.7	39,217.0	24,024.7	62.0%
2038	6,617.2	3,477.9	52.6%	340.6	63,374.7	40,830.0	22,544.6	64.4%
2039	6,758.7	3,552.3	52.6%	345.9	63,461.0	42,573.5	20,887.4	67.1%
2040	6,906.3	3,629.8	52.6%	351.5	63,506.5	44,469.2	19,037.4	70.0%
2041	7,059.9	3,710.6	52.6%	357.5	63,520.2	46,540.8	16,979.3	73.3%
2042	7,220.5	3,795.0	52.6%	363.8	63,512.9	48,813.2	14,699.7	76.9%
2043	7,388.0	3,883.0	52.6%	370.4	63,493.7	51,313.1	12,180.6	80.8%
2044	7,561.7	3,974.3	52.6%	377.2	63,469.6	54,066.7	9,402.9	85.2%
2045	7,741.0	4,068.6	52.6%	384.4	63,442.7	57,098.5	6,344.3	90.0%
Total		\$70,632.6		\$7,213.4				

Funding Projections for the State Universities Retirement System
 CoGFA Projections Based on Laws in Effect on June 30, 2023, Baseline
 Actuarially Assumed Rate of Return: 6.50%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll*	Total State Contribution	State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
2023					\$51,652.5	\$23,381.2	\$28,271.2	45.3%
2024	\$5,382.1	\$2,186.0	40.6%	\$323.5	52,381.9	24,050.1	28,331.8	45.9%
2025	5,642.7	2,249.8	39.9%	338.1	53,083.3	24,918.7	28,164.6	46.9%
2026	5,760.0	2,296.6	39.9%	340.7	53,715.7	25,077.6	28,638.2	46.7%
2027	5,883.8	2,333.0	39.7%	344.0	54,280.0	25,654.4	28,625.6	47.3%
2028	6,029.3	2,430.5	40.3%	349.1	54,774.6	26,294.2	28,480.4	48.0%
2029	6,187.9	2,494.5	40.3%	355.2	55,194.5	26,940.1	28,254.5	48.8%
2030	6,349.8	2,555.8	40.2%	361.6	55,541.0	27,595.1	27,945.9	49.7%
2031	6,518.0	2,620.8	40.2%	368.2	55,810.7	28,264.8	27,545.9	50.6%
2032	6,691.6	2,694.0	40.3%	375.2	56,002.0	28,961.9	27,040.2	51.7%
2033	6,871.1	2,775.6	40.4%	382.4	56,131.9	29,717.3	26,414.6	52.9%
2034	7,058.0	2,878.6	40.8%	390.0	56,200.4	30,559.8	25,640.6	54.4%
2035	7,253.1	2,960.7	40.8%	398.0	56,217.6	31,487.4	24,730.2	56.0%
2036	7,450.5	3,043.7	40.9%	406.1	56,177.6	32,504.6	23,673.0	57.9%
2037	7,651.7	3,128.3	40.9%	414.3	56,089.5	33,631.7	22,457.8	60.0%
2038	7,858.8	3,215.4	40.9%	422.8	55,956.3	34,884.4	21,071.9	62.3%
2039	8,072.0	3,304.9	40.9%	431.6	55,793.7	36,290.9	19,502.8	65.0%
2040	8,294.0	3,398.1	41.0%	440.8	55,598.4	37,862.1	17,736.3	68.1%
2041	8,517.8	3,492.1	41.0%	450.1	55,389.9	39,629.2	15,760.8	71.5%
2042	8,749.7	3,589.3	41.0%	459.9	55,176.3	41,614.9	13,561.4	75.4%
2043	8,988.1	3,689.2	41.0%	470.1	54,978.5	43,855.3	11,123.2	79.8%
2044	9,233.5	3,791.9	41.1%	480.7	54,792.5	46,363.0	8,429.6	84.6%
2045	9,482.8	3,896.2	41.1%	491.4	54,635.9	49,172.3	5,463.6	90.0%
Total		\$65,025.0		\$8,793.8				

* Includes payroll from Self Managed Plan (SMP)

Exhibit 1A – TRS Projection (Change #1 – Tier 2 Salary Cap to SSWB)

Funding Projections for the Teachers' Retirement System

Based on Laws in Effect on June 30, 2024, Update Tier 2 Salary Cap to SSWB Only

Actuarially Assumed Rate of Return: 7.00%

(\$ in millions)

Fiscal Year Ending 6/30	Annual State Payroll	State Contribution	Compared to Exhibit A		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2024	\$11,893.2	\$6,043.2	\$0.0	\$0.0	50.8%	\$1,092.2	\$154,325.2	\$70,687.6	\$83,637.6	45.8%
2025	12,542.5	6,203.6	0.0	0.0	49.5%	1,151.9	158,461.9	75,370.0	83,091.9	47.6%
2026	13,002.0	6,495.5	0.0	0.0	50.0%	1,194.1	162,597.0	78,412.1	84,185.0	48.2%
2027	13,359.0	6,716.1	65.0	54.9	50.3%	1,226.8	166,890.0	82,677.9	84,212.1	49.5%
2028	13,713.7	6,953.1	69.8	55.1	50.7%	1,259.4	171,152.3	87,136.9	84,015.5	50.9%
2029	14,068.0	7,118.3	76.6	56.5	50.6%	1,292.0	175,439.0	91,576.9	83,862.1	52.2%
2030	14,421.7	7,270.4	84.5	58.2	50.4%	1,324.4	179,664.5	96,142.1	83,522.4	53.5%
2031	14,773.9	7,430.8	93.6	60.3	50.3%	1,356.8	183,811.3	100,841.3	82,970.0	54.9%
2032	15,123.5	7,607.6	104.1	62.6	50.3%	1,388.9	187,858.3	105,690.7	82,167.6	56.3%
2033	15,468.6	7,798.9	116.2	65.4	50.4%	1,420.6	191,780.0	110,704.0	81,076.0	57.7%
2034	15,807.2	8,582.8	132.8	69.8	54.3%	1,451.7	195,554.5	116,498.2	79,056.2	59.6%
2035	16,148.4	8,768.1	148.4	72.9	54.3%	1,483.0	199,165.2	122,508.8	76,656.5	61.5%
2036	16,489.4	8,953.3	166.0	76.2	54.3%	1,514.3	202,593.8	128,749.1	73,844.8	63.6%
2037	16,834.7	9,140.7	186.1	79.9	54.3%	1,546.0	205,825.8	135,241.4	70,584.4	65.7%
2038	17,189.0	9,333.1	208.8	83.7	54.3%	1,578.6	208,841.7	142,010.6	66,831.1	68.0%
2039	17,549.5	9,528.8	234.1	87.8	54.3%	1,611.7	211,632.2	149,091.5	62,540.7	70.4%
2040	17,923.8	9,732.1	262.4	92.0	54.3%	1,646.1	214,191.1	156,528.4	57,662.7	73.1%
2041	18,320.8	9,947.6	294.2	96.3	54.3%	1,682.5	216,529.6	164,385.8	52,143.8	75.9%
2042	18,748.7	10,179.9	330.2	101.1	54.3%	1,721.8	218,669.3	172,742.1	45,927.2	79.0%
2043	19,219.0	10,435.3	373.0	106.7	54.3%	1,765.0	220,646.9	181,699.0	38,947.9	82.3%
2044	19,737.1	10,716.6	423.6	113.2	54.3%	1,812.6	222,524.2	191,382.9	31,141.3	86.0%
2045	20,313.0	11,029.3	482.3	120.5	54.3%	1,865.5	224,377.8	201,940.0	22,437.8	90.0%
Total		\$185,985.1	\$3,851.7	\$1,513.1		\$32,385.9				

Exhibit 1B – SERS Projection (Change #1 – Tier 2 Salary Cap to SSWB)

Funding Projections for the State Employees' Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023, Update Tier 2 Salary Cap to SSWB Only

Actuarially Assumed Rate of Return: 6.75%

(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	Compared to Exhibit B		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	\$0.0	\$0.0	50.3%	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,232.6	2,552.6	0.0	0.0	48.8%	290.1	56,275.9	26,268.6	30,007.3	46.7%
2026	5,332.9	2,596.4	0.0	0.0	48.7%	293.8	57,323.3	26,653.7	30,669.6	46.5%
2027	5,424.5	2,639.3	4.7	3.7	48.7%	296.9	58,291.0	27,644.3	30,646.7	47.4%
2028	5,519.0	2,734.1	8.1	6.1	49.5%	300.1	59,180.2	28,688.1	30,492.1	48.5%
2029	5,621.9	2,763.5	13.0	9.1	49.2%	304.0	59,995.8	29,707.3	30,288.5	49.5%
2030	5,731.7	2,809.8	18.7	12.3	49.0%	308.3	60,742.2	30,724.6	30,017.6	50.6%
2031	5,848.4	2,860.6	25.2	15.4	48.9%	313.1	61,420.4	31,750.5	29,669.8	51.7%
2032	5,971.5	2,920.6	32.3	18.6	48.9%	318.1	62,029.7	32,798.9	29,230.8	52.9%
2033	6,098.1	2,987.8	40.2	21.6	49.0%	323.0	62,574.0	33,885.5	28,688.5	54.2%
2034	6,232.9	3,260.4	49.0	24.7	52.3%	328.3	63,056.4	35,231.9	27,824.6	55.9%
2035	6,372.8	3,333.6	58.3	27.5	52.3%	333.8	63,483.4	36,656.9	26,826.5	57.7%
2036	6,516.8	3,408.9	68.2	30.2	52.3%	339.3	63,855.8	38,173.0	25,682.8	59.8%
2037	6,664.4	3,486.2	78.9	32.7	52.3%	344.9	64,179.6	39,795.6	24,384.1	62.0%
2038	6,821.1	3,568.1	90.2	35.0	52.3%	351.1	64,465.6	41,548.2	22,917.3	64.5%
2039	6,985.9	3,654.3	102.0	37.1	52.3%	357.5	64,721.1	43,453.2	21,268.0	67.1%
2040	7,157.1	3,743.9	114.0	38.8	52.3%	364.3	64,952.4	45,533.1	19,419.3	70.1%
2041	7,335.7	3,837.3	126.7	40.4	52.3%	371.5	65,168.8	47,813.6	17,355.2	73.4%
2042	7,522.5	3,935.0	140.1	41.8	52.3%	379.0	65,382.9	50,320.8	15,062.1	77.0%
2043	7,717.2	4,036.9	153.9	43.1	52.3%	386.9	65,605.4	53,083.6	12,521.7	80.9%
2044	7,919.8	4,142.9	168.6	44.2	52.3%	395.1	65,842.4	56,129.7	9,712.6	85.2%
2045	8,128.9	4,252.2	183.7	45.1	52.3%	403.7	66,094.4	59,485.0	6,609.4	90.0%
Total		\$72,108.2	\$1,475.8	\$527.4		\$7,389.8				

Exhibit 1C – SURS Projection (Change #1 – Tier 2 Salary Cap to SSWB)

Funding Projections for the State Universities Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023, Update Tier 2 Salary Cap to SSWB Only

Actuarially Assumed Rate of Return: 6.50%

(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll*	Total State Contribution	Compared to Exhibit C		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$51,652.5	\$23,381.2	\$28,271.2	45.3%
2024	\$5,382.1	\$2,186.0	\$0.0	\$0.0	40.6%	\$323.5	52,381.9	24,050.1	28,331.8	45.9%
2025	5,652.0	2,249.8	0.0	0.0	39.8%	338.8	53,107.7	24,936.5	28,171.3	47.0%
2026	5,789.1	2,296.6	0.0	0.0	39.7%	343.1	53,759.5	25,098.9	28,660.6	46.7%
2027	5,922.8	2,341.9	8.9	7.1	39.5%	347.1	54,346.6	25,689.4	28,657.2	47.3%
2028	6,078.1	2,439.9	9.4	7.1	40.1%	353.0	54,868.0	26,344.8	28,523.1	48.0%
2029	6,246.5	2,507.6	13.1	9.3	40.1%	359.9	55,319.5	27,011.9	28,307.5	48.8%
2030	6,418.1	2,572.6	16.9	11.2	40.1%	367.0	55,702.8	27,694.2	28,008.6	49.7%
2031	6,595.9	2,641.3	20.5	12.8	40.0%	374.5	56,015.2	28,397.5	27,617.7	50.7%
2032	6,778.8	2,718.1	24.1	14.1	40.1%	382.2	56,256.3	29,135.3	27,121.0	51.8%
2033	6,967.6	2,803.2	27.6	15.2	40.2%	390.1	56,442.7	29,938.2	26,504.5	53.0%
2034	7,163.7	2,913.1	34.4	17.8	40.7%	398.5	56,576.5	30,839.6	25,736.9	54.5%
2035	7,368.4	2,998.6	37.9	18.4	40.7%	407.2	56,667.1	31,833.8	24,833.3	56.2%
2036	7,576.2	3,085.4	41.8	19.0	40.7%	416.1	56,710.8	32,927.3	23,783.6	58.1%
2037	7,788.5	3,174.1	45.8	19.6	40.8%	425.2	56,717.2	34,140.8	22,576.5	60.2%
2038	8,007.2	3,265.5	50.1	20.1	40.8%	434.7	56,689.7	35,490.0	21,199.6	62.6%
2039	8,233.6	3,359.9	55.0	20.7	40.8%	444.5	56,645.9	37,005.7	19,640.2	65.3%
2040	8,470.4	3,458.6	60.5	21.4	40.8%	455.0	56,582.3	38,698.7	17,883.6	68.4%
2041	8,710.3	3,558.6	66.5	22.1	40.9%	465.6	56,519.1	40,601.0	15,918.1	71.8%
2042	8,960.4	3,662.6	73.3	22.9	40.9%	476.8	56,466.0	42,737.6	13,728.4	75.7%
2043	9,219.3	3,770.2	81.0	23.7	40.9%	488.6	56,443.8	45,145.0	11,298.8	80.0%
2044	9,487.3	3,881.4	89.5	24.6	40.9%	501.0	56,449.7	47,837.7	8,612.0	84.7%
2045	9,761.9	3,995.2	99.0	25.6	40.9%	513.8	56,501.8	50,851.6	5,650.2	90.0%
Total		\$65,880.2	\$855.3	\$332.7		\$9,006.2				

* Includes payroll from Self Managed Plan (SMP)

Exhibit 2A – TRS Projection (Change #2 – Tier 2 FAS Update)

Funding Projections for the Teachers' Retirement System
 Based on Laws in Effect on June 30, 2024, Update Tier 2 FAS Only
 Actuarially Assumed Rate of Return: 7.00%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual State Payroll	State Contribution	Compared to Exhibit A		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2024	\$11,893.2	\$6,043.2	\$0.0	\$0.0	50.8%	\$1,092.2	\$154,325.2	\$70,687.6	\$83,637.6	45.8%
2025	12,542.5	6,203.6	0.0	0.0	49.5%	1,151.9	158,440.5	75,370.1	83,070.4	47.6%
2026	12,983.0	6,495.5	0.0	0.0	50.0%	1,192.3	162,524.3	78,409.2	84,115.1	48.2%
2027	13,334.0	6,673.6	22.5	19.0	50.0%	1,224.5	166,754.5	82,627.1	84,127.3	49.6%
2028	13,681.0	6,906.3	23.1	18.2	50.5%	1,256.4	170,940.8	87,029.5	83,911.3	50.9%
2029	14,025.8	7,065.3	23.7	17.5	50.4%	1,288.1	175,136.2	91,401.3	83,734.9	52.2%
2030	14,367.9	7,210.2	24.3	16.7	50.2%	1,319.5	179,252.7	95,884.2	83,368.5	53.5%
2031	14,705.9	7,362.1	24.8	16.0	50.1%	1,350.5	183,270.4	100,484.9	82,785.5	54.8%
2032	15,038.7	7,528.9	25.4	15.3	50.1%	1,381.1	187,165.2	105,216.4	81,948.8	56.2%
2033	15,364.0	7,708.7	25.9	14.6	50.2%	1,411.0	190,908.3	110,089.1	80,819.2	57.7%
2034	15,679.7	8,476.5	26.5	13.9	54.1%	1,440.0	194,474.2	115,713.2	78,761.1	59.5%
2035	15,994.4	8,646.6	27.0	13.3	54.1%	1,468.9	197,842.6	121,522.8	76,319.8	61.4%
2036	16,305.5	8,814.8	27.5	12.6	54.1%	1,497.4	200,990.4	127,526.6	73,463.7	63.4%
2037	16,615.9	8,982.6	28.0	12.0	54.1%	1,526.0	203,898.4	133,741.4	70,157.0	65.6%
2038	16,930.9	9,152.9	28.6	11.5	54.1%	1,554.9	206,541.8	140,186.0	66,355.9	67.9%
2039	17,247.1	9,323.8	29.1	10.9	54.1%	1,583.9	208,905.5	146,888.4	62,017.1	70.3%
2040	17,571.6	9,499.3	29.7	10.4	54.1%	1,613.7	210,977.1	153,885.9	57,091.2	72.9%
2041	17,912.7	9,683.7	30.2	9.9	54.1%	1,645.0	212,761.2	161,234.6	51,526.5	75.8%
2042	18,276.9	9,880.5	30.9	9.4	54.1%	1,678.5	214,272.2	169,003.0	45,269.2	78.9%
2043	18,671.3	10,093.8	31.5	9.0	54.1%	1,714.7	215,539.8	177,279.3	38,260.5	82.2%
2044	19,099.6	10,325.3	32.2	8.6	54.1%	1,754.0	216,618.1	186,174.7	30,443.4	85.9%
2045	19,570.8	10,580.0	33.0	8.3	54.1%	1,797.3	217,576.6	195,819.0	21,757.7	90.0%
Total		\$182,657.2	\$523.9	\$247.1		\$31,941.8				

Exhibit 2B – SERS Projection (Change #2 – Tier 2 FAS Update)

Funding Projections for the State Employees' Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023, Update Tier 2 FAS Only

Actuarially Assumed Rate of Return: 6.75%

(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	Compared to Exhibit B		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	\$0.0	\$0.0	50.3%	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,223.0	2,552.6	0.0	0.0	48.9%	289.6	56,265.8	26,268.2	29,997.6	46.7%
2026	5,307.3	2,596.4	0.0	0.0	48.9%	292.4	57,290.4	26,652.3	30,638.1	46.5%
2027	5,391.3	2,648.2	13.5	10.7	49.1%	295.1	58,231.1	27,650.4	30,580.7	47.5%
2028	5,477.0	2,739.7	13.7	10.2	50.0%	297.8	59,088.9	28,698.3	30,390.6	48.6%
2029	5,569.8	2,764.4	13.9	9.7	49.6%	301.1	59,867.9	29,716.4	30,151.4	49.6%
2030	5,668.3	2,805.2	14.2	9.3	49.5%	304.8	60,571.8	30,726.3	29,845.6	50.7%
2031	5,772.3	2,849.9	14.4	8.8	49.4%	309.0	61,201.0	31,737.1	29,463.9	51.9%
2032	5,881.3	2,903.0	14.7	8.4	49.4%	313.2	61,754.3	32,761.5	28,992.8	53.1%
2033	5,992.3	2,962.6	15.0	8.1	49.4%	317.4	62,234.4	33,813.9	28,420.5	54.3%
2034	6,110.1	3,226.7	15.3	7.7	52.8%	321.9	62,643.5	35,113.7	27,529.8	56.1%
2035	6,231.9	3,291.0	15.6	7.4	52.8%	326.4	62,987.0	36,478.8	26,508.2	57.9%
2036	6,356.1	3,356.6	15.9	7.0	52.8%	330.9	63,265.0	37,919.9	25,345.0	59.9%
2037	6,482.8	3,423.5	16.2	6.7	52.8%	335.5	63,482.3	39,450.9	24,031.4	62.1%
2038	6,617.2	3,494.5	16.6	6.4	52.8%	340.6	63,648.7	41,093.6	22,555.0	64.6%
2039	6,758.7	3,569.2	16.9	6.1	52.8%	345.9	63,770.7	42,868.4	20,902.2	67.2%
2040	6,906.3	3,647.1	17.3	5.9	52.8%	351.5	63,853.6	44,796.3	19,057.3	70.2%
2041	7,059.9	3,728.2	17.7	5.6	52.8%	357.5	63,906.3	46,901.2	17,005.0	73.4%
2042	7,220.5	3,813.0	18.1	5.4	52.8%	363.8	63,939.4	49,207.5	14,731.9	77.0%
2043	7,388.0	3,901.5	18.5	5.2	52.8%	370.4	63,962.1	51,742.1	12,220.0	80.9%
2044	7,561.7	3,993.2	18.9	5.0	52.8%	377.2	63,981.0	54,530.9	9,450.1	85.2%
2045	7,741.0	4,087.9	19.4	4.8	52.8%	384.4	63,997.9	57,598.1	6,399.8	90.0%
Total		\$70,938.2	\$305.8	\$138.4		\$7,213.4				

Exhibit 2C – SURS Projection (Change #2 – Tier 2 FAS Update)

Funding Projections for the State Universities Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023, Update Tier 2 FAS Only

Actuarially Assumed Rate of Return: 6.50%

(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll*	Total State Contribution	Compared to Exhibit C		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$51,652.5	\$23,381.2	\$28,271.2	45.3%
2024	\$5,382.1	\$2,186.0	\$0.0	\$0.0	40.6%	\$323.5	52,381.9	24,050.1	28,331.8	45.9%
2025	5,642.7	2,249.8	0.0	0.0	39.9%	338.1	53,103.9	24,935.8	28,168.1	47.0%
2026	5,760.0	2,296.6	0.0	0.0	39.9%	340.7	53,746.5	25,096.1	28,650.3	46.7%
2027	5,883.8	2,345.0	11.9	9.6	39.9%	344.0	54,322.7	25,687.3	28,635.4	47.3%
2028	6,029.3	2,442.8	12.2	9.2	40.5%	349.1	54,830.1	26,341.9	28,488.2	48.0%
2029	6,187.9	2,507.1	12.6	8.9	40.5%	355.2	55,264.4	27,003.5	28,260.8	48.9%
2030	6,349.8	2,568.6	12.9	8.6	40.5%	361.6	55,626.9	27,675.6	27,951.3	49.8%
2031	6,518.0	2,634.0	13.2	8.2	40.4%	368.2	55,914.2	28,363.4	27,550.8	50.7%
2032	6,691.6	2,707.6	13.6	7.9	40.5%	375.2	56,125.0	29,080.0	27,045.0	51.8%
2033	6,871.1	2,789.5	13.9	7.7	40.6%	382.4	56,276.6	29,856.6	26,420.0	53.1%
2034	7,058.0	2,893.0	14.3	7.4	41.0%	390.0	56,368.4	30,721.2	25,647.2	54.5%
2035	7,253.1	2,975.4	14.7	7.1	41.0%	398.0	56,410.4	31,671.8	24,738.6	56.1%
2036	7,450.5	3,058.8	15.1	6.9	41.1%	406.1	56,397.1	32,713.4	23,683.7	58.0%
2037	7,651.7	3,143.8	15.5	6.6	41.1%	414.3	56,337.8	33,866.4	22,471.4	60.1%
2038	7,858.8	3,231.3	15.9	6.4	41.1%	422.8	56,235.6	35,146.7	21,088.9	62.5%
2039	8,072.0	3,321.3	16.4	6.2	41.1%	431.6	56,105.9	36,582.1	19,523.8	65.2%
2040	8,294.0	3,414.9	16.8	6.0	41.2%	440.8	55,945.4	38,183.7	17,761.8	68.3%
2041	8,517.8	3,509.4	17.3	5.7	41.2%	450.1	55,773.0	39,981.8	15,791.2	71.7%
2042	8,749.7	3,607.1	17.7	5.5	41.2%	459.9	55,597.3	42,000.2	13,597.1	75.5%
2043	8,988.1	3,707.4	18.2	5.3	41.2%	470.1	55,436.7	44,272.1	11,164.6	79.9%
2044	9,233.5	3,810.6	18.7	5.2	41.3%	480.7	55,289.9	46,813.0	8,476.9	84.7%
2045	9,482.8	3,915.5	19.2	5.0	41.3%	491.4	55,172.2	49,655.0	5,517.2	90.0%
Total		\$65,315.5	\$290.1	\$133.4		\$8,793.8				

* Includes payroll from Self Managed Plan (SMP)

Exhibit 3A – TRS Projection (Change #3 – Tier 2 COLA Update)

Funding Projections for the Teachers' Retirement System

Based on Laws in Effect on June 30, 2024, Update Tier 2 COLA Only

Actuarially Assumed Rate of Return: 7.00%

(\$ in millions)

Fiscal Year Ending 6/30	Annual State Payroll	State Contribution	Compared to Exhibit A		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2024	\$11,893.2	\$6,043.2	\$0.0	\$0.0	50.8%	\$1,092.2	\$154,325.2	\$70,687.6	\$83,637.6	45.8%
2025	12,542.5	6,203.6	0.0	0.0	49.5%	1,151.9	158,454.6	75,370.1	83,084.5	47.6%
2026	12,983.0	6,495.5	0.0	0.0	50.0%	1,192.3	162,571.6	78,410.0	84,161.6	48.2%
2027	13,334.0	6,740.2	89.1	75.2	50.5%	1,224.5	166,842.0	82,697.8	84,144.2	49.6%
2028	13,681.0	6,974.6	91.4	72.1	51.0%	1,256.4	171,076.5	87,176.9	83,899.6	51.0%
2029	14,025.8	7,135.3	93.7	69.1	50.9%	1,288.1	175,328.8	91,632.8	83,696.0	52.3%
2030	14,367.9	7,281.9	96.0	66.1	50.7%	1,319.5	179,512.1	96,207.8	83,304.3	53.6%
2031	14,705.9	7,435.4	98.2	63.3	50.6%	1,350.5	183,607.7	100,909.1	82,698.6	55.0%
2032	15,038.7	7,603.9	100.4	60.5	50.6%	1,381.1	187,592.8	105,750.2	81,842.6	56.4%
2033	15,364.0	7,785.3	102.6	57.7	50.7%	1,411.0	191,439.9	110,742.3	80,697.6	57.8%
2034	15,679.7	8,554.7	104.7	55.1	54.6%	1,440.0	195,125.0	116,496.1	78,628.9	59.7%
2035	15,994.4	8,726.5	106.8	52.5	54.6%	1,468.9	198,629.4	122,446.6	76,182.8	61.6%
2036	16,305.5	8,896.2	108.9	50.0	54.6%	1,497.4	201,931.6	128,603.2	73,328.4	63.7%
2037	16,615.9	9,065.6	111.0	47.6	54.6%	1,526.0	205,014.2	134,983.4	70,030.9	65.8%
2038	16,930.9	9,237.4	113.1	45.4	54.6%	1,554.9	207,854.5	141,607.1	66,247.4	68.1%
2039	17,247.1	9,409.9	115.2	43.2	54.6%	1,583.9	210,439.2	148,503.1	61,936.1	70.6%
2040	17,571.6	9,587.0	117.4	41.1	54.6%	1,613.7	212,758.3	155,709.8	57,048.5	73.2%
2041	17,912.7	9,773.1	119.6	39.2	54.6%	1,645.0	214,818.4	163,284.4	51,534.0	76.0%
2042	18,276.9	9,971.8	122.1	37.4	54.6%	1,678.5	216,636.2	171,296.2	45,340.0	79.1%
2043	18,671.3	10,187.0	124.7	35.7	54.6%	1,714.7	218,243.7	179,835.0	38,408.8	82.4%
2044	19,099.6	10,420.6	127.6	34.1	54.6%	1,754.0	219,697.4	189,013.1	30,684.2	86.0%
2045	19,570.8	10,677.7	130.7	32.7	54.6%	1,797.3	221,068.8	198,961.9	22,106.9	90.0%
Total		\$184,206.4	\$2,073.2	\$978.0		\$31,941.8				

Exhibit 3B – SERS Projection (Change #3 – Tier 2 COLA Update)

Funding Projections for the State Employees' Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023, Update Tier 2 COLA Only

Actuarially Assumed Rate of Return: 6.75%

(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	Compared to Exhibit B		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	\$0.0	\$0.0	50.3%	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,223.0	2,552.6	0.0	0.0	48.9%	289.6	56,277.7	26,268.3	30,009.4	46.7%
2026	5,307.3	2,596.4	0.0	0.0	48.9%	292.4	57,329.6	26,652.8	30,676.8	46.5%
2027	5,391.3	2,691.5	56.8	45.2	49.9%	295.1	58,302.7	27,696.4	30,606.4	47.5%
2028	5,477.0	2,783.8	57.7	43.0	50.8%	297.8	59,198.4	28,793.8	30,404.6	48.6%
2029	5,569.8	2,809.2	58.7	41.0	50.4%	301.1	60,021.3	29,865.8	30,155.5	49.8%
2030	5,668.3	2,850.8	59.8	39.1	50.3%	304.8	60,775.8	30,934.4	29,841.4	50.9%
2031	5,772.3	2,896.3	60.9	37.3	50.2%	309.0	61,462.8	32,009.3	29,453.5	52.1%
2032	5,881.3	2,950.3	62.0	35.6	50.2%	313.2	62,081.4	33,103.1	28,978.3	53.3%
2033	5,992.3	3,010.8	63.2	34.0	50.2%	317.4	62,635.4	34,230.9	28,404.5	54.7%
2034	6,110.1	3,275.8	64.4	32.4	53.6%	321.9	63,127.5	35,612.7	27,514.8	56.4%
2035	6,231.9	3,341.1	65.7	31.0	53.6%	326.4	63,563.9	37,066.7	26,497.2	58.3%
2036	6,356.1	3,407.7	67.0	29.6	53.6%	330.9	63,945.6	38,604.6	25,341.0	60.4%
2037	6,482.8	3,475.6	68.3	28.3	53.6%	335.5	64,278.3	40,240.5	24,037.8	62.6%
2038	6,617.2	3,547.7	69.8	27.1	53.6%	340.6	64,572.7	41,997.3	22,575.4	65.0%
2039	6,758.7	3,623.6	71.3	25.9	53.6%	345.9	64,836.0	43,895.8	20,940.3	67.7%
2040	6,906.3	3,702.7	72.8	24.8	53.6%	351.5	65,074.3	45,957.8	19,116.5	70.6%
2041	7,059.9	3,785.0	74.4	23.7	53.6%	357.5	65,297.4	48,208.3	17,089.1	73.8%
2042	7,220.5	3,871.1	76.1	22.7	53.6%	363.8	65,517.4	50,672.5	14,845.0	77.3%
2043	7,388.0	3,960.9	77.9	21.8	53.6%	370.4	65,744.5	53,378.2	12,366.3	81.2%
2044	7,561.7	4,054.0	79.7	20.9	53.6%	377.2	65,986.1	56,352.3	9,633.7	85.4%
2045	7,741.0	4,150.2	81.6	20.0	53.6%	384.4	66,244.9	59,620.4	6,624.5	90.0%
Total		\$71,920.9	\$1,288.1	\$583.4		\$7,213.4				

Exhibit 3C – SURS Projection (Change #3 – Tier 2 COLA Update)

Funding Projections for the State Universities Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023, Update Tier 2 COLA Only

Actuarially Assumed Rate of Return: 6.50%

(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll*	Total State Contribution	Compared to Exhibit C		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$51,652.5	\$23,381.2	\$28,271.2	45.3%
2024	\$5,382.1	\$2,186.0	\$0.0	\$0.0	40.6%	\$323.5	52,381.9	24,050.1	28,331.8	45.9%
2025	5,642.7	2,249.8	0.0	0.0	39.9%	338.1	53,111.6	24,935.9	28,175.7	47.0%
2026	5,760.0	2,296.6	0.0	0.0	39.9%	340.7	53,772.2	25,096.8	28,675.4	46.7%
2027	5,883.8	2,374.3	41.3	33.2	40.4%	344.0	54,369.6	25,718.8	28,650.8	47.3%
2028	6,029.3	2,472.9	42.4	31.9	41.0%	349.1	54,901.3	26,406.5	28,494.8	48.1%
2029	6,187.9	2,538.0	43.5	30.7	41.0%	355.2	55,364.0	27,104.6	28,259.4	49.0%
2030	6,349.8	2,600.4	44.6	29.6	41.0%	361.6	55,759.2	27,816.3	27,943.0	49.9%
2031	6,518.0	2,666.5	45.8	28.5	40.9%	368.2	56,083.5	28,546.8	27,536.6	50.9%
2032	6,691.6	2,741.0	47.0	27.5	41.0%	375.2	56,336.3	29,309.9	27,026.4	52.0%
2033	6,871.1	2,823.9	48.3	26.5	41.1%	382.4	56,535.2	30,137.0	26,398.2	53.3%
2034	7,058.0	2,928.2	49.6	25.6	41.5%	390.0	56,679.1	31,055.1	25,624.0	54.8%
2035	7,253.1	3,011.6	50.9	24.7	41.5%	398.0	56,777.8	32,062.0	24,715.7	56.5%
2036	7,450.5	3,096.0	52.3	23.8	41.6%	406.1	56,826.7	33,163.5	23,663.2	58.4%
2037	7,651.7	3,182.0	53.7	23.0	41.6%	414.3	56,836.2	34,380.8	22,455.4	60.5%
2038	7,858.8	3,270.6	55.2	22.2	41.6%	422.8	56,807.5	35,727.6	21,079.9	62.9%
2039	8,072.0	3,361.6	56.7	21.4	41.6%	431.6	56,755.8	37,231.3	19,524.5	65.6%
2040	8,294.0	3,456.4	58.3	20.6	41.7%	440.8	56,681.9	38,906.9	17,775.0	68.6%
2041	8,517.8	3,551.9	59.8	19.9	41.7%	450.1	56,602.9	40,783.1	15,819.9	72.1%
2042	8,749.7	3,650.8	61.5	19.2	41.7%	459.9	56,525.4	42,880.9	13,644.5	75.9%
2043	8,988.1	3,752.3	63.1	18.5	41.7%	470.1	56,465.9	45,231.9	11,234.1	80.1%
2044	9,233.5	3,856.7	64.9	17.8	41.8%	480.7	56,427.9	47,855.7	8,572.3	84.8%
2045	9,482.8	3,962.8	66.6	17.2	41.8%	491.4	56,421.5	50,779.3	5,642.1	90.0%
Total		\$66,030.3	\$1,005.5	\$461.8		\$8,793.8				

* Includes payroll from Self Managed Plan (SMP)

Exhibit 4A – TRS Projection (Change #4 – Tier 2 NRA Update)

Funding Projections for the Teachers' Retirement System

Based on Laws in Effect on June 30, 2024, Update Tier 2 Retirement Eligibility Only

Actuarially Assumed Rate of Return: 7.00%

(\$ in millions)

Fiscal Year Ending 6/30	Annual State Payroll	State Contribution	Compared to Exhibit A		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2024	\$11,893.2	\$6,043.2	\$0.0	\$0.0	50.8%	\$1,092.2	\$154,325.2	\$70,687.6	\$83,637.6	45.8%
2025	12,542.5	6,203.6	0.0	0.0	49.5%	1,151.9	158,502.5	75,369.7	83,132.8	47.6%
2026	12,982.3	6,495.5	0.0	0.0	50.0%	1,192.3	162,732.8	78,410.9	84,321.9	48.2%
2027	13,332.6	6,974.2	323.1	272.8	52.3%	1,224.4	167,138.9	82,942.0	84,196.9	49.6%
2028	13,678.8	7,214.5	331.2	261.4	52.7%	1,256.2	171,534.0	87,686.9	83,847.1	51.1%
2029	14,022.5	7,380.6	338.9	250.0	52.6%	1,287.8	175,974.5	92,432.0	83,542.5	52.5%
2030	14,363.2	7,532.3	346.4	238.7	52.4%	1,319.1	180,376.5	97,320.5	83,056.0	54.0%
2031	14,699.1	7,690.6	353.4	227.7	52.3%	1,349.9	184,723.4	102,360.0	82,363.4	55.4%
2032	15,029.1	7,863.4	359.9	216.7	52.3%	1,380.2	188,995.2	107,564.5	81,430.7	56.9%
2033	15,350.7	8,048.5	365.7	205.8	52.4%	1,409.8	193,166.4	112,944.8	80,221.6	58.5%
2034	15,661.2	8,820.1	370.1	194.6	56.3%	1,438.3	197,215.8	119,110.8	78,105.0	60.4%
2035	15,970.6	8,994.4	374.8	184.2	56.3%	1,466.7	201,127.5	125,498.2	75,629.3	62.4%
2036	16,275.6	9,166.1	378.9	174.0	56.3%	1,494.7	204,882.5	132,115.8	72,766.7	64.5%
2037	16,578.6	9,336.8	382.2	164.1	56.3%	1,522.5	208,465.7	138,980.2	69,485.5	66.7%
2038	16,885.1	9,509.4	385.0	154.5	56.3%	1,550.7	211,855.4	146,109.2	65,746.3	69.0%
2039	17,189.3	9,680.7	386.0	144.7	56.3%	1,578.6	215,038.3	153,527.0	61,511.3	71.4%
2040	17,500.3	9,855.9	386.3	135.3	56.3%	1,607.2	218,004.5	161,268.8	56,735.7	74.0%
2041	17,825.7	10,039.1	385.7	126.3	56.3%	1,637.1	220,756.3	169,384.7	51,371.7	76.7%
2042	18,169.8	10,232.9	383.2	117.3	56.3%	1,668.7	223,299.8	177,930.5	45,369.3	79.7%
2043	18,536.6	10,439.5	377.2	107.9	56.3%	1,702.3	225,645.9	186,972.4	38,673.5	82.9%
2044	18,925.0	10,658.3	365.2	97.6	56.3%	1,738.0	227,820.1	196,588.6	31,231.6	86.3%
2045	19,343.6	10,894.0	347.0	86.7	56.3%	1,776.5	229,848.6	206,863.7	22,984.9	90.0%
Total		\$189,073.6	\$6,940.2	\$3,360.3		\$31,845.1				

Exhibit 4B – SERS Projection (Change #4 – Tier 2 NRA Update)

Funding Projections for the State Employees' Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023, Update Tier 2 Retirement Eligibility Only

Actuarially Assumed Rate of Return: 6.75%

(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	Compared to Exhibit B		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	\$0.0	\$0.0	50.3%	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,222.1	2,552.6	0.0	0.0	48.9%	289.6	56,298.3	26,269.5	30,028.8	46.7%
2026	5,304.3	2,596.4	0.0	0.0	49.0%	292.2	57,395.4	26,656.1	30,739.3	46.4%
2027	5,386.8	2,753.0	118.3	94.1	51.1%	294.8	58,418.9	27,764.8	30,654.1	47.5%
2028	5,470.9	2,845.6	119.6	89.1	52.0%	297.5	59,369.9	28,930.9	30,439.0	48.7%
2029	5,562.4	2,871.4	120.9	84.4	51.6%	300.7	60,253.0	30,075.1	30,178.0	49.9%
2030	5,659.8	2,913.5	122.5	80.1	51.5%	304.4	61,072.8	31,219.1	29,853.8	51.1%
2031	5,762.8	2,959.8	124.3	76.2	51.4%	308.5	61,829.7	32,372.5	29,457.2	52.4%
2032	5,871.1	3,014.7	126.4	72.6	51.3%	312.7	62,521.7	33,546.7	28,975.0	53.7%
2033	5,982.1	3,076.5	128.9	69.3	51.4%	316.8	63,154.5	34,758.0	28,396.4	55.0%
2034	6,098.7	3,342.2	130.8	65.9	54.8%	321.3	63,730.4	36,225.8	27,504.6	56.8%
2035	6,219.3	3,408.3	132.9	62.7	54.8%	325.8	64,254.6	37,767.1	26,487.5	58.8%
2036	6,343.0	3,476.0	135.4	59.8	54.8%	330.3	64,725.1	39,391.2	25,333.9	60.9%
2037	6,466.9	3,544.0	136.7	56.6	54.8%	334.7	65,144.0	41,108.5	24,035.5	63.1%
2038	6,598.0	3,615.8	137.9	53.5	54.8%	339.6	65,513.8	42,935.3	22,578.5	65.5%
2039	6,732.5	3,689.5	137.2	49.8	54.8%	344.6	65,832.4	44,882.8	20,949.5	68.2%
2040	6,870.7	3,765.3	135.4	46.1	54.8%	349.7	66,096.4	46,963.9	19,132.6	71.1%
2041	7,011.9	3,842.6	132.0	42.1	54.8%	355.1	66,307.3	49,194.3	17,112.9	74.2%
2042	7,159.5	3,923.5	128.6	38.4	54.8%	360.7	66,468.1	51,592.9	14,875.1	77.6%
2043	7,313.5	4,007.9	124.9	34.9	54.8%	366.6	66,579.1	54,178.4	12,400.7	81.4%
2044	7,472.8	4,095.2	120.9	31.7	54.8%	372.8	66,641.6	56,970.4	9,671.2	85.5%
2045	7,638.0	4,185.8	117.2	28.8	54.8%	379.3	66,655.7	59,990.1	6,665.6	90.0%
Total		\$73,063.4	\$2,430.8	\$1,136.1		\$7,184.7				

Exhibit 4C – SURS Projection (Change #4 – Tier 2 NRA Update)

Funding Projections for the State Universities Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023, Update Tier 2 Retirement Eligibility Only

Actuarially Assumed Rate of Return: 6.50%

(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll*	Total State Contribution	Compared to Exhibit C		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$51,652.5	\$23,381.2	\$28,271.2	45.3%
2024	\$5,382.1	\$2,186.0	\$0.0	\$0.0	40.6%	\$323.5	52,381.9	24,050.1	28,331.8	45.9%
2025	5,642.0	2,249.8	0.0	0.0	39.9%	338.0	53,126.8	24,940.1	28,186.8	46.9%
2026	5,757.8	2,296.6	0.0	0.0	39.9%	340.6	53,830.7	25,118.6	28,712.1	46.7%
2027	5,881.0	2,413.8	80.8	64.8	41.0%	343.7	54,476.9	25,800.1	28,676.8	47.4%
2028	6,025.7	2,513.4	82.9	62.4	41.7%	348.8	55,061.5	26,550.3	28,511.3	48.2%
2029	6,184.0	2,579.5	85.0	60.1	41.7%	354.9	55,577.6	27,309.3	28,268.3	49.1%
2030	6,345.5	2,642.8	87.0	57.8	41.6%	361.2	56,033.7	28,087.1	27,946.6	50.1%
2031	6,513.1	2,709.9	89.1	55.6	41.6%	367.8	56,425.1	28,887.9	27,537.2	51.2%
2032	6,686.6	2,785.6	91.5	53.6	41.7%	374.8	56,752.3	29,726.2	27,026.1	52.4%
2033	6,866.2	2,869.7	94.1	51.7	41.8%	382.0	57,034.3	30,635.3	26,399.0	53.7%
2034	7,051.5	2,974.2	95.6	49.3	42.2%	389.5	57,270.9	31,642.9	25,627.9	55.3%
2035	7,243.7	3,057.8	97.1	47.1	42.2%	397.2	57,466.7	32,741.4	24,725.3	57.0%
2036	7,440.0	3,143.1	99.4	45.3	42.2%	405.2	57,617.1	33,936.5	23,680.6	58.9%
2037	7,640.3	3,230.1	101.8	43.5	42.3%	413.4	57,734.4	35,251.7	22,482.6	61.1%
2038	7,846.3	3,319.6	104.3	41.8	42.3%	421.8	57,814.2	36,695.5	21,118.6	63.5%
2039	8,056.4	3,410.9	106.0	39.9	42.3%	430.3	57,870.7	38,294.0	19,576.6	66.2%
2040	8,273.8	3,505.4	107.3	37.9	42.4%	439.2	57,907.0	40,063.4	17,843.6	69.2%
2041	8,495.9	3,601.8	109.7	36.4	42.4%	448.4	57,937.2	42,030.7	15,906.5	72.5%
2042	8,724.1	3,700.8	111.5	34.8	42.4%	457.9	57,963.3	44,213.2	13,750.2	76.3%
2043	8,957.0	3,801.7	112.5	33.0	42.4%	467.6	57,996.0	46,636.3	11,359.6	80.4%
2044	9,194.6	3,904.7	112.9	31.0	42.5%	477.6	58,040.9	49,322.2	8,718.7	85.0%
2045	9,436.5	4,009.6	113.4	29.3	42.5%	487.7	58,107.7	52,296.9	5,810.8	90.0%
Total		\$66,906.8	\$1,881.9	\$875.3		\$8,771.1				

* Includes payroll from Self Managed Plan (SMP)

**Exhibit 5B – SERS Projection (Change #5 – Members of Depts. of Human Services, Lottery,
and Juvenile Justice under Alternative Benefit)**

Funding Projections for the State Employees' Retirement System

CoGFA Projections Based on Laws in Effect on June 30, 2023, Alternative Formula Eligibility for Various Departments
Actuarially Assumed Rate of Return: 6.75%
(\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	Compared to Exhibit B		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	\$0.0	\$0.0	50.3%	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,222.8	2,552.6	0.0	0.0	48.9%	290.2	56,270.3	26,268.2	30,002.1	46.7%
2026	5,306.8	2,596.4	0.0	0.0	48.9%	294.8	57,305.5	26,652.8	30,652.6	46.5%
2027	5,390.6	2,667.2	32.5	25.9	49.5%	299.1	58,259.2	27,672.0	30,587.2	47.5%
2028	5,476.2	2,759.1	33.1	24.7	50.4%	303.5	59,132.1	28,743.2	30,388.9	48.6%
2029	5,569.1	2,784.1	33.7	23.5	50.0%	308.5	59,928.2	29,786.7	30,141.4	49.7%
2030	5,667.7	2,825.3	34.3	22.4	49.8%	313.6	60,651.2	30,823.8	29,827.4	50.8%
2031	5,771.7	2,870.4	35.0	21.4	49.7%	319.2	61,301.5	31,863.7	29,437.8	52.0%
2032	5,880.4	2,923.7	35.5	20.4	49.7%	324.8	61,876.7	32,917.5	28,959.2	53.2%
2033	5,991.2	2,983.6	36.0	19.4	49.8%	330.4	62,380.4	34,000.4	28,380.0	54.5%
2034	6,108.5	3,247.8	36.4	18.3	53.2%	336.2	62,814.1	35,331.0	27,483.1	56.2%
2035	6,229.5	3,312.2	36.8	17.4	53.2%	342.1	63,184.2	36,727.5	26,456.7	58.1%
2036	6,352.4	3,377.5	36.9	16.3	53.2%	347.9	63,489.1	38,198.8	25,290.3	60.2%
2037	6,477.4	3,444.0	36.7	15.2	53.2%	353.9	63,733.5	39,758.3	23,975.2	62.4%
2038	6,609.5	3,514.2	36.3	14.1	53.2%	360.4	63,925.5	41,426.1	22,499.4	64.8%
2039	6,748.2	3,588.0	35.7	13.0	53.2%	367.2	64,071.6	43,221.9	20,849.6	67.5%
2040	6,892.7	3,664.8	35.0	11.9	53.2%	374.2	64,175.7	45,165.4	19,010.3	70.4%
2041	7,042.6	3,744.5	33.9	10.8	53.2%	381.6	64,245.3	47,278.5	16,966.8	73.6%
2042	7,199.6	3,828.0	33.0	9.9	53.2%	389.4	64,291.2	49,585.7	14,705.4	77.1%
2043	7,363.3	3,915.0	32.0	9.0	53.2%	397.4	64,319.1	52,110.3	12,208.8	81.0%
2044	7,532.3	4,004.9	30.6	8.0	53.2%	405.4	64,332.8	54,874.1	9,458.8	85.3%
2045	7,707.9	4,098.3	29.7	7.3	53.2%	414.3	64,333.3	57,901.1	6,432.2	90.0%
Total		\$71,285.4	\$653.1	\$308.9		\$7,541.1				

Exhibit 6A – TRS Projection (Combined Changes)

Funding Projections for the Teachers' Retirement System
 Based on Laws in Effect on June 30, 2024, Combined Changes
 Actuarially Assumed Rate of Return: 7.00%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual State Payroll	State Contribution	Compared to Exhibit A		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2024	\$11,893.2	\$6,043.2	\$0.0	\$0.0	50.8%	\$1,092.2	\$154,325.2	\$70,687.6	\$83,637.6	45.8%
2025	12,542.5	6,203.6	0.0	0.0	49.5%	1,151.9	158,589.3	75,369.6	83,219.6	47.5%
2026	12,982.3	6,495.5	0.0	0.0	50.0%	1,192.3	163,024.8	78,415.0	84,609.8	48.1%
2027	13,357.5	7,316.1	665.0	561.6	54.8%	1,226.7	167,678.6	83,307.2	84,371.4	49.7%
2028	13,711.2	7,568.7	685.5	540.9	55.2%	1,259.2	172,368.9	88,452.3	83,916.6	51.3%
2029	14,064.2	7,749.0	707.3	521.7	55.1%	1,291.6	177,158.0	93,641.4	83,516.6	52.9%
2030	14,416.4	7,916.1	730.1	503.3	54.9%	1,324.0	181,968.5	99,022.0	82,946.4	54.4%
2031	14,766.1	8,090.8	753.6	485.4	54.8%	1,356.1	186,790.8	104,606.3	82,184.5	56.0%
2032	15,112.4	8,281.3	777.8	468.3	54.8%	1,387.9	191,612.3	110,413.1	81,199.2	57.6%
2033	15,453.0	8,485.5	802.8	451.7	54.9%	1,419.2	196,415.7	116,458.5	79,957.2	59.3%
2034	15,785.0	9,278.4	828.4	435.6	58.8%	1,449.6	201,188.6	123,358.8	77,829.8	61.3%
2035	16,119.2	9,474.9	855.2	420.3	58.8%	1,480.3	205,924.5	130,555.0	75,369.6	63.4%
2036	16,452.0	9,670.5	883.2	405.6	58.8%	1,510.9	210,614.8	138,062.3	72,552.5	65.6%
2037	16,787.0	9,867.4	912.8	391.8	58.8%	1,541.7	215,255.3	145,904.9	69,350.4	67.8%
2038	17,129.3	10,068.6	944.2	378.8	58.8%	1,573.1	219,834.8	154,108.0	65,726.8	70.1%
2039	17,473.0	10,270.6	975.9	365.9	58.8%	1,604.7	224,352.0	162,703.9	61,648.1	72.5%
2040	17,827.7	10,479.1	1,009.5	353.7	58.8%	1,637.2	228,809.1	171,735.5	57,073.5	75.1%
2041	18,200.8	10,698.4	1,045.0	342.2	58.8%	1,671.5	233,219.6	181,261.1	51,958.6	77.7%
2042	18,595.7	10,930.5	1,080.9	330.8	58.8%	1,707.8	237,599.4	191,343.1	46,256.3	80.5%
2043	19,018.8	11,179.3	1,117.0	319.5	58.8%	1,746.6	241,966.3	202,054.5	39,911.9	83.5%
2044	19,468.0	11,443.2	1,150.2	307.5	58.8%	1,787.9	246,350.4	213,478.2	32,872.2	86.7%
2045	19,948.7	11,725.8	1,178.8	294.5	58.8%	1,832.0	250,775.5	225,697.9	25,077.5	90.0%
Total		\$199,236.5	\$17,103.2	\$7,879.1		\$32,244.4				

Exhibit 6B – SERS Projection (Combined Changes)

Funding Projections for the State Employees' Retirement System
 CoGFA Projections Based on Laws in Effect on June 30, 2023, Combined Changes
 Actuarially Assumed Rate of Return: 6.75%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll	Total State Contribution	Compared to Exhibit B		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$54,002.7	\$24,072.1	\$29,930.6	44.6%
2024	\$5,139.9	\$2,583.8	\$0.0	\$0.0	50.3%	\$287.0	55,168.5	25,172.1	29,996.3	45.6%
2025	5,231.7	2,552.6	0.0	0.0	48.8%	290.7	56,345.2	26,269.5	30,075.7	46.6%
2026	5,330.0	2,596.4	0.0	0.0	48.7%	295.4	57,548.6	26,655.7	30,892.9	46.3%
2027	5,420.3	2,877.4	242.7	193.1	53.1%	299.7	58,695.6	27,892.8	30,802.9	47.5%
2028	5,513.7	2,976.0	249.9	186.3	54.0%	304.3	59,789.3	29,202.1	30,587.2	48.8%
2029	5,616.0	3,009.5	259.1	180.9	53.6%	309.5	60,836.2	30,507.1	30,329.1	50.1%
2030	5,725.4	3,060.4	269.4	176.2	53.5%	315.2	61,842.7	31,831.1	30,011.5	51.5%
2031	5,841.9	3,116.3	280.9	172.1	53.3%	321.3	62,811.8	33,186.3	29,625.5	52.8%
2032	5,964.8	3,181.6	293.4	168.4	53.3%	327.6	63,743.3	34,585.1	29,158.1	54.3%
2033	6,091.7	3,254.7	307.1	165.1	53.4%	333.9	64,645.4	36,046.7	28,598.7	55.8%
2034	6,225.3	3,532.5	321.1	161.7	56.7%	340.5	65,522.1	37,791.9	27,730.2	57.7%
2035	6,363.4	3,610.9	335.5	158.3	56.7%	347.2	66,380.7	39,640.1	26,740.6	59.7%
2036	6,505.1	3,691.3	350.6	155.0	56.7%	353.9	67,221.6	41,602.4	25,619.2	61.9%
2037	6,649.3	3,773.1	365.8	151.5	56.7%	360.9	68,050.4	43,693.3	24,357.1	64.2%
2038	6,800.4	3,858.9	380.9	147.7	56.7%	368.4	68,872.1	45,931.2	22,940.9	66.7%
2039	6,956.0	3,947.2	394.9	143.5	56.7%	376.2	69,687.6	48,331.0	21,356.6	69.4%
2040	7,113.8	4,036.7	406.9	138.5	56.7%	384.1	70,497.7	50,907.9	19,589.8	72.2%
2041	7,277.7	4,129.7	419.1	133.6	56.7%	392.5	71,310.8	53,684.3	17,626.5	75.3%
2042	7,449.1	4,227.0	432.0	129.0	56.7%	401.4	72,137.1	56,684.1	15,453.0	78.6%
2043	7,627.3	4,328.1	445.1	124.5	56.7%	410.6	72,973.1	59,924.9	13,048.2	82.1%
2044	7,805.7	4,429.3	455.0	119.2	56.7%	419.8	73,811.9	63,419.2	10,392.7	85.9%
2045	7,987.0	4,532.2	463.6	113.8	56.7%	429.4	74,650.1	67,185.1	7,465.0	90.0%
Total		\$77,305.6	\$6,673.0	\$2,918.4		\$7,669.5				

Exhibit 6C – SURS Projection (Combined Changes)

Funding Projections for the State Universities Retirement System
 CoGFA Projections Based on Laws in Effect on June 30, 2023, Combined Changes
 Actuarially Assumed Rate of Return: 6.50%
 (\$ in millions)

Fiscal Year Ending 6/30	Annual Payroll*	Total State Contribution	Compared to Exhibit C		State Contribution as Percent of Payroll	Total Employee Contribution	Actuarial Accrued Liability	Actuarial Value of Assets	Unfunded Liability	Funded Ratio
			(Reduction)/ Increase in State Contribution	(Reduction)/ Increase in State Contribution						
2023							\$51,652.5	\$23,381.2	\$28,271.2	45.3%
2024	\$5,382.1	\$2,186.0	\$0.0	\$0.0	40.6%	\$323.5	52,381.9	24,050.1	28,331.8	45.9%
2025	5,651.3	2,249.8	0.0	0.0	39.8%	338.8	53,173.9	24,941.8	28,232.1	46.9%
2026	5,786.8	2,296.6	0.0	0.0	39.7%	342.9	53,987.3	25,126.4	28,860.9	46.5%
2027	5,919.7	2,557.4	224.4	180.0	43.2%	346.8	54,761.0	25,963.2	28,797.8	47.4%
2028	6,074.1	2,661.3	230.8	173.8	43.8%	352.7	55,492.7	26,883.2	28,609.4	48.4%
2029	6,241.7	2,734.9	240.4	170.0	43.8%	359.5	56,177.0	27,830.4	28,346.6	49.5%
2030	6,412.4	2,805.7	250.0	166.0	43.8%	366.6	56,824.5	28,815.4	28,009.1	50.7%
2031	6,588.8	2,880.3	259.6	161.8	43.7%	373.9	57,432.1	29,843.3	27,588.8	52.0%
2032	6,771.1	2,963.6	269.5	157.8	43.8%	381.5	58,001.7	30,929.2	27,072.5	53.3%
2033	6,959.1	3,055.3	279.7	153.7	43.9%	389.4	58,553.5	32,107.0	26,446.5	54.8%
2034	7,152.9	3,170.6	292.0	150.7	44.3%	397.6	59,089.0	33,408.5	25,680.5	56.5%
2035	7,353.5	3,262.0	301.3	146.0	44.4%	406.0	59,614.1	34,823.3	24,790.8	58.4%
2036	7,558.8	3,355.3	311.6	141.8	44.4%	414.8	60,126.8	36,359.5	23,767.4	60.5%
2037	7,768.6	3,450.7	322.4	137.8	44.4%	423.7	60,640.5	38,040.6	22,599.9	62.7%
2038	7,984.5	3,548.9	333.6	133.8	44.4%	432.9	61,152.1	39,875.7	21,276.4	65.2%
2039	8,205.6	3,649.4	344.5	129.8	44.5%	442.3	61,677.3	41,892.2	19,785.1	67.9%
2040	8,435.0	3,753.6	355.5	125.8	44.5%	452.1	62,219.0	44,105.5	18,113.6	70.9%
2041	8,670.4	3,860.5	368.4	122.4	44.5%	462.4	62,791.2	46,542.5	16,248.8	74.1%
2042	8,913.0	3,970.5	381.2	118.9	44.5%	473.0	63,395.6	49,220.2	14,175.4	77.6%
2043	9,161.5	4,083.1	394.0	115.4	44.6%	484.0	64,040.6	52,162.4	11,878.1	81.5%
2044	9,415.9	4,198.4	406.5	111.8	44.6%	495.3	64,728.8	55,387.9	9,340.8	85.6%
2045	9,676.7	4,316.5	420.3	108.5	44.6%	507.0	65,469.5	58,922.5	6,546.9	90.0%
Total		\$71,010.4	\$5,985.7	\$2,705.8		\$8,966.7				

* Includes payroll from Self Managed Plan (SMP)