



Commission on Government Forecasting and Accountability

PENSION IMPACT NOTE 104TH General Assembly

BILL NO: SB 0002

March 12, 2025

SPONSOR (S): Martwick - Guzman

SYSTEM: All Systems

FISCAL IMPACT

SB 0002 mirrors HB 5909 of the 103rd General Assembly. An actuarial study was completed by the Commission's actuary, Segal Consulting, on the major provisions of HB 5909 and the impact on the Big Three State Systems (TRS, SERS, & SURS). Since the only difference is the enactment date (HB 5909: Jan 1, 2025 / SB 0002: Jan 1, 2026), the following chart shows the projected increase in state contributions through FY 2045. The full study is available in Appendix III.

Increase in Present Value of Total State Contributions through FY 2045 (\$\$\$ in Millions)				
	TRS	SERS	SURS	Total
Baseline	\$ -	\$ -	\$ -	\$ -
Change #1 - T2 Salary Cap to SSWB	\$ 3,852	\$ 1,475	\$ 855	\$ 6,182
Change # 2 - T2 FAS Update	\$ 524	\$ 305	\$ 290	\$ 1,119
Change #3 - T2 COLA Update	\$ 2,073	\$ 1,288	\$ 1,005	\$ 4,366
Change #4 - T2 NRA Update	\$ 6,940	\$ 2,431	\$ 1,882	\$ 11,253
Change #5 - Members of Depts of HS, Lottery, & JJ Under Alt Formula	N/A	\$ 653	N/A	N/A
Combined*	\$ 17,103	\$ 6,673	\$ 5,986	\$ 29,762

*The combination of certain individual changes result in dissimilar amounts than those individual components summed.

An actuarial study was completed by the Commission’s actuary, Foster & Foster, on the major provisions of HB 5909 from the 103rd General Assembly and its impact on selected Downstate Police (Article 3) and Downstate Fire (Article 4) funds. The following chart shows the first-year increase in the nominal value of municipal contributions (2025) for those funds. The full study is available in Appendix V.

First Year Increase in Nominal Value of Municipal Contributions (\$\$\$ in Thousands)					
Fund		Baseline	HB 5909	Impact	% Increase
Aurora	Police	\$ 20,972.74	\$ 22,999.50	\$ 2,026.76	9.7%
	Fire	\$ 15,161.09	\$ 16,918.45	\$ 1,757.37	11.6%
Rock Falls	Police	\$ 841.28	\$ 931.78	\$ 90.50	10.8%
	Fire	\$ 309.49	\$ 355.79	\$ 46.30	15.0%

SUBJECT MATTER: SB 0002 adjusts various provisions applicable to members and participants of funds under the Illinois Pension Code that joined on or after January 1, 2011 (Tier 2). Each adjustment is summarized below in the Comment Section.

COMMENT:

***All provisions of SB 0002 outlined below are effective upon becoming law**

Increasing the Tier 2 Pensionable Salary Cap to Social Security Wage Base

Current Law

- Currently, the Tier 2 pensionable Salary Cap is equal to \$127,283.
 - Members do not make contributions on wages above the cap.
- The Tier 2 cap is increased annually by the lesser of:
 - 3%; or
 - ½ the increase in CPI-U for the preceding 12 months.
 - If CPI-U = 0, no increase is paid.
 - The Tier 2 cap within JRS & GARS is the lesser of 3% or **the full increase** in CPI-U for the preceding 12 months.

SB 0002

Beginning January 1, 2026, under SB 0002, the Tier 2 pensionable salary cap would be brought into line with the Social Security Wage Base (SSWB), which as of 2024 is \$168,600. The bill does not allow retroactive adjustments of employee contributions or benefit payments for the

period between January 1, 2011 and January 1, 2026. Earnings, salary, and wages received on or after Jan 1, 2011 but before January 1, 2026 will have the limitations retroactively increased to an amount equal to the SSWB for the applicable years; i.e., if a Tier 2 member is about to retire in TRS, for example, their pensionable salary will be based on the SSWB for the preceding four years. No additional employee contributions are required for this retroactive pensionable salary cap increase.

Changes to Tier 2 Final Average Salary (FAS) Requirements

SB 0002 modifies the Final Average Salary (FAS) calculations for Tier 2 retirement annuities across Illinois pension funds. A table of the various FAS rates for the existing Tier 2 plans and the new rates can be found in Appendix I.

Change to the Tier 2 Automatic Annual Increase

Current Law

- All funds and systems except JRS & GARS have Tier 2 automatic annual increases that are non-compounded, and are calculated at the lesser of:
 - 3%; or
 - ½ the annual unadjusted percentage increase (not less than zero) in the CPI-U.
 - If the increase in CPI-U is 0, no increase is payable.
- JRS & GARS Tier 2 automatic annual increases are compounded, and are calculated at the lesser of:
 - 3%; or
 - The annual unadjusted percentage increase in the CPI-U.
- Tier 2 COLAs are payable at the latter of age 67 or the first anniversary of retirement, except for public safety officials, who start receiving increases at age 60.

SB 0002

Beginning January 1, 2026, each Tier 2 annual increase (COLA) in a retirement annuity or supplemental annuity shall be a non-compounded 3% increase. Along with the new formula, the starting date of Tier 2 COLAs would correspond with the requirements applicable for Tier 1 COLAs of that respective system.

Reduction in Tier 2 Age & Service Requirements

SB 0002 adjusts the age & service requirements by which members in the Tier 2 plans under the Illinois Pension Code become eligible for retirement. Tier 2 age and service requirements were set higher than Tier 1 requirements, and SB 0002 brings the Tier 2 age and service requirements in line with those of Tier 1. For ease of comparison, a graphic depiction is necessary to comprehend the full scope of the rollback of Tier 2 benefits back to Tier 1 as contemplated in

this bill. A table showing the existing requirements and the requirements SB 0002 implements can be found in Appendix II.

Alternative Formula Eligibility and Applicable Service Credit Upgrade Provisions for Investigators/Security Employees of the Departments of Lottery and Human Services

The current SERS retirement benefits for both Tier 1 & 2 Investigators for the Department of the Lottery are detailed in the chart found below:

Current Law						
Employee	Tier	SS-Coordinated?	Contribution Rate	Multiplier	Full Retirement	Reduced Retirement
Investigator for the Dept. of Lottery	1	No	8%	2.20%	Age 60 with 8 years of service credit OR Rule of 85	Ages 55-60 with 25-30 years (Reduced 1/2 of 1% every year under age 60)
Investigator for the Dept. of Lottery	2	No	8%	2.20%	Age 67 with 10 years service credit	Ages 62-67 with 10 years (Reduced 1/2 of 1% every year under age 67)
SB 2						
Investigator for the Dept. of Lottery	1	No	12.5%	3.00%	Age 55 with 20 years of service OR Age 50 with 25 years of service	N/A
Investigator for the Dept. of Lottery	2	No	12.5%	3.00%	Age 55 with 20 years of service	N/A

SB 0002 amends the Illinois Pension Code to allow participation in the SERS Alternative Formula for investigators for the Department of the Lottery.

SB 0002 also allows a security employee of the Department of Human Services in the Alternative Formula to elect to convert up to 13 years of prior service credit as a security employee in the Department of Human Services into service credit under the Alternative Formula. SB 0002 also allows a State highway maintenance worker in the Alternative Formula to elect to convert up to 8 years of prior service credit. In both cases, the employee is required to pay an amount equal to the difference between the employee contributions already made and those that would have been paid had their prior service been rendered under the Alternative Formula, plus interest thereon at the statutory service credit purchase rate (the “effective rate”) of 6%, compounded annually, from the date of service to the date of payment.

Alternative Formula Participation for Certain Security Employees of the Department of Juvenile Justice

Currently, in order for a security employee of the Department of Juvenile Justice to participate in the SERS alternative formula, the employee must be employed in a position at a DJJ facility and have involvement in areas such as training of delinquent youths, providing rehabilitative and vocational training, and assisting other personnel who perform these duties. Additionally, the

employee must:

- Be over the age of 21; and
- Possess a high school diploma or equivalent and either:
 - A bachelor's or advanced degree from an accredited college or university; or
 - 2 or more years of experience providing direct care to youth in the form of residential care, coaching, case management, or mentoring.

SB 0002 stipulates that the bachelor's or advanced degree requirement shall no longer determine eligibility for the alternative formula for the above-mentioned positions at DJJ. Affected employees may convert their prior regular formula service to alternative formula service by paying the difference between the employee contributions for that period of service and the amounts that would have been contributed had the member been participating in the alternative formula from the date of service to the date of payment. The member is not required to pay the employer's normal cost nor interest for the period of service they wish to upgrade.

Accelerated Pension Benefits for GARS, CTPF & JRS

Current Law

- PA 100-0587 implemented an accelerated pension benefit payment in lieu of any pension benefit for SERS, SURS, & TRS ("Total Buyout"), as follows:
 - Inactive vested Tier 1 & Tier 2 members may elect to receive an accelerated pension payment equal to 60% of the present value of the member's pension benefits in lieu of receiving a traditional retirement annuity.
- PA 100-0587 also established an accelerated pension benefit for a reduction in annual Tier 1 retirement annuity and survivor's annuity increases in SERS, SURS, and TRS ("COLA Buyout"), as follows:
 - A member may elect to receive a lump sum payment equal to 70% of the difference of the present value of the Tier One 3% compounded COLA and the present value of a reduced COLA (simple 1.5%); and
 - Annual increases begin on the January 1 occurring on or after the first anniversary of retirement.
- If an eligible member returns to service, all benefits earned are based solely on service after returning; the accelerated payment may not be repaid and credit cannot be reinstated.
- PA 102-0718 extended the sunset date of the two buyout programs to June 30, 2026.

SB 0002

- SB 0002 establishes both a "Total Buyout" and "COLA Buyout" plan within GARS, JRS, and CTPF;
- The buyout plans mirror the existing plans in SERS, SURS, & TRS, except that:
 - Funding for the buyout programs will come from the General Revenue Fund and not from proceeds from the State Pension Obligation Acceleration Bonds, as is the case with the existing buyout programs; and

- The reduced COLA under the “COLA Buyout” plan is payable on the first anniversary of retirement or age 67, whichever is later.
- SB 0002 establishes January 1, 2030 as the sunset date for the GARS, JRS, and CTPF buyout programs.

Placing Downstate Police & Fire and Chicago Police & Fire Articles Under the Ambit of the Retirement Systems Reciprocal Act

Current Law

Under current law, neither the Chicago Police and Chicago Fire, nor the Downstate Police and Downstate Firefighters’ Articles of the Illinois Pension code are included under the Retirement Systems Reciprocal Act, although reciprocity exists between the funds within each respective article (e.g., members of Downstate police funds can utilize reciprocity with other Downstate Police Funds, although this involves the transfer of service credits, whereas the Downstate Fire article has true reciprocity amongst fire pension funds).

The Retirement Systems Reciprocal Act allows for active employees to combine service credit earned from various participating systems to apply towards the minimum vesting requirements of the fund that they participate in currently or the fund that they last participated in before terminating active service. For example, a Tier 2 member in IMRF could utilize reciprocity and combine 4 years of prior service in SERS and 6 years in IMRF to meet the 10-year Tier 2 vesting requirement in IMRF.

SB 0002

SB 0002 would place the Downstate Police, Downstate Fire, Chicago Police, and Chicago Fire Articles of the Illinois Pension Code under the ambit of the Reciprocal Act. The bill states that participation under the Reciprocal Act would only apply to members who have not yet begun receiving retirement annuities as of the effective date. In other words, retired members would not be entitled to a recalculation of their pensions based upon reciprocal service.

IMRF’s Sherriff’s Law Enforcement Personnel (SLEP) Formula Eligibility for Certain Public Safety Officials

Under current law, county correctional and probation officers, firefighters, and sworn law enforcement officers working for municipalities without an established Article 3 or Article 4 pension fund, as the case may be, participate in the IMRF Regular Formula. Job titles for those who qualify as a “firefighter” include;

- A licensed emergency medical technician (EMT) who is a sworn member of a public fire department;
- A paramedic employed by a unit of local government; and
- An EMT, emergency medical technician – intermediate (EMT-I) or advanced emergency medical technician (A-EMT) employed by a unit of local government.

SB 0002 would make all of these job titles eligible for the IMRF SLEP Formula. The benefits for each formula are shown in the chart below.

	IMRF Regular		IMRF SLEP	
	Tier 1	Tier 2	Tier 1	Tier 2
Retirement Age	<ul style="list-style-type: none"> •Age 60 w/ 8+ years of service •Age 55 w/ 35+ •Age 55 w/ 8+ (Reduced) 	<ul style="list-style-type: none"> •Age 67 w/ 10+ •Age 62 w/ 35+ •Age 62 w/ 10+ (Reduced) 	Age 50 w/ 20+	<ul style="list-style-type: none"> •Age 55 w/ 10+ •Age 50 w/ 10+ (Reduced)
Formula	1.67% of FAS each year up to 15, 2% every year after 15		2.5% of FAS each year of service	
Max Annuity	75%		80%	75%
FAS	Avg of 4 highest consecutive years of final 10	Avg of highest 8 consecutive years of final 10	Avg of 4 highest consecutive years of final 10	Avg of highest 8 consecutive years of final 10
COLA	3% non-compounded	3% non-compounded or 1/2 CPI-U increase	3% non-compounded	3% non-compounded or 1/2 CPI-U increase
Employee Contributions	4.5% (SS coordinated)	4.5% (SS coordinated)	7%	7.50%

Addition of “De Facto Firefighters” Under the Downstate Fire Article

Under current law, the definition of “Firefighter” under Article 4, the Downstate Fire Article, includes the following job titles listed under Article 10 of the Illinois Municipal Code, found in the table below:

Division 1 Municipalities	Division 2.1 Municipalities	Municipalities w/o Division Designation*	Not Included
Firefighter	Firefighter	Firefighter	Anyone actively participating in SURS
Fire Engineer	Fire Engineer	Fire Engineer	
Marine Engineer	Marine Engineer	Marine Engineer	
Fire Pilot	Fire Pilot	Fire Pilot	
Bomb Technician	Bomb Technician	Bomb Technician	
Scuba Diver	Scuba Diver	Scuba Diver	
*Except those who served as a de facto and not as a de jure firefighter			

SB 0002 adds the definition of a “de facto firefighter” to the larger “Firefighter” definition under Article 4. The definition of a “de facto firefighter” is a firefighter who:

- Spends the majority of working time participating in the work of controlling and extinguishing fires at the location of such fires, preparing for such work, or waiting to respond to calls for such work, and;
- Has scheduled or actually works hours commensurate in duration and frequency with firefighters under both divisions under the Illinois Municipal Code.

This definition **does not** include;

- Part-time firefighters not already covered by the Code;
- Auxiliary, reserve, or voluntary firefighters (including paid-on-call firefighters);
- Clerks, dispatchers, or other civilian employees of fire departments or fire protection districts not routinely expected to perform firefighter duties.

Disability COLA Eligibility for Tier 2 Downstate Fire

Under current law, disabled Tier 2 firefighters under Article 4 (Downstate Fire) are eligible for COLAs upon the latter of the first anniversary of the disability annuity start date or at age 60. The Tier 2 disability COLA is equal to the lesser of 3% or one-half the increase in the CPI-U, and is non-compounded. Under HB 5099, Tier 2 disabled firefighters would receive a 3% non-compounded COLA, payable at the latter of the first anniversary of the disability annuity start date or age 60. In essence, the Tier 2 disability annuity COLA would be brought into line with the Tier 1 disability annuity COLA.

Adjustment of the Minimum Retirement Pension, Disability Pension, and Surviving Spouse Annuities for Downstate Fire

Current Law

PA 93-0689, effective July 1, 2004, amended the Downstate Fire Article of the Illinois Pension Code to set the minimum retirement pension payable to a firefighter with 20 or more years of creditable service, the minimum disability pension payable, and the minimum surviving spouse’s pension at \$1,159.27 per month.

SB 0002

SB 0002 sets the minimum retirement pension payable to a firefighter with 20 or more years of creditable service, the minimum disability pension payable, and the minimum surviving spouse’s pension on two separate dates. Beginning July 1, 2026, this amount will be set at \$1,822.50 per month. Beginning July 1, 2026, this amount shall be no less than 150% of the federal poverty level. “Federal poverty level” is defined as the poverty guidelines applicable to an individual in a single-person household in Illinois.

Removal of Tier 3 / Tier 2a Language from Chicago Municipal Employees, Chicago Laborers', and Chicago Park Employees Articles

Current Law

PA 100-0023, effective July 6, 2017, established identical “Tier 3” packages of benefits for the Chicago Municipal Employees’ and Chicago Laborers’ articles, respectively, applicable to new hires on or after the effective date. Existing Tier 2 members were given the option to elect to join these new tiers. These benefit packages generally traded a reduction in the age a member could retire with a full pension for an increase in the percentage of payroll that member would contribute each year (an increase in contributions from 7.5% to 9.5% in exchange for a 2-year reduction in Tier 2 retirement age, from 67 to 65)

Similarly, PA 102-0263, effective August 6, 2021, established a “Tier 2a” benefit structure for the Chicago Park District Pension Fund for members who first entered service or after January 1, 2022. Similar to the two previously mentioned “Tier 3” packages, existing Tier 2 members were given the option to elect to join this new tier. In exchange for a reduction in the regular retirement age (age 67 to age 65), participants contribute 9% as opposed to 7%.

SB 0002

In the spirit of aligning Tier 2 age-and-service provisions with those of Tier 1, SB 0002 eliminates the language added by PA 100-0023 and P.A. 102-0263, effectively closing these separate tiers of benefits. SB 0002 adds language allowing any elections made under the provisions added by PA 100-0253 and P.A. 102-0263 to be declared null. These changes are not intended to limit an employee’s entitlement to a refund under any provision of the Code.

Adjustment to Amount of Service Credit Allowed for Conversion of Unused Sick Time in SURS

Current Law

Prior to PA 98-0599, effective June 1, 2014, SURS participants were entitled, within 60 days immediately preceding retirement, to convert unused sick leave time into credit for service in accordance with the following schedule:

- 30-90 full calendar days and 20-59 full work days of unused sick leave = $\frac{1}{4}$ year of service
- 91-180 full calendar days and 60-119 full work days of unused sick leave = $\frac{1}{2}$ year of service
- 181-270 full calendar days and 120-179 full work days of unused sick leave = $\frac{3}{4}$ year of service
- 271-360 full calendar days and 180-240 full work days of unused sick leave = 1 year of service.

PA 98-0599 was ruled unconstitutional due to changes that impacted Tier 1 benefit accruals. The Act limited this conversion of credit to participants who joined the fund before the effective date (June 1, 2014), adding language eliminating participants who joined on or after the date from receiving service credit for unused sick leave time. Current law includes the accrual schedule shown above, which is interpreted by SURS as imposing a 1-year cap on the amount of unused sick leave a member can convert into service credit, as long as the member elects to do so within the 60 days immediately preceding retirement.

SB 0002

SB 0002 sets a limit on the amount of service credit a participant can earn from the conversion of unused sick leave time to a maximum of 2 years of service credit, matching the capped amount of service credit a member of TRS can receive for unused sick leave.

Adjustment to Final Average Salary (FAS) Cap Penalty in SURS and TRS

P.A. 94-0004, effective June 1, 2005, amended the SURS and TRS Articles of the Illinois Pension Code with regard to participant salary increases. If the amount of a participant's earnings for any academic year used to determine the final rate of earnings exceeds the previous year's amount by more than 6%, that participant's employer must pay the present value of the increase in earnings that is in excess of 6% to the respective system. This provision is known as the "FAS Cap Penalty." SB 0002 re-opens several FAS Cap exemptions that had been allowed to sunset since 2005. These exemptions and the corresponding Public Acts are outlined in full detail in Appendix III.

ZH:bs

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Appendix I

Appendix I below is a summary of the Tier 2 age-and-service changes made in HB 5909.

Age and Service Eligibility for Full Annuity by Fund and Tier					
Pension System		Current Law			HB 5909
		Tier 1	Tier 2	Tier 3	New Tier 2
TRS		Age 62 with 5 years; Age 60 with 10 years; Age 55 with 35 years; or Rule of 85 for TRS members who are employees of the State of Illinois	Age 67 with 10 years		
SERS	Regular Formula	Rule of 85; Age 60 with 8 years; or Any age with 35 years			
		Alternative Formula	Age 55 with 20 years; or Age 50 with 25 years	Age 60 with at least 20 years of service Age 55 with 20 years for certain positions only	
SURS	Traditional/Portable DB Formula	Age 62 with 5 years of service; Age 60 with 8 years; or Any age with 30 years	Age 67 with 10 years		
	Police/Fire	Age 50 with 25 years; or Age 55 with 20 years	Age 60 with 20 years		
JRS		Age 60 with 10 years; or Age 62 with 6 years	Age 67 with 8 years		
GARS		Age 55 with 8 years; or Age 62 with 4 years			
Downstate Police		Age 50 and 20 years;	Age 55 with 10 years	N/A	
Downstate Firefighters					
Chicago Police		Age 50 with 20 years; or Mandatory retirement at age 63	Age 55 with 10 years; or Mandatory retirement at age 63		Tier 2 eligibility would become identical to Tier 1 eligibility.*
Chicago Firefighters		Age 50 with 20 years; or Mandatory retirement at age 63, except for emergency medical technicians.	Age 55 with 10 years		
IMRF	Regular	Age 60 with 8 years; or Age 55 with 35 years	Age 67 with 10 years; or Age 62 with 35 years		
	SLEP	Age 50 with 20 years	Age 55 with 10 years		
Cook County		Age 60 with 10 years; or Age 50 with 30 years	Age 67 with 10 years		
Cook County Forest Preserve					
Metropolitan Water Reclamation District		Age 60 with 5 years; or Age 55 with 30 years	Age 67 with 10 years; or Age 62 with 30 years		
Chicago Teachers		Age 60 with 20 years; Age 62 with 5 years; or Age 55 with 33.91 years for members who began employment on or after September 1, 1983	Age 67 with 10 years		
Chicago Municipal		Age 60 with 10 years; or Age 50 with 30 years Age 55 with 10 years (money purchase)			
Chicago Laborers		Age 60 with 10 years; Age 55 with 25 years; or Age 50 with 30 years Age 55 with 10 years (money purchase); or Age 60 with any number of years (money purchase)	Age 65 with 10 years		
Chicago Park District		Age 60 with 4 years; or Age 50 with 30 years			

*HB 5909 removes the Tier 3 language from Articles 8, 11, and 12 (Chicago Municipal, Chicago Laborers, and Chicago Park District). As a result, the Tier 3 members would be treated as Tier 2 members, whose eligibility would become identical to Tier 1 eligibility under this legislation.

Appendix II

Appendix II below is a summary of the Tier 2 pensionable salary changes made in HB 5909.

Final Average Salary (FAS)					
Pension System		Current Law			HB 5909
		Tier 1	Tier 2	Tier 3	New Tier 2
TRS		Average of the highest 4 consecutive annual salary within the last 10 years (or 48 consecutive months within the last 120 months)			
SERS	Regular Formula				
	Alternative Formula	Salary on the last day; or Average of the highest 48 consecutive months; or Average of the highest 48 consecutive months within the last 120 months (for those in service before January 1, 1998), whichever is greater	Average of the highest 8 consecutive annual salary within the last 10 years (or 96 consecutive months in the last 120 months)		
SURS	Traditional/Portable DB Formula	Average of the highest 4 consecutive annual salary (or the last 48 months)			
	Police/Fire	highest 4 consecutive academic years; Last 48 months of employment; or last day, whichever is greater			
JRS		For those who first became a participant before August 10, 2009: Salary on last day For those who first became a participant from August 10, 2009 through December 31, 2010: Average of the highest 4 consecutive annual salary within the last 10 years			
GARS					
Downstate Police		Salary on the last day	Average of the highest 48 consecutive months within the last 60 months; or Average of the highest 96 consecutive months within the last 120 months, whichever is greater	N/A	
Downstate Firefighters					
Chicago Police		Average of the highest 4 consecutive annual salary within the last 10 years (or 48 consecutive months within the last 120 months)	Average of the highest 8 consecutive annual salary within the last 10 years (or 96 consecutive months in the last 120 months)		Tier 2 FAS would become identical to Tier 1 FAS*
Chicago Firefighters			Highest 96 consecutive months within the last 120 months; or Highest average salary for 48 consecutive months within the last 60 months		
IMRF	Regular				
	SLEP				
Cook County		Average of the highest 4 consecutive annual salary within the last 10 years			
Cook County Forest Preserve					
Metropolitan Water Reclamation District		Any 52 consecutive pay periods within the last 10 years			
Chicago Teachers		Average of the highest 4 consecutive annual salary within the last 10 years			
Chicago Municipal					
Chicago Laborers					Average of the highest 8 consecutive annual salary within the last 10 years
Chicago Park District					

*HB 5909 removes the Tier 3 language from Articles 8, 11, and 12 (Chicago Municipal, Chicago Laborers, and Chicago Park District). As a result, the Tier 3 members would be treated as Tier 2 members, whose FAS would become identical to Tier 1 FAS under this legislation.

Appendix III.

Below is a summation of the statutory evolution of the Final Average Salary Cap (FAS Cap) provisions in TRS and SURS that are being made operable by SB 0002 without a sunset date.

94th General Assembly (2005-2006)

P.A. 094-0004 eff. 6-1-05

Public Act 94-0004 established the Final Average Salary Cap (FAS Cap) for SURS and TRS. The present value of the increase in pension resulting from any salary increases over 6% awarded to a member in their final average salary period must be paid by the employer (university or school district), instead of the State. The only exemption to the original FAS Cap was for salary increases resulting from contracts or collective bargaining agreements agreed upon before June 1, 2005. When those agreements expired, the FAS Cap would be applied to all salary increases given in the pensionable salary period.

P.A. 094-1057 eff. 7-31-06 (Original Sunset date: July 1, 2014)

Public Act 94-1057 amended SURS and TRS articles of the Pension Code to create more exemptions to the FAS increases over 6% stipulated in P.A. 094-0004. Those exemptions are as follows:

- Earnings increases for participants that are ten years or more from retirement eligibility;
- Earnings increases for overload work, that is defined as being either summer school, or overtime work for the sole purpose of academic instruction;
- Earnings increases from promotions that require additional certification from the State Universities Civil Service System, or State Teacher Certification Board, and promotions to tenured positions for SURS participants;
- Earnings increases for TRS participants when the employer has no discretion in payment, notwithstanding that the payment is calculated into the final average salary; and
- Exemption for salary increases resulting from contracts or collective bargaining agreements through June 30, 2014.

102nd General Assembly (2021-2022)

P.A. 102-0016, eff. 6-17-21 (Original Sunset date: End of 2019-2020 school year)

Public Act 102-0016 amended the SURS and TRS articles of the Pension Codes to create two more exemptions to the FAS Cap which are as follows:

- Earnings increases for SURS and TRS participants that result from overload work caused by an emergency declaration such that the employer could not offer overload work; and
- Earnings increases for TRS participants that received salary increases resulting from increased instructional time, during the 2019-2020 school year.

P.A. 102-0525, eff. 8-20-21 (Original Sunset date: 9-15-22)

Public Act 102-0525 exempted earnings increases for TRS participants resulting from teaching summer school after May 1st 2021.

103rd General Assembly (2023-2024)

P.A. 103-0515 eff. 8-11-23 (No Sunset Date)

Public Act 103-0515 amended the Illinois Pension code to exempt earnings increases for TRS participants that are a result of bringing school districts into compliance with the new minimum teacher salary rate mandated by P.A. 101-0443.

January 7, 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 present value of 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 Present Value of 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
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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 7, 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 written in a cursive style with a long horizontal line extending to the right.

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	Present Value of (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	Present Value of (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	Present Value of (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	Present Value of (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	Present Value of (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 Present Value of 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)

January 17, 2025

Mr. Clayton Klenke, Executive Director
Illinois Commission on Government Forecasting and Accountability
T. 217.785.3122
E. ClaytonK@ilga.gov

Re: Cost Impact of HB 5909 on Article 3 & 4 Illinois Pension Funds

Dear Mr. Klenke,

This letter provides you with the projected cost estimates for implementing the Tier 2 changes resulting from HB 5909 on the selected Article 3 and 4 pension funds.

Cost Impact of Tier 2 Enhancements Included in HB 5909

We have estimated the impact of implementing the Tier 2 benefit enhancements as defined in HB 5909 on the following Article 3 and 4 Illinois Pension Funds:

- Aurora Police (See Exhibit 1)
- Rock Falls Police (See Exhibit 2)
- Aurora Fire (See Exhibit 3)
- Rock Falls Fire (See Exhibit 4)

Below is a summary of the provisions and assumptions included in the costing:

1. The Tier 2 pensionable salary cap will increase to match the Social Security Wage Base.
2. Tier 2 will eliminate the use of the final average earnings and instead use the “salary on the last day” as is defined for Tier 1.
3. Tier 2 Members who are at least 50 years old and have 20 or more years of creditable service could retire with an unreduced annuity.
4. The Tier 2 COLA will still be a simple COLA, but it will now be based on a flat 3.00%.
5. The age of eligibility for the annual Tier 2 COLA would be the later of the January 1st after reaching age 55 or the first anniversary of the pension’s start date.
6. For Article 4, current Tier 2 disabled firefighters would receive a 3.00% non-compounded COLA, payable at the latter of the first anniversary of the disability annuity start date or age 60.
7. For Article 4, the minimum retirement pension payable to a firefighter with 20 or more years of creditable service, the minimum disability pension payable, and the minimum surviving spouse’s pension will be increased. Beginning July 1, 2025, this amount will be set at \$1,822.50 per month. Beginning July 1, 2026, this amount will be no less than 150% of the federal poverty level.

The costs were projected through the year 2040.

Assumptions and Methods

The assumptions and methods employed for the purpose of this measurement were consistent with the assumptions that the Firefighters' Pension Investment Fund (FPIF) and Illinois Police Officers Pension Investment Fund (IPOPIF) used for the 2023 and 2024 actuarial valuation reports, without regard to phasing in the assumptions for the IPOPIF funds. When the plan changes are considered, we did revise the retirement rates for Tier 2 to match those for Tier 1 if a participant retires with 20 years of service. A summary of the assumptions can be found in Exhibits 5 (Article 3) and 6 (Article 4).

For the projections, we assumed that new entrants came into the fund with the following profiles:

	Aurora		Rock Falls	
	Fire	Police	Fire	Police
Age at Hire	27	27	26	28
Salary ¹	95,000	98,000	48,900	53,500
% Male	95%	85%	95%	85%

¹The starting salary is adjusted annually by inflation for new hires in future years.

New entrants entered the fund throughout the projection period as Tier 2 participants and at a rate equal to the number of hires required to keep the initial active headcount stable throughout the projection period.

Data

In conducting this analysis, we have relied on personnel data supplied to us by the Illinois Department of Insurance with permission from the FPIF and IPOPIF to employ the data for purposes other than in the issuance of reports on behalf of the FPIF and IPOPIF. The effective date of the data varies by sample fund and is noted in the attached exhibits. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness.

The demographics of the sample funds will influence the impact of any new legislation on the cost to the fund. For example, the following items will vary in their impact on a given fund based on the current demographics:

- Funds with a more significant Tier 2 population at the start of the projection will realize more cost early in the projection. Over time the impact of this lessens as Tier 2 actives replace decrementing Tier 1 actives.
- Funds with lower pay may not be effected very much by the increase in the Tier 2 salary cap vs. funds with pay much closer to the cap who will see a significant increase due to the increased cap.
- Funds with an older Tier 1 active population will more quickly replace their Tier 1 actives with Tier 2 actives in the projection.

Below is a summary of the data that we used for this analysis:

	Aurora		Rock Falls	
	Fire	Police	Fire	Police
Headcounts				
Active				
Tier 1	96	149	4	6
Tier 2	134	178	9	14
% Tier 2	58%	54%	69%	70%
Retiree	175	227	8	16
Beneficiary	38	39	6	3
Disabled	9	19	4	1
Terminated Vested	<u>17</u>	<u>59</u>	<u>1</u>	<u>6</u>
Total	469	671	32	46
Average Age (Active)				
Tier 1	48.04	45.58	44.86	50.04
Tier 2	31.19	30.93	31.06	33.82
Average Pay (Active)				
Tier 1	155,941	142,347	86,031	82,260
Tier 2	117,780	112,726	60,399	68,635
Data Snapshot Date	12/31/2023	12/31/2023	4/30/2024	4/30/2024

Discussion of Risk and Third-Party Software

These calculations were determined for the purpose of estimating the cost impact of this proposed legislation. Use of the results for other purposes may not be applicable and produce significantly different results. Future actuarial measurements may differ significantly from the current measurements presented in this letter for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations.

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position. Measurement of the impact of potential deviation from the actuarial assumptions is outside the scope of this assessment, however, it is important to note that the estimate provided is produced at a single point in time and subject to the demographics as they exist on the valuation date and the actuarial assumptions used to determine the cost impact.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

Statement of Actuarial Opinion

The undersigned are familiar with the immediate and long-term aspects of pension calculations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. To the best of our knowledge, the results are complete and accurate, and in our opinion, the techniques and assumptions used are reasonable.

To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the programs has any direct financial interest or indirect material interest in the Article 3 or 4 funds included in this analysis, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of these funds. Thus, there is no relationship existing that might affect our capacity to prepare and certify this estimate of the cost impact of the proposed legislation.

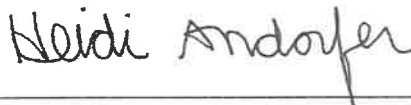
Respectfully submitted,

Foster & Foster, Inc.



By:

Jason L. Franken, FSA, EA, MAAA



By:

Heidi E. Andorfer, FSA, EA, MAAA

Exhibit 1

Article 3 HB 5909 Impact - Aurora Police

	Baseline	HB 5909 Changes	Impact, \$	Impact, %
Municipal Contribution				
2024	20,653,846	22,461,630	1,807,784	8.8%
2025	20,972,739	22,999,495	2,026,756	9.7%
2026	21,537,491	23,786,749	2,249,258	10.4%
2027	22,090,975	24,588,108	2,497,133	11.3%
2028	22,701,444	25,462,910	2,761,466	12.2%
2029	23,378,146	26,413,692	3,035,546	13.0%
2030	24,079,379	27,401,540	3,322,161	13.8%
2031	24,854,291	28,480,989	3,626,698	14.6%
2032	25,703,654	29,644,503	3,940,849	15.3%
2033	26,625,219	30,885,385	4,260,166	16.0%
2034	27,683,961	32,268,118	4,584,157	16.6%
2035	28,923,256	33,825,929	4,902,673	17.0%
2036	30,383,614	35,592,014	5,208,400	17.1%
2037	32,149,169	37,636,335	5,487,166	17.1%
2038	34,368,661	40,080,639	5,711,978	16.6%
2039	37,460,035	43,285,193	5,825,158	15.6%
2040	42,958,888	48,520,741	5,561,853	12.9%
Impact	466,524,768	533,333,970	66,809,202	14.3%
Normal Cost				
2024	10,010,393	11,254,184	1,243,791	12.4%
2025	10,199,664	11,642,598	1,442,934	14.1%
2026	10,311,924	11,959,487	1,647,563	16.0%
2027	10,369,929	12,248,051	1,878,122	18.1%
2028	10,432,787	12,559,886	2,127,099	20.4%
2029	10,510,699	12,899,787	2,389,088	22.7%
2030	10,559,607	13,227,136	2,667,529	25.3%
2031	10,608,635	13,577,172	2,968,537	28.0%
2032	10,658,051	13,944,146	3,286,095	30.8%
2033	10,674,927	14,293,157	3,618,230	33.9%
2034	10,702,590	14,669,219	3,966,629	37.1%
2035	10,763,831	15,090,153	4,326,322	40.2%
2036	10,851,366	15,547,635	4,696,269	43.3%
2037	10,964,272	16,039,245	5,074,973	46.3%
2038	11,095,679	16,552,737	5,457,058	49.2%
2039	11,272,802	17,109,128	5,836,326	51.8%
2040	11,515,585	17,679,241	6,163,656	53.5%
Impact	181,502,741	240,292,962	58,790,221	32.4%

Exhibit 2

Article 3 HB 5909 Impact - Rock Falls Police

	Baseline	HB 5909 Changes	Impact, \$	Impact, %
Municipal Contribution				
2024	819,396	903,866	84,470	10.3%
2025	841,277	931,779	90,502	10.8%
2026	871,616	968,458	96,842	11.1%
2027	893,113	996,967	103,854	11.6%
2028	911,716	1,024,075	112,359	12.3%
2029	935,464	1,056,834	121,370	13.0%
2030	965,600	1,096,011	130,411	13.5%
2031	999,456	1,138,233	138,777	13.9%
2032	1,039,517	1,186,521	147,004	14.1%
2033	1,085,915	1,241,438	155,523	14.3%
2034	1,139,648	1,303,828	164,180	14.4%
2035	1,201,535	1,374,261	172,726	14.4%
2036	1,273,722	1,454,586	180,864	14.2%
2037	1,358,270	1,539,153	180,883	13.3%
2038	1,466,571	1,644,722	178,151	12.1%
2039	1,635,065	1,802,064	166,999	10.2%
2040	388,779	549,168	160,389	41.3%
Impact	17,826,660	20,211,964	2,385,304	13.4%
Normal Cost				
2024	338,420	390,160	51,740	15.3%
2025	350,609	407,576	56,967	16.2%
2026	360,177	422,717	62,540	17.4%
2027	359,962	428,772	68,810	19.1%
2028	353,980	430,535	76,555	21.6%
2029	350,204	435,106	84,902	24.2%
2030	350,993	444,448	93,455	26.6%
2031	353,398	454,995	101,597	28.7%
2032	358,748	468,526	109,778	30.6%
2033	367,258	485,828	118,570	32.3%
2034	378,825	506,773	127,948	33.8%
2035	393,286	531,163	137,877	35.1%
2036	410,746	559,190	148,444	36.1%
2037	429,681	582,874	153,193	35.7%
2038	450,449	607,049	156,600	34.8%
2039	472,487	631,236	158,749	33.6%
2040	495,261	651,105	155,844	31.5%
Impact	6,574,484	8,438,053	1,863,569	28.3%

Exhibit 3

Article 4 HB 5909 Impact - Aurora Fire

	Baseline	HB 5909 Changes	Impact, \$	Impact, %
Municipal Contribution				
2024	15,095,242	16,688,777	1,593,535	10.6%
2025	15,161,085	16,918,454	1,757,369	11.6%
2026	15,460,957	17,396,435	1,935,478	12.5%
2027	15,799,768	17,923,029	2,123,261	13.4%
2028	16,180,125	18,498,986	2,318,861	14.3%
2029	16,624,649	19,148,013	2,523,364	15.2%
2030	17,124,468	19,856,802	2,732,334	16.0%
2031	17,699,039	20,647,497	2,948,458	16.7%
2032	18,359,066	21,526,637	3,167,571	17.3%
2033	19,109,544	22,491,967	3,382,423	17.7%
2034	19,963,616	23,552,573	3,588,957	18.0%
2035	20,931,394	24,710,789	3,779,395	18.1%
2036	22,059,835	26,005,522	3,945,687	17.9%
2037	23,410,056	27,479,148	4,069,092	17.4%
2038	25,104,125	29,254,377	4,150,252	16.5%
2039	27,452,236	31,579,101	4,126,865	15.0%
2040	31,635,596	35,535,849	3,900,253	12.3%
Impact	337,170,801	389,213,956	52,043,155	15.4%
Normal Cost				
2024	7,089,597	8,133,918	1,044,321	14.7%
2025	7,075,699	8,267,836	1,192,137	16.8%
2026	7,031,501	8,386,268	1,354,767	19.3%
2027	6,984,734	8,513,134	1,528,400	21.9%
2028	6,934,506	8,646,288	1,711,782	24.7%
2029	6,900,455	8,806,884	1,906,429	27.6%
2030	6,879,647	8,988,611	2,108,964	30.7%
2031	6,877,428	9,200,100	2,322,672	33.8%
2032	6,900,866	9,445,730	2,544,864	36.9%
2033	6,938,520	9,708,903	2,770,383	39.9%
2034	6,991,807	9,988,331	2,996,524	42.9%
2035	7,047,159	10,266,046	3,218,887	45.7%
2036	7,108,917	10,542,524	3,433,607	48.3%
2037	7,182,073	10,811,753	3,629,680	50.5%
2038	7,265,874	11,083,275	3,817,401	52.5%
2039	7,370,292	11,339,475	3,969,183	53.9%
2040	7,494,282	11,588,142	4,093,860	54.6%
Impact	120,073,357	163,717,218	43,643,861	36.3%

Exhibit 4

Article 4 HB 5909 Impact - Rock Falls Fire

	Baseline	HB 5909 Changes	Impact, \$	Impact, %
Municipal Contribution				
2024	301,933	344,945	43,012	14.2%
2025	309,485	355,788	46,303	15.0%
2026	324,871	374,555	49,684	15.3%
2027	340,978	394,200	53,222	15.6%
2028	358,591	415,480	56,889	15.9%
2029	376,120	436,832	60,712	16.1%
2030	392,107	456,889	64,782	16.5%
2031	409,142	476,714	67,572	16.5%
2032	428,331	497,819	69,488	16.2%
2033	449,868	521,583	71,715	15.9%
2034	474,856	548,646	73,790	15.5%
2035	497,920	577,840	79,920	16.1%
2036	528,061	613,607	85,546	16.2%
2037	568,856	659,314	90,458	15.9%
2038	628,430	720,817	92,387	14.7%
2039	738,565	828,986	90,421	12.2%
2040	227,892	315,813	87,921	38.6%
Impact	7,356,006	8,539,828	1,183,822	16.1%
Normal Cost				
2024	189,302	215,058	25,756	13.6%
2025	196,260	224,893	28,633	14.6%
2026	203,613	235,243	31,630	15.5%
2027	211,086	245,900	34,814	16.5%
2028	219,065	257,234	38,169	17.4%
2029	226,328	268,063	41,735	18.4%
2030	231,004	276,614	45,610	19.7%
2031	234,987	283,402	48,415	20.6%
2032	239,622	289,786	50,164	20.9%
2033	244,604	296,816	52,212	21.3%
2034	250,408	304,686	54,278	21.7%
2035	251,193	311,285	60,092	23.9%
2036	251,150	317,962	66,812	26.6%
2037	253,505	326,543	73,038	28.8%
2038	257,295	335,125	77,830	30.2%
2039	262,279	344,423	82,144	31.3%
2040	268,586	355,146	86,560	32.2%
Impact	3,990,287	4,888,179	897,892	22.5%

Disability Rate

Sample rates included in table below. 60% of the disabilities are assumed to be in the line of duty.

% Becoming Disabled During Year	
Age	Rate
20	0.000%
25	0.029%
30	0.133%
35	0.247%
40	0.399%
45	0.561%
50	0.675%
55	0.855%
60	1.093%

Termination Rate

See table below.

% Terminating During Year			
Service	Rate	Service	Rate
0	13.00%	8	3.00%
1	8.00%	9	2.50%
2	7.00%	10	2.25%
3	6.00%	11	2.00%
4	5.00%	12	1.75%
5	4.50%	13	1.50%
6	4.00%	14+	1.25%
7	3.50%		

Salary Increases

See table below.

Salary Scale	
Service	Rate
0	11.00%
1	9.50%
2	8.00%
3	7.50%
4	7.00%
5	6.00%
6	5.00%
7-11	4.00%
12-29	3.75%
30+	3.50%

Inflation 2.50%.

Cost-of-Living Adjustment Tier 1: 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.
Tier 2: 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.

Marital Status 80% of Members are assumed to be married.

Spouse's Age Males are assumed to be three years older than females.

Funding Method Projected Unit Credit Cost Method.

Actuarial Asset Method Investment gains and losses are smoothed over a 5-year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return.

Funding Policy Amortization Method The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2040. The initial amortization amount is 90% of the Accrued Liability less the Actuarial Value of Assets.

Payroll Growth 3.00% per year.

Administrative Expenses Administrative expenses will be estimated as 2% of the fund's total normal cost.

EXHIBIT 6

ARTICLE 4 ASSUMPTIONS

The assumptions shown below were adopted by the Board December 1, 2021 following a 2021 review of plan experience.

Interest Rate 7.125% per year compounded annually, net of investment related expenses.

Mortality Rate **Active Lives:**
PubS-2010 Employee mortality, unadjusted, with generational improvements with most recent projection scale (currently Scale MP-2021). 20% of active deaths are assumed to be in the line of duty.

Inactive Lives:
PubS-2010 Healthy Retiree mortality, adjusted by a factor of 1.081 for male retirees and unadjusted for female retirees, with generational improvements with most recent projection scale (currently Scale MP-2021).

Beneficiaries:
PubS-2010 Survivor mortality, unadjusted for male beneficiaries and adjusted by a factor of 1.098 for female beneficiaries, with generational improvements with most recent projection scale (currently Scale MP-2021).

Disabled Lives:
PubS-2010 Disabled mortality, adjusted by a factor of 1.178 for male disabled members and unadjusted for female disabled members, with generational improvements with most recent projection scale (currently Scale MP-2021).

The mortality assumptions sufficiently accommodate anticipated future mortality improvements.

Retirement Age

% Retiring During Year (Tier 1)		% Retiring During Year (Tier 2)	
Age	Rate	Age	Rate
50-51	12%	50-54	3%
52-53	15%	55	30%
54-55	20%	56-59	20%
56-59	20%	60-62	25%
60-62	25%	63-64	33%
63-64	33%	65-69	50%
65-69	50%	70+	100%
70+	100%		

Disability Rate

Sample rates included in table below. 80% of the disabilities are assumed to be in the line of duty.

% Becoming Disabled During Year	
Age	Rate
20	0.010%
25	0.016%
30	0.068%
35	0.220%
40	0.420%
45	0.650%
50	0.900%
55	1.240%
60	1.580%

Termination Rate

Sample rates included in table below.

% Terminating During Year	
Age	Rate
20	10.00%
25	8.00%
30	4.00%
35	2.50%
40	1.20%
45+	1.00%

Salary Increases

See table below.

Salary Scale	
Service	Rate
0	12.50%
1	10.50%
2	9.50%
3	8.50%
4	7.50%
5	6.50%
6	5.00%
7	4.50%
8+	4.00%

Inflation

2.25%.

Cost-of-Living Adjustment	<p><u>Tier 1:</u> 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.</p> <p><u>Tier 2:</u> 1.125% per year after the later of attainment of age 60 or first anniversary of retirement.</p>
Marital Status	80% of Members are assumed to be married.
Spouse's Age	Males are assumed to be three years older than females.
Funding Method	Projected Unit Credit Cost Method.
Actuarial Asset Method	Investment gains and losses are smoothed over a 5-year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return.
Funding Policy Amortization Method	The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2040. The initial amortization amount is 90% of the Accrued Liability less the Actuarial Value of Assets.
Payroll Growth	2.75% per year.
Administrative Expenses	Administrative expenses will be estimated as 2% of the fund's total normal cost.