TO: Members of the Legislative Commission on Pensions and Retirement

FROM: Lawrence A. Martin, Executive Director LAM

RE: Actuarial Cost Estimates for H.F. 2341 (Thissen, by request); S.F. 1892 (Pappas): SPTRFA Benefit Increase and Funding Legislation

DATE: May 7, 2007

Introduction

At the request of the Commission staff, the St. Paul Teachers Retirement Fund Association (SPTRFA) provided the Commission with an actuarial cost estimate of the proposed changes contained in H.F. 2341 (Thissen, by request); S.F. 1892 (Pappas).

Summary of H.F. 2341 (Thissen, by request); S.F. 1892 (Pappas)

H.F. 2341 (Thissen, by request); S.F. 1892 (Pappas) amends or repeals portions of Minnesota Statutes, Chapters 127A, 354A, and 356, the laws relating to state aid to education, the first class city teacher retirement fund associations, and retirement generally, by making the following changes:

1. Appropriates Additional Ongoing State Aid to SPTRFA (Sections 3, 4, and 8). Annual ongoing state direct aid to the St. Paul Teachers Retirement Fund Association (SPTRFA) is increased by $3,033,000, payable until 2037, and the aid would no longer cancel in favor of the Teachers Retirement Association (TRA) to cover liabilities transferred from the former Minneapolis Teachers Retirement Fund Association (MTRFA) if the SPTRFA becomes as well funded as TRA before 2037.

2. Increases the SPTRFA Employer Contribution and Independent School District No. 625 State Education Aid by One Percent (Sections 1, 2, and 8). The St. Paul Teachers Retirement Fund Association (SPTRFA) regular employer contribution is increased from 4.50 percent to 5.50 percent and state education aid to Independent School District No. 625, St. Paul, is increased by one percent of the SPTRFA covered payroll, continuing without the current 2020 termination date.

3. Revises SPTRFA Post-Retirement Adjustment Mechanism (Sections 5 and 6). The current St. Paul Teachers Retirement Fund Association (SPTRFA) post-retirement adjustment mechanism, consisting of a two percent annual automatic increase and a periodic investment-gain-funded adjustment based on five-year average rates of return performance results, is replaced by an adjustment equal to the increase in the federal Consumer Price Index up to five percent annually, but not in a negative amount.

4. Extends SPTRFA Full Funding Amortization Target Date to 2038 (Section 7). The current St. Paul Teachers Retirement Fund Association (SPTRFA) full funding amortization target date of 2021 is extended to 2038.

5. Adds Supplemental Actuarial Reporting Items for SPTRFA (Section 7). The St. Paul Teachers Retirement Fund Association (SPTRFA) actuarial work is required to include additional exhibits disclosing the funding ratio of the plan and the contribution deficiency or sufficiency of the plan based on the market value of plan assets in addition to the actuarial value of plan assets.

6. Repeals SPTRFA Excess Administrative Expense Assessment (Section 8). The current special assessment imposed on St. Paul Teachers Retirement Fund Association (SPTRFA) retirees and active members when the SPTRFA administrative expenses, expressed as a percentage of covered pay, exceed the level of Teachers Retirement Association (TRA) administrative expenses, is repealed.

Summary of the Actuarial Cost Estimates on H.F. 2341 (Thissen, by request); S.F. 1892 (Pappas)

a. Impact of the Contribution Increase and Direct State Aid Increase.

	The Segal Company Actuarial Valuation Results 2006		Gabriel Roeder Smith Estimate of the Impact of Direct & Indirect State Aid Increase		Resulting Actuarial Condition of the Plan	
Membership						
Active Members		4,219		--		4,219
Service Retirees		2,302		--		2,302
Disabilitants		25		--		25
Survivors		280		--		280
Deferred Retirees		1,447		--		1,447
Nonvested Former Members		1,671		--		1,671
Total Membership		9,944		--		9,944
Funded Status						
Accrued Liability		$1,358,619,906		--		$1,358,619,906
Current Assets		$938,919,005		--		$938,919,005
Unfunded Accrued Liability		$419,700,901		--		$419,700,901
Funding Ratio	69.11%		--		69.11%	
Financing Requirements						
Covered Payroll		$234,213,344		--		$234,213,344
Benefits Payable		$78,420,222		--		$78,420,222
Normal Cost	9.21%	$21,575,645	--	--	9.21%	$21,575,645
Administrative Expenses	0.26%	$608,955	--	--	0.26%	$608,955
Normal Cost & Expense	9.47%	$22,184,600	--	--	9.47%	$22,184,600
Normal Cost & Expense	9.47%	$22,184,600	--	--	9.47%	$22,184,600
Amortization	15.55%	$36,420,175	--	--	15.55%	$36,420,175
Total Requirements	25.02%	$58,604,775	--	--	25.02%	$58,604,775
Employee Contributions	5.69%	$13,319,540	--		5.69%	$13,319,540
Employer Contributions	8.59%	$20,111,296	1.00%	$2,342,133	9.59%	$22,453,429
Employer Add'l Cont.	0.00%	$0	--	--	--	--
Direct State Funding	2.05%	$4,803,000	1.29%	$3,033,000	3.34%	$7,836,000
Other Govt. Funding	0.00%	$0	--	--	--	--
Administrative Assessment	0.00%	$0	--	--	--	--
Total Contributions	16.32%	$38,233,836	2.29%	$5,375,133	18.61%	$43,608,969
Total Requirements	25.02%	$58,604,775	--	--	25.02%	$58,604,775
Total Contributions	16.32%	$38,233,836	2.29%	$5,375,133	18.61%	$43,608,969
Deficiency (Surplus)	8.70%	$20,370,939	(2.29%)	($5,375,133)	6.41%	$14,995,806

b. Impact of the Amortization Date Extension.

	The Segal Company Actuarial Valuation Results 2006		Gabriel Roeder Smith Estimate of the Impact of Amortization Date Change; Aid Termination Date Extension		Resulting Actuarial Condition of the Plan	
Membership						
Active Members		4,219		--		4,219
Service Retirees		2,302		--		2,302
Disabilitants		25		--		25
Survivors		280		--		280
Deferred Retirees		1,447		--		1,447
Nonvested Former Members		1,671		--		1,671
Total Membership		9,944		--		9,944
Funded Status						
Accrued Liability		$1,358,619,906		--		$1,358,619,906
Current Assets		$938,919,005		--		$938,919,005
Unfunded Accrued Liability		$419,700,901		--		$419,700,901
Funding Ratio	69.11%				69.11%	
Financing Requirements						
Covered Payroll		$234,213,344		--		$234,213,344
Benefits Payable		$78,420,222		--		$78,420,222

	The Segal Company Actuarial Valuation Results 2006		Gabriel Roeder Smith Estimate of the Impact of Amortization Date Change; Aid Termination Date Extension		Resulting Actuarial Condition of the Plan	
Normal Cost	9.21%	$21,575,645	--	--	9.21%	$21,575,645
Administrative Expenses	0.26%	$608,955	--	--	0.26%	$608,955
Normal Cost & Expense	9.47%	$22,184,600	--	--	9.47%	$22,184,600
Normal Cost & Expense	9.47%	$22,184,600	--	--	9.47%	$22,184,600
Amortization	15.55%	$36,420,175	(5.68%)	($13,401,643)	9.87%	$23,018,532
Total Requirements	25.02%	$58,604,775	(5.68%)	($13,401,643)	19.34%	$45,203,132
Employee Contributions	5.69%	$13,319,540	--	--	5.69%	$13,319,540
Employer Contributions	8.59%	$20,111,296	--	--	8.59%	$20,111,296
Employer Add'l Cont.	0.00%	$0	--	--	0.00%	$0
Direct State Funding	2.05%	$4,803,000	--	--	2.05%	$4,803,000
Other Govt. Funding	0.00%	$0	--	--	0.00%	$0
Administrative Assessment	0.00%	$0	--	--	0.00%	$0
Total Contributions	16.32%	$38,233,836	--	--	16.32%	$38,233,836
Total Requirements	25.02%	$58,604,775	(5.68%)	($13,401,643)	19.34%	$45,203,132
Total Contributions	16.32%	$38,233,836	--	--	16.32%	$38,233,836
Deficiency (Surplus)	8.70%	$20,370,939	(5.68%)	($13,401,643)	3.02%	$6,969,296

c. Actuarial Impact of the Post-Retirement Adjustment Mechanism Change.

	The Segal Company Actuarial Valuation Results 2006		Gabriel Roeder Smith Estimate of the Impact of the Post-Retirement Adjustment Mechanism		Resulting Actuarial Condition of the Plan	
Membership						
Active Members		4,219		--		4,219
Service Retirees		2,302		--		2,302
Disabilitants		25		--		25
Survivors		280		--		280
Deferred Retirees		1,447		--		1,447
Nonvested Former Members		1,671		--		1,671
Total Membership		9,944		--		9,944
Funded Status						
Accrued Liability		$1,358,619,906		$91,939,930		$1,450,559,836
Current Assets		$938,919,005		--		$938,919,005
Unfunded Accrued Liability		$419,700,901		$91,939,930		$511,640,831
Funding Ratio	69.11%		--		64.73%	
Financing Requirements						
Covered Payroll		$234,213,344		--		$234,213,344
Benefits Payable		$78,420,222		--		$78,420,222
Normal Cost	9.21%	$21,575,645	0.73%	$1,709,757	9.94%	$23,285,402
Administrative Expenses	0.26%	$608,955	--	--	0.26%	$608,955
Normal Cost & Expense	9.47%	$22,184,600	0.73%	$1,709,757	10.20%	$23,894,357
Normal Cost & Expense	9.47%	$22,184,600	0.73%	$1,709,757	10.20%	$23,894,357
Amortization	15.55%	$36,420,175	3.40%	$7,974,921	18.95%	$44,395,096
Total Requirements	25.02%	$58,604,775	4.13%	$9,684,678	29.15%	$68,289,453
Employee Contributions	5.69%	$13,319,540	--	--	5.69%	$13,319,540
Employer Contributions	8.59%	$20,111,296	--	--	8.59%	$20,111,296
Employer Add'l Cont.	0.00%	$0	--	--	0.00%	$0
Direct State Funding	2.05%	$4,803,000	--	--	2.05%	$4,803,000
Other Govt. Funding	0.00%	$0	--	--	0.00%	$0
Administrative Assessment	0.00%	$0	--	--	0.00%	$0
Total Contributions	16.32%	$38,233,836	--	--	16.32%	$38,233,836
Total Requirements	25.02%	$58,604,775	4.13%	$9,684,678	29.15%	$68,289,453
Total Contributions	16.32%	$38,233,836	--	--	16.32%	$38,233,836
Deficiency (Surplus)	8.70%	$20,370,939	4.13%	$9,684,678	12.83%	$30,055,617

d. Actuarial Impact of All Changes in the Proposed Legislation.

	The Segal Company Actuarial Valuation Results 2006		Adapted Gabriel Roeder Smith Actuarial Cost Estimates: Impact of Direct & Indirect State Aid Increase		Adapted Gabriel Roeder Smith Actuarial Cost Estimates: Impact of Amortization Date Change; Aid Termination Date Extension		Adapted Gabriel Roeder Smith Actuarial Cost Estimates: Impact of the Post-Retirement Adjustment Mechanism		Resulting Actuarial Condition of the Plan	
Membership										
Active Members		4,219		--		--		--		4,219
Service Retirees		2,302		--		--		--		2,302
Disabilitants		25		--		--		--		25
Survivors		280		--		--		--		280
Deferred Retirees		1,447		--		--		--		1,447
Nonvested Former Memb.		1,671		--		--		--		1,671
Total Membership		9,944		--		--		--		9,944
Funded Status										
Accrued Liability		$1,358,619,906		--		--		91,939,930		$1,450,559,836
Current Assets		$938,919,005		--		--		--		$938,919,005
Unfunded Accr. Liability		$419,700,901		--		--		$91,939,930		$511,640,831
Funding Ratio	69.11%		--		--		--		64.73%	
Financing Requirements										
Covered Payroll		$234,213,344		--		--		--		$234,213,344
Benefits Payable		$78,420,222		--		--		--		$78,420,222
Normal Cost	9.21%	$21,575,645	--	--	--	--	0.73%	1,709,757	9.94%	$23,285,402
Administrative Exp.	0.26%	$608,955	--	--	--	--	--	--	0.26%	$608,955
Normal Cost & Exp.	9.47%	$22,184,600	--	--	--	--	0.73%	$1,709,757	10.20%	$23,894,357
Normal Cost & Exp.	9.47%	$22,184,600	--	--	--	--	0.73%	$1,709,757	10.20%	$23,894,357
Amortization	15.55%	$36,420,175	--	--	(5.68%)	(13,401,643)	3.40%	7,974,921	13.23%	$30,993,453
Total Requirements	25.02%	$58,604,775	--	--	(5.68%)	($13,401,643)	4.13%	$9,684,678	23.43%	$54,887,810
Employee Contrib.	5.69%	$13,319,540	--	--	--	--	--	--	5.69%	$13,319,540
Employer Contrib.	8.59%	$20,111,296	1.00%	2,342,133	--	--	--	--	9.59%	$22,453,429
Employer Add'l Cont.	0.00%	$0	--	--	--	--	--	--	0.00%	$0
Direct State Funding	2.05%	$4,803,000	1.29%	3,033,000	--	--	--	--	3.34%	$7,836,000
Other Govt. Funding	0.00%	$0	--	--	--	--	--	--	0.00%	$0
Admin. Assessment	0.00%	$0	--	--	--	--	--	--	0.00%	$0
Total Contributions	16.32%	$38,233,836	2.29%	$5,375,133	--	--	--	--	18.61%	$43,608,969
Total Requirements	25.02%	$58,604,775	--	--	(5.68%)	($13,401,643)	4.13%	$9,684,678	23.43%	$54,887,810
Total Contributions	16.32%	$38,233,836	2.29%	$5,375,133	--	--	--	--	18.61%	$43,608,969
Deficiency (Surplus)	8.70%	$20,370,939	(2.29%)	($5,375,133)	(5.68%)	($13,401,643)	4.13%	$9,684,678	4.82%	$11,278,841

Analysis and Discussion of the Actuarial Cost Estimate

At the request of the Commission staff, the actuarial cost estimate prepared on behalf of the St. Paul Teachers Retirement Fund Association (SPTRFA) by the actuarial consulting firm of Gabriel Roeder Smith & Company (GRS) of Southfield, Michigan, has been provided to the Commission. While the GRS actuarial cost estimate provides the best indication of the impact of the proposed legislation that is available, the actuarial cost estimate is not without some procedural, accuracy, and reliability issues, as follows:

1. Actuarial Cost Estimate Not Prepared By The Segal Company. The process issue is the source for the actuarial cost estimate and the unexplained reason why the retirement plan used a consulting actuary other than the jointly retained "official" consulting actuary. Since 2004, when the responsibility for retaining the "official" consulting actuarial firm was transferred from the Commission to the retirement system administrators acting jointly, The Segal Company has prepared the annual actuarial valuations of the statewide and major local retirement plans and is intended to be the actuarial firm for the preparation of actuarial cost estimates of pending retirement legislation. Although SPTRFA utilized The Segal Company to prepare the actuarial cost estimate for a similar proposal late during the 2006 Session (an amendment heard, but rejected, by the House Ways and Means Committee), the plan decided to utilize an actuarial consultant that does not perform any significant quantity of Minnesota public pension plan actuarial work to cost out this benefit and funding change bill. If the Commission desires to have actuarial cost estimates prepared by the best available consultant, which is the actuary preparing the regular actuarial valuations, the best way for the Commission to see its desire carried out is to reject on that basis alone any proposed benefit or funding legislation that is prepared by a different consultant.

2. Appropriateness of a Late Actuarial Cost Estimate. The process issue is the late date at which the actuarial cost estimate for the proposed legislation was prepared for the retirement plan and provided to the Commission. The proposed legislation is apparently a priority item for the St. Paul Teachers Retirement Fund Association (SPTRFA), introduced on March 15, 2007, in the Senate and March 23, 2007, in the House, but the actuarial cost estimates for the proposed legislation were not available until April 30, 2007, and May 1, 2007. The actuarial impact of any proposed legislation changing benefits and funding requirements is a logical major policy issue to be raised when the bill is heard, but the retirement plan had no actuarial cost estimate when the proposed legislation was presented to the Commission on April 24, 2007. While late actuarial work is better than no actuarial work, the lack of prompt attention by the retirement plan in obtaining an actuarial cost estimate before finalizing its proposal and before seeking Commission review does raise doubts about the policy analysis process within the retirement plan.

3. 2007 Actuarial Cost Estimate Differs Significantly from the 2006 Actuarial Cost Estimate. The accuracy and reliability issue is the difference between the actuarial cost estimates produced in 2006 and in 2007 for the virtually identical post-retirement adjustment proposal. On May 17, 2006, on behalf of the St. Paul Teachers Retirement Fund Association (SPTRFA), The Segal Company prepared an actuarial cost estimate for a Consumer Price Index (CPI)-based post-retirement adjustment mechanism (capped at 4.9 percent) to replace the current SPTRFA mechanism (two percent automatic annual increase plus excess investment return in excess of 8.5 percent) and an open (rolling) 30-year amortization period that became Amendment S1057-10A (drawn to S1057-11A, the 2006 Omnibus Retirement Bill). The following summarizes that 2006 actuarial cost estimate:

			2006 Segal Actuarial Cost Estimate					
	2005		Amort. Period Change		Post-Ret. Adj. Change		Resulting Plan Condition	
Membership								
Active Members		4,355		--		--		4,355
Service Retirees		2,208		--		--		2,208
Disabilitants		32		--		--		32
Survivors		259		--		--		259
Deferred Retirees		1,368		--		--		1,368
Nonvested Former Members		1,687		--		--		1,687
Total Membership		9,909		--		--		9,909
Funded Status								
Accrued Liability		$1,299,831,584		--		$145,965,934		$1,445,797,518
Current Assets		$905,292,514		--		--		$905,292,514
Unfunded Accrued Liability		$394,539,070		--		$145,965,934		$540,505,004
Funding Ratio	69.65%		--		7.03%		62.62%	
Financing Requirements								
Covered Payroll		$227,818,794		--		--		$227,818,794
Benefits Payable		$72,438,204		--		--		$72,438,204
Normal Cost	9.23%	$21,035,503	--	--	1.02%	$2,321,415	10.25%	$23,356,918
Administrative Expenses	0.24%	$546,765	--	--	--	--	0.24%	$546,765
Normal Cost & Expense	9.47%	$21,582,268	--	--	1.02%	$2,321,415	10.49%	$23,903,683
Normal Cost & Expense	9.47%	$21,582,268	--	$0	1.02%	$2,321,415	10.49%	$23,903,683
Amortization	14.30%	$32,578,088	(6.82%)	($15,537,242)	5.29%	$12,052,776	12.77%	$29,092,460
Total Requirements	23.77%	$54,160,356	(6.82%)	($15,537,242)	6.31%	$14,374,191	23.26%	$52,996,143
Employee Contributions	5.73%	$13,059,350	--	--	--	--	5.73%	$13,059,350
Employer Contributions	8.65%	$19,698,785	--	--	--	--	8.65%	$19,698,785
Employer Add'l Cont.	0.00%	$0	--	--	--	--	0.00%	$0
Direct State Funding	2.11%	$4,803,000	--	--	--	--	2.11%	$4,803,000
Other Govt. Funding	0.00%	$0	--	--	--	--	0.00%	$0
Administrative Assessment	0.00%	$0	--	--	--	--	0.00%	$0
Total Contributions	16.49%	$37,561,135	--	--	--	--	16.49%	$37,561,135
Total Requirements	23.77%	$54,160,356	(6.82%)	($15,537,242)	6.31%	$14,374,191	23.26%	$52,996,143
Total Contributions	16.49%	$37,561,135	--	--	--	--	16.49%	$37,561,135
Deficiency (Surplus)	7.29%	$16,599,221	(6.82%)	($15,537,242)	6.31%	$14,374,191	6.77%	$15,435,008
Amortization Target Date	2032						2035	
Actuary	Segal						Segal	

While the 2007 actuarial cost estimate on the CPI-based post-retirement adjustment change indicates a 16.7 percent increase in total requirements ($67.4 million total requirement rather than $57.9 million total requirement) and a 49.7 percent increase in the contribution deficiency of the retirement plan ($29.1 million deficiency rather than $19.4 million deficiency), the 2006 actuarial cost estimate for essentially the same post-retirement adjustment change (4.9 percent annual maximum rather than 5.0 percent annual maximum) produced a 26.5 percent increase in total actuarial requirements ($68.5 million total requirement rather than the $54.2 million total requirement) and an 86.6 percent increase in the contribution deficiency of the retirement plan ($31.0 million deficiency rather than $16.6 million deficiency). The retirement plan representatives should be requested to provide a rationale why the 2007 results should be considered more accurate and reliable than the 2006 results.

4. 2007 Actuarial Cost Estimate Based on Undisclosed Baseline Actuarial Work. The accuracy, reliability, and process issue is the failure of the St. Paul Teachers Retirement Fund Association (SPTRFA) to provide the Commission with the baseline actuarial valuation on which the Gabriel Roeder Smith & Company (GRS) actuarial cost estimates for the proposed legislation are based, as required by Minnesota Statutes, Section 356.215, Subdivision 17. The GRS actuarial cost estimate references a baseline set of actuarial results, but does not set out the full baseline set. From some comparisons in the 2007 GRS actuarial cost estimates, the outline of the GRS baseline 2006 actuarial valuation can be identified or derived and that derived outline differs from the "official" 2006 actuarial valuation for unexplained reasons, as follows:

	The Segal Company "Official" Valuation 2006		Gabriel Roeder Smith Valuation 2006	
Membership				
Active Members		4,219		
Service Retirees		2,302		
Disabilitants		25		
Survivors		280		Undisclosed
Deferred Retirees		1,447		
Nonvested Former Members		1,671		
Total Membership		9,944		
Funded Status				
Accrued Liability		$1,358,619,906		$1,346,120,437
Current Assets		$938,919,005		$938,919,005
Unfunded Accrued Liability		$419,700,901		$407,201,432
Funding Ratio	69.11%		69.75%	
Financing Requirements				
Covered Payroll		$234,213,344		$234,213,344
Benefits Payable		$78,420,222		undisclosed
Normal Cost	9.21%	$21,575,645	9.32%	$21,973,843
Administrative Expenses	0.26%	$608,955	0.26%	$613,455
Normal Cost & Expense	9.47%	$22,184,600	9.58%	$22,587,298
Normal Cost & Expense	9.47%	$22,184,600	9.58%	$22,587,298
Amortization	15.55%	$36,420,175	14.97%	$35,320,880
Total Requirements	25.02%	$58,604,775	24.55%	$57,908,178
Employee Contributions	5.69%	$13,319,540		
Employer Contributions	8.59%	$20,111,296		
Employer Add'l Cont.	0.00%	$0		Undisclosed
Direct State Funding	2.05%	$4,803,000		
Other Govt. Funding	0.00%	$0		
Administrative Assessment	0.00%	$0		
Total Contributions	16.32%	$38,233,836		
Total Requirements	25.02%	$58,604,775	24.55%	$57,908,178
Total Contributions	16.32%	$38,233,836	16.30%	$38,473,417
Deficiency (Surplus)	8.70%	$20,370,939	8.25%	$19,434,761

Without receiving a copy of the baseline actuarial valuation, it is impossible to assess whether the differences are a function of actuarial assumptions, actuarial method, actuarial techniques, or a combination or tow or three of the factors.

5. CPI Increase Estimate Assumption Understated and At Odds With Official Actuarial Assumption on Inflation. The accuracy and reliability issue is the likelihood that the actuarial assumption with respect to the Consumer Price Index (CPI) increase used in the actuarial cost estimate understates ongoing future inflation and that the estimate actuarial assumption is at variance with the current and

recommended inflation actuarial assumptions for the major statewide retirement plans. The 2007 Gabriel Roeder Smith & Company (GRS) actuarial cost estimate was prepared on the basis of a 2.7 percent annual Consumer Price Index increase actuarial assumption, identified as the assumption chosen by the staff of the St. Paul Teachers Retirement Fund Association (SPTRFA), apparently based on an analysis of a 90-year history of Consumer Price Index increases. The Commission staff has not attempted to replicate the SPTRFA staff analysis, but has analyzed the Consumer Price Index increases for the past 50 years. That analysis makes the selection of 2.70 annual inflation as an assumption less certain. Inflation has been less than 2.7 percent in 11 of the past 25 years (44.0 percent of the period), 11 of the past 40 years (27.58 percent of the period), and in 20 of the past 50 years (40 percent of the period). Inflation was very low during the initial portion of the 50-year period, above 2.7 percent consistently for the 19 years in the middle of the 50-year period, and sporadically up and down compared to 2.7 percent in the most recent 22 years. The results by year are set forth in Attachment A. The current actuarial assumptions of the major statewide retirement plans have an inflation assumption implicit in the interest, salary increase, and payroll growth assumptions, which are 4.0-4.5 percent annually for the General State Employees Retirement Plan of the Minnesota State Retirement System (MSRS-General), 4.0-4.5 percent annually for the General Employee Retirement Plan of the Public Employees Retirement Association (PERA-General), and 5.0 percent for the Teachers Retirement Association (TRA). Recently, there is apparently consensus by The Segal Company, the jointly retained actuary, and the three actuarial firms separately retained by the three retirement systems, but not including GRS, to reduce the inflation actuarial assumption to 3.0 percent. The SPTRFA-selected CPI increase actuarial assumption is hugely more optimistic than the current major statewide retirement plan inflation assumptions and is somewhat more optimistic than the proposed revised major statewide retirement plan inflation assumption.

If the retirement plan is convinced that 2.7 percent is a sound estimate of future inflation, a cap on the annual adjustment rate lower than five percent would be appropriate. **Amendment H2341-20A** sets the maximum on the post-retirement adjustment annually at three percent rather than five percent. Since the actuarial cost estimate was based on a recurring 2.7 percent annual increase, changing the maximum will not produce a decrease in the actuarial cost estimate, but would curb some potential future actuarial losses.

6. <u>SPTRFA 2007 Actuarial Cost Estimate Not Necessarily Prepared Under the Commission's Standards for Actuarial Work and Lacks Chapter 356 Compliance Statement</u>. The accuracy, reliability, and process issue is the failure of the consulting actuary preparing the cost estimate to indicate that the actuarial work was prepared under the Commission's Standards for Actuarial Work and is the lack of a certification that the actuarial work complies with Minnesota Statutes, Chapter 356, as required by Minnesota Statutes, Section 356.215, Subdivision 17. Without those indications and certifications, the Commission cannot rely with any certainty on the indicated results. By allowing a consulting actuarial firm and a retirement plan to proceed in pursuing proposed legislation without reliable and compliant actuarial work, the Commission is encouraging future departures from these accuracy and reliability regulations and is setting a problematic precedent.

Attachment A

Consumer Price Index - Urban Wage Earners and Clerical Workers

Series Id: CWUR0000SA0
Not Seasonally Adjusted
Area: U.S. city average
Item: All items
Base Period: 1982-84=100

Year	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec	Annual	3rd Q % Increases
1956	27.0	27.0	27.0	27.0	27.2	27.3	27.5	27.5	27.5	27.7	27.7	27.8	27.3	
1957	27.8	27.9	28.0	28.1	28.1	28.3	28.4	28.5	28.5	28.5	28.6	28.6	28.3	3.64
1958	28.8	28.8	29.0	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	29.1	2.11
1959	29.1	29.1	29.1	29.1	29.2	29.3	29.4	29.3	29.4	29.5	29.5	29.5	29.3	1.03
1960	29.5	29.5	29.5	29.7	29.7	29.8	29.8	29.8	29.8	29.9	30.0	30.0	29.8	1.36
1961	30.0	30.0	30.0	30.0	30.0	30.0	30.1	30.1	30.2	30.2	30.2	30.2	30.1	1.34
1962	30.2	30.2	30.3	30.4	30.4	30.4	30.4	30.4	30.6	30.6	30.6	30.6	30.4	1.32
1963	30.6	30.6	30.7	30.7	30.7	30.8	30.9	30.9	30.9	31.0	31.0	31.1	30.8	0.98
1964	31.1	31.1	31.1	31.1	31.1	31.2	31.3	31.2	31.3	31.3	31.4	31.4	31.2	1.29
1965	31.4	31.4	31.5	31.6	31.6	31.8	31.8	31.8	31.8	31.9	31.9	32.0	31.7	1.60
1966	32.0	32.2	32.3	32.5	32.5	32.6	32.7	32.9	32.9	33.1	33.1	33.1	32.6	3.46
1967	33.1	33.1	33.2	33.3	33.4	33.5	33.6	33.7	33.8	33.9	34.0	34.1	33.6	2.74
1968	34.2	34.3	34.5	34.6	34.7	34.9	35.1	35.2	35.3	35.5	35.6	35.7	35.0	5.03
1969	35.8	36.0	36.3	36.5	36.6	36.8	37.0	37.2	37.3	37.5	37.7	37.9	36.9	5.67
1970	38.0	38.2	38.4	38.7	38.8	39.0	39.2	39.2	39.4	39.6	39.8	40.0	39.0	5.63
1971	40.0	40.1	40.2	40.4	40.6	40.8	40.9	41.0	41.0	41.1	41.2	41.3	40.7	3.79
1972	41.4	41.6	41.6	41.7	41.9	42.0	42.1	42.2	42.4	42.5	42.6	42.7	42.1	3.41
1973	42.9	43.2	43.6	43.9	44.1	44.4	44.5	45.4	45.5	45.9	46.2	46.5	44.7	7.31
1974	46.9	47.5	48.0	48.3	48.8	49.3	49.7	50.3	50.9	51.4	51.8	52.2	49.6	11.87
1975	52.4	52.8	53.0	53.2	53.5	53.9	54.5	54.7	54.9	55.3	55.6	55.8	54.1	7.86
1976	56.0	56.1	56.2	56.5	56.8	57.1	57.4	57.7	57.9	58.2	58.3	58.5	57.2	5.46
1977	58.9	59.5	59.8	60.3	60.6	61.0	61.3	61.5	61.8	61.9	62.2	62.5	60.9	6.74
1978	62.8	63.2	63.7	64.3	64.9	65.6	66.0	66.4	66.8	67.4	67.7	68.1	65.6	8.09
1979	68.7	69.5	70.3	71.1	71.9	72.8	73.7	74.4	75.1	75.7	76.4	77.2	73.1	12.43
1980	78.3	79.4	80.5	81.4	82.3	83.2	83.3	83.8	84.6	85.3	86.1	86.9	82.9	12.65
1981	87.5	88.5	89.0	89.6	90.3	91.1	92.2	92.8	93.7	93.9	94.1	94.4	91.4	10.76
1982	94.7	95.0	94.8	95.2	96.2	97.4	98.0	98.2	98.3	98.6	98.4	98.0	96.9	4.91
1983	98.1	98.1	98.4	99.0	99.5	99.8	100.1	100.5	101.0	101.2	101.2	101.2	99.8	2.75
1984	101.6	101.8	101.8	102.1	102.5	102.8	103.2	104.2	104.8	104.8	104.7	104.8	103.3	3.76
1985	104.9	105.4	105.9	106.3	106.7	107.0	107.1	107.3	107.6	107.9	108.3	108.6	106.9	2.67
1986	108.9	108.5	107.9	107.6	107.9	108.4	108.4	108.6	109.1	109.1	109.2	109.3	108.6	1.39
1987	110.0	110.5	111.0	111.6	111.9	112.4	112.7	113.3	1 13.8	114.1	114.3	114.2	112.5	4.31
1988	114.5	114.7	115.1	115.7	116.2	116.7	117.2	117.7	118.5	118.9	119.0	119.2	117.0	3.86
1989	119.7	120.2	120.8	121.8	122.5	122.8	123.2	123.2	123.6	124.2	124.4	124.6	122.6	4.30
1990	125.9	126.4	127.1	127.3	127.5	128.3	12 8.7	129.9	131.1	131.9	132.2	132.2	129.0	5.56
1991	132.8	132.8	133.0	133.3	133.8	134.1	134.3	134.6	135.2	135.4	135.8	135.9	134.3	3.13
1992	136.0	136.4	137.0	137.3	137.6	138.1	138.4	138.8	139.1	139.6	139.8	139.8	138.2	2.88
1993	140.3	140.7	141.1	141.6	141 .9	142.0	142.1	142.4	142.6	143.3	143.4	143.3	142.1	2.52
1994	143.6	144.0	144.4	144.7	144.9	145.4	145.8	146.5	146.9	147.0	147.3	147.2	145.6	3.02
1995	147.8	148.3	148.7	149.3	149.6	149.9	149.9	150.2	150.6	151.0	150.9	150.9	149.8	2.52
1996	151.7	152.2	152.9	153.6	154.0	154.1	154.3	154.5	155.1	155.5	155.9	155.9	154.1	2.99
1997	156.3	156.8	157.0	157.2	157.2	157.4	157.5	157.8	158.3	158.5	158.5	158.2	157.6	2.06
1998	158.4	158.5	158.7	159.1	159.5	159.7	159.8	160.0	160.2	160.6	160.7	160.7	159.7	1.20
1999	161.0	161.1	161.4	162.7	162.8	162.8	163.3	163.8	164.7	165.0	165.1	165.1	163.2	2.81
2000	165.6	166.5	167.9	168.0	168.2	169.2	169.4	169.3	170.4	170.6	170.9	170.7	168.9	3.46
2001	171.7	172.4	172.6	173.5	174.4	174.6	173.8	173.8	174.8	174.0	173.7	172.9	173.5	2.58
2002	173.2	173.7	174.7	175.8	175.8	175.9	176.1	176.6	177.0	177.3	177.4	177.0	175.9	1.26
2003	177.7	179.2	180.3	179.8	179.4	179.6	179.6	180.3	181.0	180.7	180.2	179.9	179.8	2.26
2004	180.9	181.9	182.9	183.5	184.7	185.3	184.9	185.0	185.4	186.5	186.8	186.0	184.5	2.43
2005	186.3	187.3	188.6	190.2	190.0	190.1	191.0	192.1	195.0	195.2	193.4	192.5	191.0	5.18
2006	194.0	194.2	195.3	197.2	198.2	198.6	199.2	199.6	198.4	197.0	196.8	197.2	197.1	1.74
2007	197.559	198.544	200.612											

From: Phil Kapler [pkapler@sptrfa.org]
Sent: Tuesday, May 01, 2007 12:40 PM
To: Brian Rice; MATT.BOGENSCHULTZ@spps.org; Lisa Diesslin
Subject: Actuary Analysis of SPTRFA COLA Bill - 2007

Good afternoon,

Attached are the analyses performed by Gabriel Roeder Smith concerning the actuarial effects of proposed legislation for the SPTRFA.

Scenarios 1-5 deal with supplemental funding and post increase changes.

Scenario 5A limits the proposal to a combination of re-setting the amortization target date and adoption of the Soc Sec model COLA.

Lisa, I will be most grateful if you could pass a copy on to Mr. Martin for his review and consideration. Call if any questions.

Regards,

Phillip Kapler
SPTRFA
651-642-2550

----- Original Message -----
From: Koss, Jim (Sfld)
To: pkapler@sptrfa.org
Sent: Tuesday, May 01, 2007 11:30 AM

Phil,

Here's the cost impact of combining the COLA with the increased amortization period, as we discussed last evening.

Please call me should you have any questions,

Jim

GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

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May 1, 2007

Mr. Phillip Kapler
Executive Director
St. Paul Teachers' Retirement Fund Association
1619 Dayton Avenue, Room 309
Saint Paul, MN 55104-6206

Re: St. Paul Teachers' Retirement Fund Association Cost Estimate of Proposed Language Contained in SF 1892 and HF 2341 – Addendum Attachment Five A

Dear Phil:

We had previously estimated the cost impact of the proposed amendments to the Minnesota Statutes contained in SF 1892 and HF 2341 in our report dated April 30, 2007. At your request we have prepared an additional analysis illustrating the cost impact of combining Proposal Items 4 and 5 only. Unless otherwise noted, the cost impact was measured using the same methods, assumptions, and data as were used in our report dated April 30, 2007.

SF 1892 and HF 2341 contain the proposed amendments to the benefits and provisions of the Fund:

1. Increase the annual employer contribution by 1.00 percent of salary (from 11.64% to 12.64% for basic members and from 8.34% to 9.34% of salary for coordinated members).

2. Increase the annual supplemental state contribution to $6,000,000 (from $2,953,000).

3. Extend payment of the annual supplemental state contributions through June 30, 2037 (from June 30, 2021).

4. Extend the date for full funding to June 30, 2038 (from June 30, 2021).

5. Change the annual postretirement increase amount to the average third quarter Consumer Price Index value of all items for urban wage earners and clerical workers, limited to no less than zero percent and no greater than five percent. Change the eligibility for postretirement increases to allow members who have received or accrued benefits for at least three full calendar months to receive a prorated share of the full increase on the basis of whole calendar quarters. Change the timing of the COLA increase from June 30 to January 1.

The cost impact was measured to include items 4 and 5. In calculating the cost impact, we have assumed that future postretirement increases would be 2.70 percent per annum, and that full funding would be established by June 30, 2036 (a 30-year amortization period from the measurement date of July 1, 2006).

The enclosed attachments detail the impact of the proposed change as well as some disclaimers applicable to cost estimates. They may be considered as an addendum to our report dated April 30, 2007.

If you have any questions or require additional information, please don't hesitate to contact us.

Sincerely,

Jim K

Jim Koss, A.S.A., E.A., M.A.A.A.

Cathy Nagy

Cathy Nagy, F.S.A., E.A., M.A.A.A.

WJK:CN/rmn
Enclosures

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Attachment Five A

St. Paul Teachers' Retirement Fund Association
Actuarial Liabilities and Supplemental Contribution Rate as of July 1, 2006
Implement Cost-of-Living Adjustment Changes and Increase Amortization Period

	Baseline Valuation Results		Proposal Items 4 and 5		Change	
	% of Pay	Dollar Amount	% of Pay	Dollar Amount	% of Pay	Dollar Amount
A. Statutory Contributions - Chapter 354A						
1. Employee contributions	5.69%	$ 13,414,749	5.69%	$ 13,414,749	0.00%	$ -
2. Employer contributions	8.58%	20,255,668	8.58%	20,255,668	0.00%	-
3. Supplemental contributions						
(a) 1996 Legislation	0.78%	1,850,000	0.78%	1,850,000	0.00%	-
(b) 1997 Legislation	1.25%	2,953,000	1.25%	2,953,000	0.00%	-
4. Administrative expense assessment		-				
5. Total	16.30%	$ 38,473,417	16.30%	$ 38,473,417	0.00%	$ -
B. Required Contributions - Chapter 356						
1. Normal Cost:						
(a) Retirement	7.96%	$ 18,772,302	8.60%	$ 20,297,988	0.64%	$ 1,525,686
(b) Disability	0.26	615,907	0.28	659,806	0.02	43,899
(c) Death	0.19	440,576	0.20	473,325	0.01	32,749
(d) Termination	0.91	2,145,058	0.96	2,253,271	0.05	108,213
(e) Total	9.32%	$ 21,973,843	10.04%	$ 23,684,390	0.72%	$ 1,710,547
2. Supplemental contribution amortization	14.97%	$ 35,320,880	11.39%	$ 26,874,069	-3.58%	$ (8,446,811)
3. Allowance for administrative expenses	0.26%	$ 613,455	0.26%	$ 613,455	0.00%	$ -
4. Total	24.55%	$ 57,908,178	21.69%	$ 51,171,914	-2.86%	$ (6,736,264)
C. Contribution Excess / (Deficiency): (A.5) - (B.4)	-8.25%	$ (19,434,761)	-5.39%	$ (12,698,497)	2.86%	$ 6,736,264
D. Funded Ratios						
1. Accrued Benefit Funded Ratio:		72.00%		67.44%		-4.56%
2. Projected Benefit Funded Ratio:		85.74%		85.97%		0.23%
3. Accrued Liability Funded Ratio:		69.75%		65.29%		-4.46%

Cost Estimate Disclaimers

Attachment Six

This report is intended to describe the financial effect of the proposed plan changes. No statement in this report is intended to be interpreted as a recommendation in favor of the changes, or in opposition to them.

The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon present and proposed plan provisions that are outlined in the report. This information was provided to the actuary by SPTRFA staff. The actuary is not aware of any additional information that would impact these results. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the author of this report prior to relying on information in the report.

The assumed long-term average COLA increase used in this proposal was 2.7% per annum. This assumption was chosen by SPTRFA staff, based on an analysis of the average historical changes in the annual Consumer Price Index (CPI) over more than ninety years, as published by the Bureau of Labor Statistics. The 2.7% COLA assumption falls within the range of reasonable assumptions, in our view. Analyzing subsets of the CPI data over shorter periods would result in averages above or below 2.7%. The use of a COLA assumption higher than 2.7% would produce liabilities and required contributions larger than what is shown in this report.

If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the author of the report prior to making such a decision.

In the event that more than one plan change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably greater than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

GRS Gabriel Roeder Smith & Company
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April 30, 2007

Mr. Phillip Kapler
Executive Director
St. Paul Teachers' Retirement Fund Association
1619 Dayton Avenue, Room 309
Saint Paul, MN 55104-6206

Re: St. Paul Teachers' Retirement Fund Association Cost Estimate of Proposed Language Contained in SF 1892 and HF 2341

Dear Phil:

We have estimated the cost impact of the proposed amendments to the Minnesota Statutes contained in SF 1892 and HF 2341. Unless otherwise noted, the cost impact was measured using the same methods, assumptions, and data as were used in the actuarial valuation of the St. Paul Teachers' Retirement Fund Association ("SPTRFA") as of July 1, 2006, performed by Gabriel, Roeder, Smith & Company.

SF 1892 and HF 2341 contain the proposed amendments to the benefits and provisions of the Fund:

1. Increase the annual employer contribution by 1.00 percent of salary (from 11.64% to 12.64% for basic members and from 8.34% to 9.34% of salary for coordinated members).
2. Increase the annual supplemental state contribution to $6,000,000 (from $2,953,000).
3. Extend payment of the annual supplemental state contributions through June 30, 2037 (from June 30, 2021).
4. Extend the date for full funding to June 30, 2038 (from June 30, 2021).
5. Change the annual postretirement increase amount to the average third quarter Consumer Price Index value of all items for urban wage earners and clerical workers, limited to no less than zero percent and no greater than five percent. Change the eligibility for postretirement increases to allow members who have received or accrued benefits for at least three full calendar months to receive a prorated share of the full increase on the basis of whole calendar quarters. Change the timing of the COLA increase from June 30 to January 1.

The cumulative cost impact was measured at four separate points to include items 1-2, items 1-4, items 1-5, and item 5 only. In calculating the cost impact, we have assumed that future postretirement increases would be 2.70 percent per annum, and that the supplemental payments would be payable through and full funding would be established by June 30, 2036 (a 30-year amortization period from the measurement date of July 1, 2006).

The date of the valuation was July 1, 2006. This means that the results of this proposal valuation will indicate the probable effects of what the July 1, 2006 valuation would have shown if the proposed provision change was adopted on that date. This proposal valuation does not predict the results of future actuarial valuations. Future activities can affect future valuation results in an unpredictable manner. Rather, this proposal valuation gives an indication of the probable effect of the **provision changes only** on future valuations without comment on the complete end result of the future valuations.

The costs are based on the funding method selected by the Board to comply with the Governmental Accounting Standards Board (GASB) Statement No. 25 and the funding policy adopted by the Board. The unfunded liability is amortized using a 15-year closed-period ending June 30, 2021. Under proposal items two and three, the unfunded liability is amortized using a 30-year closed-period ending June 30, 2036.

The enclosed attachments detail the impact of the proposed change as well as some disclaimers applicable to cost estimates.

If you have any questions or require additional information, please don't hesitate to contact us.

Sincerely,

Jim Koss

Jim Koss, A.S.A., E.A., M.A.A.A.

Cathy Nagy

Cathy Nagy, F.S.A., E.A., M.A.A.A.

WJK:CN/rmn
Enclosures

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St. Paul Teachers' Retirement Fund Association
Determination of Contribution Sufficiency as of July 1, 2006
Increased Statutory Employer Contributions and State Supplemental Contribution

Attachment One

	Baseline Valuation Results		Proposal Items 1 and 2		Change	
	% of Pay	Dollar Amount	% of Pay	Dollar Amount	% of Pay	Dollar Amount
A. Statutory Contributions - Chapter 354A						
1. Employee contributions	5.69%	$ 13,414,749	5.69%	$ 13,414,749	0.00%	$ -
2. Employer contributions	8.58%	20,255,668	9.58%	22,615,112	1.00%	2,359,444
3. Supplemental contributions						
(a) 1996 Legislation	0.78%	1,850,000	0.78%	1,850,000	0.00%	-
(b) 1997 Legislation	1.25%	2,953,000	2.54%	6,000,000	1.29%	3,047,000
4. Administrative expense assessment		-				
5. Total	16.30%	$ 38,473,417	18.59%	$ 43,879,861	2.29%	$ 5,406,444
B. Required Contributions - Chapter 356						
1. Normal Cost:						
(a) Retirement	7.96%	$ 18,772,302	7.96%	$ 18,772,302	0.00%	$ -
(b) Disability	0.26	615,907	0.26	615,907	0.00	-
(c) Death	0.19	440,576	0.19	440,576	0.00	-
(d) Termination	0.91	2,145,058	0.91	2,145,058	0.00	-
(e) Total	9.32%	$ 21,973,843	9.32%	$ 21,973,843	0.00%	$ -
2. Supplemental contribution amortization	14.97%	$ 35,320,880	14.97%	$ 35,320,880	0.00%	$ -
3. Allowance for administrative expenses	0.26%	$ 613,455	0.26%	$ 613,455	0.00%	$ -
4. Total	24.55%	$ 57,908,178	24.55%	$ 57,908,178	0.00%	$ -
C. Contribution Excess / (Deficiency): (A.5) - (B.4)	-8.25%	$ (19,434,761)	-5.96%	$ (14,028,317)	2.29%	$ 5,406,444
D. Funded Ratios						
1. Accrued Benefit Funded Ratio:		72.00%		72.00%		0.00%
2. Projected Benefit Funded Ratio:		85.74%		89.70%		3.96%
3. Accrued Liability Funded Ratio:		69.75%		69.75%		0.00%

St. Paul Teachers' Retirement Fund Association
Determination of Contribution Sufficiency as of July 1, 2006
Increase Amortization Period to 30 Years

Attachment Two

	Proposal Items 1 and 2		Proposal Items 1, 2, 3 and 4		Change	
	% of Pay	Dollar Amount	% of Pay	Dollar Amount	% of Pay	Dollar Amount
A. Statutory Contributions - Chapter 354A						
1. Employee contributions	5.69%	$ 13,414,749	5.69%	$ 13,414,749	0.00%	$ -
2. Employer contributions	9.58%	22,615,112	9.58%	22,615,112	0.00%	-
3. Supplemental contributions						
(a) 1996 Legislation	0.78%	1,850,000	0.78%	1,850,000	0.00%	-
(b) 1997 Legislation	2.54%	6,000,000	2.54%	6,000,000	0.00%	-
4. Administrative expense assessment		-				
5. Total	18.59%	$ 43,879,861	18.59%	$ 43,879,861	0.00%	$ -
B. Required Contributions - Chapter 356						
1. Normal Cost:						
(a) Retirement	7.96%	$ 18,772,302	7.96%	$ 18,772,302	0.00%	$ -
(b) Disability	0.26	615,907	0.26	615,907	0.00	-
(c) Death	0.19	440,576	0.19	440,576	0.00	-
(d) Termination	0.91	2,145,058	0.91	2,145,058	0.00	-
(e) Total	9.32%	$ 21,973,843	9.32%	$ 21,973,843	0.00%	$ -
2. Supplemental contribution amortization	14.97%	$ 35,320,880	9.29%	$ 21,919,237	-5.68%	$ (13,401,643)
3. Allowance for administrative expenses	0.26%	$ 613,455	0.26%	$ 613,455	0.00%	$ -
4. Total	24.55%	$ 57,908,178	18.87%	$ 44,506,535	-5.68%	$ (13,401,643)
C. Contribution Excess / (Deficiency): (A.5) - (B.4)	-5.96%	$ (14,028,317)	-0.28%	$ (626,674)	5.68%	$ 13,401,643
D. Funded Ratios						
1. Accrued Benefit Funded Ratio:		72.00%		72.00%		0.00%
2. Projected Benefit Funded Ratio:		89.70%		99.22%		9.52%
3. Accrued Liability Funded Ratio:		69.75%		69.75%		0.00%

St. Paul Teachers' Retirement Fund Association
Determination of Contribution Sufficiency as of July 1, 2006
Implement Cost-of-Living Adjustment Changes

Attachment Three

	Proposal Items 1, 2, 3 and 4		Proposal Items 1, 2, 3, 4 and 5		Change	
	% of Pay	Dollar Amount	% of Pay	Dollar Amount	% of Pay	Dollar Amount
A. Statutory Contributions - Chapter 354A						
1. Employee contributions	5.69%	$ 13,414,749	5.69%	$ 13,414,749	0.00%	$ -
2. Employer contributions	9.58%	22,615,112	9.58%	22,615,112	0.00%	-
3. Supplemental contributions						
(a) 1996 Legislation	0.78%	1,850,000	0.78%	1,850,000	0.00%	-
(b) 1997 Legislation	2.54%	6,000,000	2.54%	6,000,000	0.00%	-
4. Administrative expense assessment		-				
5. Total	18.59%	$ 43,879,861	18.59%	$ 43,879,861	0.00%	$ -
B. Required Contributions - Chapter 356						
1. Normal Cost:						
(a) Retirement	7.96%	$ 18,772,302	8.60%	$ 20,297,988	0.64%	$ 1,525,686
(b) Disability	0.26	615,907	0.28	659,806	0.02	43,899
(c) Death	0.19	440,576	0.20	473,325	0.01	32,749
(d) Termination	0.91	2,145,058	0.96	2,253,271	0.05	108,213
(e) Total	9.32%	$ 21,973,843	10.04%	$ 23,684,390	0.72%	$ 1,710,547
2. Supplemental contribution amortization	9.29%	$ 21,919,237	11.39%	$ 26,874,069	2.10%	$ 4,954,832
3. Allowance for administrative expenses	0.26%	$ 613,455	0.26%	$ 613,455	0.00%	$ -
4. Total	18.87%	$ 44,506,535	21.69%	$ 51,171,914	2.82%	$ 6,665,379
C. Contribution Excess / (Deficiency): (A.5) - (B.4)	-0.28%	$ (626,674)	-3.10%	$ (7,292,053)	-2.82%	$ (6,665,379)
D. Funded Ratios						
1. Accrued Benefit Funded Ratio:		72.00%		67.44%		-4.56%
2. Projected Benefit Funded Ratio:		99.22%		91.93%		-7.29%
3. Accrued Liability Funded Ratio:		69.75%		65.29%		-4.46%

St. Paul Teachers' Retirement Fund Association
Determination of Contribution Sufficiency as of July 1, 2006
Implement Only Cost-of-Living Adjustment Changes

Attachment Four

	Baseline Valuation Results		Proposal Item 5		Change	
	% of Pay	Dollar Amount	% of Pay	Dollar Amount	% of Pay	Dollar Amount
A. Statutory Contributions - Chapter 354A						
1. Employee contributions	5.69%	$ 13,414,749	5.69%	$ 13,414,749	0.00%	$ -
2. Employer contributions	8.58%	20,255,668	8.58%	20,255,668	0.00%	-
3. Supplemental contributions						
(a) 1996 Legislation	0.78%	1,850,000	0.78%	1,850,000	0.00%	-
(b) 1997 Legislation	1.25%	2,953,000	1.25%	2,953,000	0.00%	-
4. Administrative expense assessment		-				
5. Total	16.30%	$ 38,473,417	16.30%	$ 38,473,417	0.00%	$ -
B. Required Contributions - Chapter 356						
1. Normal Cost:						
(a) Retirement	7.96%	$ 18,772,302	8.60%	$ 20,297,988	0.64%	$ 1,525,686
(b) Disability	0.26	615,907	0.28	659,806	0.02	43,899
(c) Death	0.19	440,576	0.20	473,325	0.01	32,749
(d) Termination	0.91	2,145,058	0.96	2,253,271	0.05	108,213
(e) Total	9.32%	$ 21,973,843	10.04%	$ 23,684,390	0.72%	$ 1,710,547
2. Supplemental contribution amortization	14.97%	$ 35,320,880	18.35%	$ 43,295,801	3.38%	$ 7,974,921
3. Allowance for administrative expenses	0.26%	$ 613,455	0.26%	$ 613,455	0.00%	$ -
4. Total	24.55%	$ 57,908,178	28.65%	$ 67,593,646	4.10%	$ 9,685,468
C. Contribution Excess / (Deficiency): (A.5) - (B.4)	-8.25%	$ (19,434,761)	-12.35%	$ (29,120,229)	-4.10%	$ (9,685,468)
D. Funded Ratios						
1. Accrued Benefit Funded Ratio:		72.00%		67.44%		-4.56%
2. Projected Benefit Funded Ratio:		85.74%		80.04%		-5.70%
3. Accrued Liability Funded Ratio:		69.75%		65.29%		-4.46%

St. Paul Teachers' Retirement Fund Association
Actuarial Liabilities and Supplemental Contribution Rate as of July 1, 2006
Implement Cost-of-Living Adjustment Changes

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. Determination of Actuarial Accrued Liability			
1. Active members:			
(a) Retirement benefits	$ 694,050,706	$ 210,728,512	$ 483,322,194
(b) Disability benefits	14,098,520	6,451,258	7,647,262
(c) Death benefits	11,401,859	5,065,139	6,336,720
(d) Termination	25,213,834	22,742,016	2,471,818
(e) Total	$ 744,764,920	$ 244,986,926	$ 499,777,994
2. Vested terminated members	$ 37,511,930	-	$ 37,511,930
3. Other non-vested terminated members	$ 2,177,543	-	$ 2,177,543
4. Annuitants	$ 898,528,374	-	$ 898,528,374
5. Total	$1,682,982,767	$ 244,986,926	$1,437,995,841
B. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			$1,437,995,841
2. Actuarial Value of Assets			938,919,005
3. Unfunded Actuarial Liability			$ 499,076,836
C. Determination of Supplemental Contribution Rate (Statutory Amortization Date)			
1. Present value of future payrolls through the amortization date of June 30, 2021			$2,719,438,007
2. Supplemental contribution rate [B.3 / C.1]			18.35%
D. Determination of Supplemental Contribution Rate (Amortization Period of 30 Years)			
1. Present value of future payrolls through the amortization date of June 30, 2036			$4,382,362,676
2. Supplemental contribution rate [B.3 / D.1]			11.39%

Cost Estimate Disclaimers

This report is intended to describe the financial effect of the proposed plan changes. No statement in this report is intended to be interpreted as a recommendation in favor of the changes, or in opposition to them.

The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon present and proposed plan provisions that are outlined in the report. This information was provided to the actuary by SPTRFA staff. The actuary is not aware of any additional information that would impact these results. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the author of this report prior to relying on information in the report.

The assumed long-term average COLA increase used in this proposal was 2.7% per annum. This assumption was chosen by SPTRFA staff, based on an analysis of the average historical changes in the annual Consumer Price Index (CPI) over more than ninety years, as published by the Bureau of Labor Statistics. The 2.7% COLA assumption falls within the range of reasonable assumptions, in our view. Analyzing subsets of the CPI data over shorter periods would result in averages above or below 2.7%. The use of a COLA assumption higher than 2.7% would produce liabilities and required contributions larger than what is shown in this report.

If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the author of the report prior to making such a decision.

In the event that more than one plan change is being considered, it is very important to remember that the results of separate actuarial valuations cannot generally be added together to produce a correct estimate of the combined effect of all of the changes. The total can be considerably greater than the sum of the parts due to the interaction of various plan provisions with each other, and with the assumptions that must be used.

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May 17, 2006

Mr. Phillip Kapler
St. Paul Teachers' Retirement Fund Association
1619 Dayton Avenue, Room 309
Saint Paul, MN 55104-6206

Dear Mr. Kapler:

As requested, we have completed a cost study as of July 1, 2005, for the St. Paul Teachers' Retirement Fund Association to determine the cost of the following plan changes:

Summary of Pricings

1. Cost-of-Living Adjustment (COLA) based on CPI:

   Provide benefit increases after retirement for all current and future retirees, beneficiaries and disabled members, a percentage increase per annum based on CPI. We have estimated the CPI to be 3.25% for all future years.

2. Amortization Period:

   The total Unfunded Actuarial Accrued Liability will be amortized as a level percentage of payroll each year, using an open 30-year amortization period and assuming payroll increases of 5.00% per annum.

Results

The enclosed exhibit detail costs both as a dollar amount and as a percentage of expected payroll ($227,818,794).

Funding Policy

The costs are based on the funding method selected by the Board to comply with Governmental Accounting Standards Board Statement (GASB) No. 25 and the funding policy adopted by the Board.

The amortization period of an open 30-year period is consistent with GASB No. 25.

The assumption of CPI for future years of 3.25% is not unreasonable based on recent history.

Actuarial Assumptions

These costs are based on the current actuarial assumptions, cost methods and plan provisions as shown in the actuarial valuation report as of July 1, 2005 (Section 4: Exhibits IX , X and XI). If a significant change in employee behavior occurs as a result of these improvements, certain assumptions may need to be revised, which may affect the cost of the plan.

The total Actuarial Accrued Liability and total Unfunded Actuarial Accrued Liability increased, hence the Funded Ratio (AVA/AAL) decreased from 69.65% to 62.62%. However, the supplemental contribution decreased due to a longer amortization period of 30 years, thus the contribution (deficiency) as a percentage of payroll decreased from -7.29% to -6.77%, as of July 1, 2005.

If you have any questions concerning the results of this study, or if we can be of further assistance, please let us know.

Sincerely,

Leslie L. Thompson, FSA, MAAA, EA
Senior Vice President and Consulting Actuary

SZH/dqm

Enclosure

St. Paul Teachers' Retirement Fund Association
Cost Impact Study as of July 1, 2005
COLA increased to 3.25% and Amortization period of 30 years for all years

Determination of Contribution Sufficiency – Total

	Percent of Payroll	Dollar Amount
A. Statutory Contributions – Chapter 354A		
1. Employee contributions	5.73%	$13,059,350
2. Employer contributions	8.65	19,698,785
3. Supplemental contributions		
(a) 1996 Legislation	0.81	1,850,000
(b) 1997 Legislation	1.30	2,953,000
4. Administrative expense assessment	-	-
5. Total	16.49%	$37,561,135
B. Required Contributions – Chapter 356		
1. Normal Cost:		
(a) Retirement	8.91%	$20,302,714
(b) Disability	0.25	569,104
(c) Death	0.23	525,471
(d) Withdrawal	0.86	1,959,629
(e) Total	10.25%	$23,356,918
2. Supplemental contribution amortization	12.77%	$29,092,460
3. Allowance for administrative expenses	0.24	546,765
4. Total	23.26%	$52,996,143
C. Contribution Sufficiency / (Deficiency): (A.5) – (B.4)	-6.77%	-$15,435,008
Projected annual payroll for fiscal year beginning on the valuation date		$227,818,794

St. Paul Teachers' Retirement Fund Association
Cost Impact Study as of July 1, 2005
COLA increased to 3.25% and Amortization period of 30 years for all years

	Actuarial Present Value of Projected Benefits	Actuarial Present Value of Future Normal Costs	Actuarial Accrued Liability
A. Determination of Actuarial Accrued Liability			
1. Active members:			
(a) Retirement benefits	$697,535,867	$202,902,684	$494,633,183
(b) Disability benefits	13,200,758	5,991,649	7,209,109
(c) Death benefits	13,366,520	5,631,851	7,734,669
(d) Withdrawal benefits	25,050,088	21,664,615	3,385,473
(e) Total	$749,153,233	$236,190,799	$512,962,434
2. Vested terminated members	$38,025,004	-	$38,025,004
3. Other non-vested terminated members	2,274,788	-	2,274,788
4. Annuitants	892,535,292	-	892,535,292
5. Total	$1,681,988,317	$236,190,799	$1,445,797,518
B. Determination of Unfunded Actuarial Accrued Liability			
1. Actuarial Accrued Liability			$1,445,797,518
2. Actuarial Value of Assets			905,292,514
3. Unfunded Actuarial Accrued Liability: (B.1) – (B.2)			$540,505,004
C. Determination of Supplemental Contribution Rate			
1. Present value of future payrolls with an amortization period of 30 years			$4,231,441,321
2. Supplemental contribution rate: (B.3) / (C.1)			12.77%
Funded Ratio (AVA/AAL)			62.62%

.... moves to amend H.F. No. 2341; S.F. No. 1892, as follows:

Page 5, line 18, delete "5.0" and insert "3.0"