

**PUBLIC SCHOOL RETIREMENT SYSTEM  
OF THE CITY OF ST. LOUIS**

**MINUTES OF THE BOARD OF TRUSTEES REGULAR MEETING**

**June 17, 2024**

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**I. ROLL CALL AND ANNOUNCEMENT OF A QUORUM**

The June meeting of the Board of Trustees of the Public School Retirement System of the City of St. Louis (PSRSSTL) was called to order at around 4:37 p.m. on Monday, June 17, 2024. The meeting was conducted by video conference through Zoom and a Livestream on YouTube. Louis Cross, Chairman of the Board of Trustees, was the presiding officer.

Roll Call was taken. Trustees Angie Banks, Christina Bennett, Louis Cross, Sheila Goodwin, Emily Hubbard, Shanise Johnson, Yvette Levy, Martel Mann, and Dorris Walker were present. The Board of Trustees had a quorum at the meeting. Trustees Bobbie Richardson and Albert Sanders joined the meeting in progress.

PSRSSTL Executive Director Susan Kane, Actuary Representatives Michael Ribble, Matthew Staback and Blake Wildermann and Attorney Representatives David Eckhardt, Aly Winters, and Asuo Asente were also in attendance.

**II. APPROVAL OF MINUTES FROM LAST MEETING**

Sheila Goodwin made a motion, seconded by Dorris Walker, to approve the minutes of the Regular Board of Trustees Meeting from April 15, 2024. By voice vote, the motion carried.

**III. READING OF COMMUNICATIONS TO THE BOARD OF TRUSTEES**

None

**IV. PRESENTATIONS BY INTERESTED PARTIES**

None

**V. CONSENT AGENDA**

Sheila Goodwin made a motion, seconded by Dorris Walker, to approve the Retirement and Benefits of May 2024. By voice vote, motion carried.

Sheila Goodwin made a motion, seconded by Bobbie Richardson, to approve the refunds and bills of April and May 2024. By voice vote, motion carried.

**VI. REPORT OF THE CHAIRPERSON**

The Chairman indicated that the System would be working to set up meetings with the St. Louis Public Schools Board of Education to discuss increasing employer contributions into the System. This is needed after the legislation that was passed in 2017 reduced employer contributions which has resulted in a loss of \$30 million dollars in contributions since that time. The Chairman also indicated that he and several of the Trustees had recently attended the NASP Conference in Atlanta, GA.

**VII. REPORT OF THE EXECUTIVE DIRECTOR**

The Executive Director reported that the System’s phones will transition to a new phone provider, Zultys, on June 20, 2024. She also provided an update on the Pension Administration System project. Seven bidders had responded that they would be submitting a proposal by the deadline date of June 21, 2024. She will work with the Co-Chairs of the Personnel and Professional Contracts Committee to schedule finalist presentations to the Board.

The Executive Director then referred to the memo in the Board packet summarizing the renewals for the System’s Crime and Fiduciary Policy. Gallagher, the Consultant for PSRSSTL’s Business Insurance had recommended remaining with the current providers. The Crime policy premium would increase by 5% and the Fiduciary policy by 4% over current. There would be no changes to the policy coverage.

After all discussion had been concluded, Christina Bennett made a motion, seconded by Dorris Walker, to accept the renewal from Traveler’s Insurance and Markel for the Fiduciary Policy and from Traveler’s Insurance for the Crime Policy as recommended by Gallagher, the System’s Business Insurance consultant.

A roll call vote was taken.

Angie Banks	Yes	Christina Bennett	Yes	Louis Cross	Yes
Sheila Goodwin	Yes	Emily Hubbard	Yes	Shanise Johnson	Yes
Yvette Levy	Yes	Martel Mann	Yes	Albert Sanders	Yes
Dorris Walker	Yes				

The motion was carried with ten yes votes.

After reporting on her attendance at the NCTR System Director’s Meeting earlier in June, the Executive Director also reminded the Trustees of other upcoming conferences to satisfy their continuing education requirements.

**VIII. REPORT OF THE INVESTMENT CONSULTANT**

None

**IX. REPORT OF THE ACTUARY**

Michael Ribble from Buck Consulting, a Gallagher Company, began the review of the 2024 Actuarial Valuation Report based on data as of January 1, 2024. The Actuarial methods and assumptions had not changed since the Experience Study adopted as of December 31, 2020. After his opening comments, he then introduced Blake Wilderman and Matt Staback from the Buck team. Mr. Wilderman continued with the presentation by discussing the membership census data and changes from the prior year. Mr. Staback provided an overview of System assets and liabilities, and the impact of the positive investment returns from the prior year. Mr. Ribble finished the presentation by discussing the valuation results as compared to the previous year. He also provided an overview of the calculation of the actuarially determined contribution of 13.94% but also reminded the Trustees of the statutorily required contribution of 13%. It is anticipated that the gap between statutorily required and actuarially determined contributions will grow.

After all discussion had been concluded, Christina Bennett made a motion, seconded by Bobbie Richardson, to accept the 2024 Actuarial Valuation Report as presented by the Actuary.

A roll call vote was taken.

Christina Bennett	Yes	Louis Cross	Yes	Sheila Goodwin	Yes
Emily Hubbard	Yes	Shanise Johnson	Yes	Yvette Levy	Yes
Bobbie Richardson	Yes	Albert Sanders	Yes	Dorris Walker	Yes

The motion was carried with nine yes votes.

## **X. REPORTS OF COMMITTEES OF THE BOARD OF TRUSTEES**

### **Benefits Committee**

Co-Chair Shanise Johnson reported that nineteen Medicare Eligible retired members took advantage of the special open enrollment period and switched from the St. Louis Public Schools Base and Buy Up Medical plans to one of the Medicare Advantage plans offered by PSRSSTL. She also noted that the dental RFP process is underway, and responses are expected on Thursday, June 20.

### **Trustee Business Committee**

No report.

### **Investment Committee**

No report.

### **Legislative, Rules & Regulations Committee**

No report.

### **Personnel & Professional Contracts Committee**

No report.

## **XI. NEW BUSINESS**

None

## **XII. REPORT OF THE ATTORNEY**

Sheila Goodwin made a motion, seconded by Bobbie Richardson, to close the meeting and that all records and votes, to the extent permitted by law, pertaining to and/or resulting from this closed meeting be closed under R.S.MO § 610.021 (1) for the purpose of having a confidential or privileged communication with the legal counsel for the PSRSSTL on legal matters.

A roll call vote was taken.

Christina Bennett	Yes	Louis Cross	Yes	Sheila Goodwin	Yes
Emily Hubbard	Yes	Shanise Johnson	Yes	Yvette Levy	Yes

Martel Mann	Yes	Bobbie Richardson	Yes	Albert Sanders	Yes
Dorris Walker	Yes				

The motion was carried with ten yes votes.

The meeting continued in closed session and the Trustees voted on three motions.

Shanise Johnson made a motion, seconded by Christina Bennett to authorize the Executive Director, assisted by Husch Blackwell, to prepare and submit a response to the Proxy Voting Report from the MO State Auditor's Office.

A roll call vote was taken.

Christina Bennett	Yes	Louis Cross	Yes	Sheila Goodwin	Yes
Emily Hubbard	Yes	Shanise Johnson	Yes	Yvette Levy	Yes
Martel Mann	Yes	Bobbie Richardson	Yes	Albert Sanders	Yes
Dorris Walker	Yes				

The motion was carried with ten yes votes.

Christina Bennett made a motion, seconded by Dorris Walker, to authorize Husch Blackwell at a cost not to exceed \$10,000 to work with the appropriate Husch Blackwell out of state office to continue legal action against the family of a deceased PSRSSTL retired member regarding an overpayment.

A roll call vote was taken.

Christina Bennett	Yes	Louis Cross	Yes	Sheila Goodwin	Yes
Emily Hubbard	Yes	Shanise Johnson	Yes	Yvette Levy	Yes
Martel Mann	Yes	Bobbie Richardson	Yes	Albert Sanders	Yes
Dorris Walker	Yes				

The motion was carried with ten yes votes.

Albert Sanders made a motion, seconded by Dorris Walker, to approve the use of a credit card for PSRSSTL business related budgeted purchases and the credit card use policy drafted by Husch Blackwell.

A roll call vote was taken.

Christina Bennett	Yes	Louis Cross	Yes	Sheila Goodwin	No
Emily Hubbard	Yes	Shanise Johnson	Yes	Yvette Levy	Yes
Martel Mann	Yes	Bobbie Richardson	Yes	Albert Sanders	Yes
Dorris Walker	Yes				

The motion was carried with nine yes votes.

After all business had been concluded, Dorris Walker made a motion, seconded by Sheila Goodwin, to open the meeting, pursuant to Section 610.021, of the Missouri Revised Statutes.

A roll call vote was taken.

Christina Bennett	Yes	Louis Cross	Yes	Sheila Goodwin	Yes
Emily Hubbard	Yes	Shanise Johnson	Yes	Yvette Levy	Yes
Martel Mann	Yes	Bobbie Richardson	Yes	Albert Sanders	No
Dorris Walker	Yes				

The motion was carried with nine yes votes.

### **XIII. ADJOURNMENT**

Since there was no further business, Sheila Goodwin made a motion, seconded by Bobbie Richardson, to adjourn the meeting. By voice vote, motion carried, and the meeting adjourned at around 7:14 p.m.

Attachments:

- Retirement & Benefit: May 2024
- Refunds and Bills—April and May 2024
- 2024 Actuarial Valuation Report

## Distributions - April, 2024

CHECK NUMBER	CHECK DATE	LAST NAME	FIRST NAME/MI	GROSS (B+C)	FEDERAL TAXES W/H	NET PAY	STATUS A(ctive) R(etired)	REASON D(eath) S(eparation)	NOTES	Dec Mem SSN
1306	04/23/24	ADERO	BISA	3,877.33	775.47	3,101.86	A	S		
1307	04/23/24	ARMSTRONG	SHAVONNE	1,543.68	308.74	1,234.94	A	S		
1308	04/23/24	BEGIC	ALEXANDRA	17,892.14		17,892.14	A	S		
1309	04/23/24	BERRA	ALEXA	13,571.28	2,714.26	10,857.02	A	S		
1310	04/23/24	BROWN	FREDICK	22,573.62	4,514.72	18,058.90	A	S	KIPP KAIROS	
1311	04/23/24	CARTER	RACQUEAL	6,920.26	1,384.05	5,536.21	A	S		
1312	04/23/24	CHISHOLM	STANFORD	16,386.97		16,386.97	A	S	KAIROS	
1313	04/23/24	COX	DEBBI R	6,203.13		6,203.13	A	S		
1314	04/23/24	CRAWFORD	CYNTHIA	4,988.21	997.64	3,990.57	A	S		
1315	04/23/24	CROWELL	ALVIA	12,191.10	2,438.22	9,752.88	A	S	SLPS KIPP	
1316	04/23/24	DUNBAR	LATOYA	3,236.70	647.34	2,589.36	A	S		
1317	04/23/24	ELDRIDGE	DAVID	14,302.21	2,860.44	11,441.77	A	S		
1318	04/23/24	FOSTER	MARION	10,506.95	2,101.39	8,405.56	A	S		
1319	04/23/24	FULLER	DANENISE	20,173.02	4,034.60	16,138.42	A	S	MOM	
1320	04/23/24	GIBBS	BRIANA	5,231.25	1,046.25	4,185.00	A	S		
1321	04/23/24	GILLESPIE	DIANE	35,900.02		35,900.02	A	S	IESM EHL-ELEM	
1322	04/23/24	GORDON JR	LEO	35,577.69		35,577.69	A	S		
1323	04/23/24	GRAY	DYNASHIA	16,461.13	3,292.23	13,168.90	A	S		
1324	04/23/24	GRAY	LADEA	6,582.24	1,316.45	5,265.79	A	S		
1325	04/23/24	HAMPTON	KENDRA	5,719.07	1,143.81	4,575.26	A	S		
1326	04/23/24	HEPP	STEVEN	926.48	185.30	741.18	A	S	KAIROS	
1327	04/23/24	HOWARD	BRIA	1,063.38	212.68	850.70	A	S	MOM	
1328	04/23/24	HURLEY	ALLISON	16,615.04		16,615.04	A	S		
1329	04/23/24	JOHNSON	CIERA	1,769.31	353.86	1,415.45	A	S		
1330	04/23/24	JOHNSON	MIANEKIO	4,092.80	818.56	3,274.24	A	S		
1331	04/23/24	JOLLY	MALIA	6,063.03		6,063.03	A	S	KIPP KAIROS	
1332	04/23/24	JONES	JAMAL	6,006.44	1,201.29	4,805.15	A	S	KAIROS	
1333	04/23/24	JOST	CARRIE	43,420.21	8,684.04	34,736.17	A	S		
1334	04/23/24	JURICIC	ANA	12,911.28	2,582.26	10,329.02	A	S	GSASTL	
1335	04/23/24	KNOPF	JUSTIN	1,045.10	209.02	836.08	A	S		
1336	04/23/24	KOLLACK	CHELSEA K	5,689.77		5,689.77	A	S	CA	
1337	04/23/24	LANE	ELIZABETH	11,303.31		11,303.31	A	S	MOM	
1338	04/23/24	LLOYD	SEAN	888.05	177.61	710.44	A	S	KIPP	
1339	04/23/24	MCCRARY	KATRINA	15,815.73	3,163.15	12,652.58	A	S	KIPP	
1340	04/23/24	MCDONALD	ZARIA	4,907.38	981.48	3,925.90	A	S		
1341	04/23/24	MOON	ELIZABETH	1,596.40	319.28	1,277.12	A	S		
1342	04/23/24	MOSELY	PARIS	3,255.36	651.07	2,604.29	A	S		
1343	04/23/24	NASH	MELISSA P	46,816.42	9,363.28	37,453.14	A	S		

## Distributions - April, 2024

CHECK NUMBER	CHECK DATE	LAST NAME	FIRST NAME/MI	GROSS (B+C)	FEDERAL TAXES W/H	NET PAY	STATUS A(ctive) R(etired)	REASON D(eath) S(eparation)	NOTES	Dec Mem SSN
1344	04/23/24	ORETO	ZACHARY P	19,942.26	3,988.45	15,953.81	A	S		
1345	04/23/24	OUTLAW	AKEIBI D	2,561.95	512.39	2,049.56	A	S	PREM	
1346	04/23/24	PEAY	AMORA	1,764.85	352.97	1,411.88	A	S		
1347	04/23/24	RASH	CHANELLE	5,097.39	1,019.48	4,077.91	A	S	MOM	
1348	04/23/24	REECE	ETTA	1,662.33	332.47	1,329.86	A	S	CA	
1349	04/23/24	SCHAEFFLER	EMILY	10,640.15		10,640.15	A	S	HLSG SLPS	
1350	04/23/24	SMITH	DAVID	5,724.51	1,144.90	4,579.61	A	S	LFL KIPP LSMS SLPS	
1351	04/23/24	STEPHENS	BRITTANY	12,837.75	2,567.55	10,270.20	A	S		
1352	04/23/24	STEVENSON	NANCY	7,973.85	1,594.77	6,379.08	A	S	LFL	
1353	04/23/24	TAFOYA	TERRI A	12,693.65		12,693.65	A	S	CA	
1354	04/23/24	TAYLOR	EVERLEAN	28,528.51		28,528.51	A	S		
1355	04/23/24	THARBS	ASHLEY	8,569.56		8,569.56	A	S		
1356	04/23/24	THOMAS	PRISCILLA	3,238.23	647.65	2,590.58	A	S		
1357	04/23/24	THOMPSON	BETTY	312.47	62.49	249.98	A	S		
1358	04/23/24	TURNER	ADIA	9,835.53	1,967.11	7,868.42	A	S		
1359	04/23/24	TURNER	WILLIE A	20,389.34	4,077.87	16,311.47	A	S	CA	
1360	04/23/24	VANDEVORT	MELINDA	12,765.61	2,553.12	10,212.49	A	S	MOM	
1362	04/23/24	WALLS	GEORGIA L	25,050.00		25,050.00	A	S		
1361	04/23/24	WALLS	GEORGIA L	11,894.48	2,378.90	9,515.58	A	S		
1363	04/23/24	WATKINS	BRITTANY	828.71	165.74	662.97	A	S		
1364	04/23/24	WESLEY	ANDREA	6,789.02	1,357.80	5,431.22	A	S		
1365	04/23/24	YANCY	GERMAINE C	20,667.19	4,133.44	16,533.75	A	S		
1366	04/23/24	ZEHNDER	NANCY J	19,720.82		19,720.82	A	S		
1367	04/25/24	HOWARD	SHEILA	1,877.96	375.59	1,502.37	A	D	BRIAN HOWARD	
1221	03/25/24	MCMATH	KINETA	(6,021.45)	(1,204.29)	(4,817.16)	A	S	VOID AND REISSUE	
1368	04/25/24	MCMATH	KINETA	6,021.45	1,204.29	4,817.16	A	S	VOID AND REISSUE	
<b>TOTAL</b>				<b>\$ 695,389.61</b>	<b>\$ 87,711.18</b>	<b>\$ 607,678.43</b>				



<b>Public School Retirement System of the City of St. Louis</b>			
<b>Checks Written During the Month of April, 2024</b>			
<b>Payee</b>	<b>Ck. Number</b>	<b>Description</b>	<b>Amount</b>
<b>Date Paid April 5, 2024</b>			
Office Payroll	ACH	Office Payroll	18,752.93
AXA Equitable	ACH	457 Contributions	575.00
Integrated Payroll Services (IPS)	ACH	Payroll Processing Fee	64.87
<b>Date Paid April 8, 2024</b>			
Ameren Missouri	1258	Electric Service	1,880.19
ACC Business	1259	Telephone Fiberoptics	608.66
Charter Communications	1260	Internet and Voice	174.96
Republic Services #346	1261	Trash Pick-Up	447.89
St. Louis Mat & Linen Company	1262	Floor Mats	208.00
Scottish Rite Preservation	1263	Employee Parking	146.00
BuildingStars STL Operations, Inc.	1264	Janitorial Services	1,386.00
Anders CPAs & Advisors	1265	Systems Financial Statement Audit	15,000.00
Office Essentials	1266	Office Supplies	763.95
Intelica Commercial Real Estate	1267	Maintenance Materials	597.61
Above All Personnel	1268	Employee - Miata Reeves-Borne	1,687.50
Missouri Division of Fire Safety	1269	Elevator Operating Certificate	25.00
Gregory F.X. Daly Collector of Revenue	1270	Water - City	144.49
Pension Benefit Information, LLC	1271	Death Audit-CertiDeath-Continuous Monitoring	12,000.00
Tech Electronics, Inc.	1272	Subscription Monitoring of Fire and Security Alarm	381.00
Tech Electronics, Inc.	1273	City of St Louis ARFAM Permit Fee	55.00
Board of Education of the City of St. Louis Health Benefits Trust	1274	Delta Dental	211.36
Board of Education of the City of St. Louis Health Benefits Trust	1275	Vision Benefits	13.23
Board of Education of the City of St. Louis Health Benefits Trust	1276	Life Insurance	200.30
<b>Date Paid April 19, 2024</b>			
Office Payroll	ACH	Office Payroll	11,542.32
AXA Equitable	ACH	457 Contributions	575.00
Integrated Payroll Services (IPS)	ACH	Payroll Processing Fee	72.84
<b>Date Paid April 22, 2024</b>			
Absopure Water Company	1277	Water Cooler Service	67.45
Above All Personnel	1278	Temporary Staff	1,065.90
American City Business Journals, Inc.	1279	Business Journal Subscription	1,260.00
Anders CPAs & Advisors	1280	Audit of Financial Statements	10,000.00
Blade Technologies, Inc.	1281	Professional Services	3,589.94
Bug Out	1282	Pest Control	50.00
Crain Communications Inc	1283	Annual Enterprise License	4,970.00
Gallagher Benefit Services, Inc.	1286	Group Ins. Consulting Services Monthly Fee	3,320.25
Hartnett Reyes-Jones L.L.C.	1287	Legal Fees	15,815.50
Intelica Commercial Real Estate	1288	Building Management Fee	164.68
Intelica Commercial Real Estate	1289	Management Fee	1,000.00
Konica Minolta Business Solutions USA Inc	1290	Purchase and Service	9,433.80
Metropolitan St. Louis Sewer District	1291	Sewer Service	61.89
Mellon Investments Corporation	1292	Investment	1,807.54
Mellon Investments Corporation	1293	Investment	1,965.35
Mellon Investments Corporation	1294	Investment	1,445.47
Midwest Elevator Co., Inc.	1295	Monthly Maintenance	364.32
Mitel	1296	Telephone Service	304.33
MRI Software LLC	1297	Intellica Work Order System	47.04
Office Essentials	1298	Office Supplies	6.92
SteadyRain	1299	Consulting Fee	1,200.00
Purchase Power	1300	Postage	1,050.00
Segal	1301	Consulting Fee	12,112.50
TCW Asset Management Company	1302	Management Fee	60,598.69
Susan Kane	1305	Travel Expenses	166.16
EARNEST Partners, LLC	1284	1st Quarter 2024 Management Fee	13,623.98
Fidelity Institutional Asset Mgmt. Trust Co.	1285	1st Quarter 2024 Management Fee	62,098.20
Westfield Capital Management Company, LP	1303	1st Quarter 2024 Management Fee	70,036.47
Xponance, Inc	1304	1st Quarter 2024 Management Fee	64,693.17
		<b>TOTAL</b>	<b>\$409,833.65</b>

Public School Retirement System of the City of St. Louis Checks Written During the Month of May, 2024			
<u>Payee</u>	<u>Ck. Number</u>	<u>Description</u>	<u>Amount</u>
<b>Date Paid May 3, 2024</b>			
Office Payroll	ACH	Office Payroll	11,720.55
AXA Equitable	ACH	457 Contributions	400.00
Integrated Payroll Services (IPS)	ACH	Payroll Processing Fee	64.87
<b>Date Paid May 6, 2024</b>			
Above All Personnel	1369	Temporary Staff	3,536.86
ACC Business	1370	Telephone Fiberoptics	608.66
Anders CPAs & Advisors	1371	Audit of Financial Statements	12,180.00
ActivTrak	1372	Annual Subscription	432.00
Buck Global, LLC	1373	Actuarial and Consulting Services	18,962.00
Charter Communications	1374	Internet and Voice	174.96
Full Care	1375	Snow and Ice Management	235.00
Husch Blackwell	1376	Legal Services	10,416.00
Intelica	1377	Maintenance	105.00
Office Essentials	1378	Office Supplies	1,349.27
Proshred St. Louis	1379	Document Shredding	60.00
St. Louis Mat & Linen Company	1380	Floor Mats	260.00
Scottish Rite Preservation	1381	January 2024 Parking - 2 Employees	146.00
Specialty Mailing	1382	Postage - Retiree Newsletter	210.00
Specialty Mailing	1383	Postage	76.05
Susan Kane	1384	Reimbursement - Postage & Chrome Enterprise	104.18
Causeway Capital Management LLC	1385	1st Quarter 2024 Management Fee	77,200.11
Manulife Investment Management U.S. LLC	1386	1st Quarter 2024 Management Fee	33,060.02
Systematic Financial Management, LP	1387	1st Quarter 2024 Management Fee	68,312.61
Board of Education St. Louis Benefits Trust	1388	Office Employees Insurance - Dental	186.83
Board of Education St. Louis Benefits Trust	1389	Office Employees Insurance - Vision	11.85
Board of Education St. Louis Benefits Trust	1390	Office Employees Insurance - Life	191.30
<b>Date Paid May 10, 2024</b>			
Ameren Missouri	1391	Electric Service	1,828.23
Charter Communications	1392	Internet and Voice	174.96
Intelica	1393	Maintenance	385.00
Midwest Elevator Co., Inc.	1394	Monthly Maintenance	364.32
Office Essentials	1395	Office Supplies	110.74
Republic Services #346	1396	Trash Pick-Up	406.01
Specialty Mailing	1397	Retiree Newsletter Postage	1,309.19
Specialty Mailing	1398	Active Member Newsletter Postage	1,588.45
Angela Johnson	1399	Tuition Reimbursement	1,887.30
<b>Date Paid May 17, 2024</b>			
Office Payroll	ACH	Office Payroll	11,689.92
AXA Equitable	ACH	457 Contributions	400.00
Integrated Payroll Services (IPS)	ACH	Payroll Processing Fee	72.84
<b>Date Paid May 20, 2024</b>			
Above All Personnel	1400	Temporary Staff - Miata Reeves-Borne	3,657.98
Arthur J. Gallagher Risk Management Services, LLC	1401	AJG Administration Fee	15,000.00
Blade Technologies	1402	Professional Services	3,593.14
Buck Global, LLC	1403	Actuarial & Consulting Services - April 2024	14,849.50
Bug Out	1404	Pest Control Maintenance	50.00
BuildingStars Operations, Inc.	1405	Maintenance	945.00
Hartnett Reyes-Jones, LLC	1406	Legal Fees	9,282.50
Konica Minolta Business Solutions USA Inc.	1407	April Service for Copier C3601, C364E	280.64

Public School Retirement System of the City of St. Louis Checks Written During the Month of May, 2024			
<u>Payee</u>	<u>Ck. Number</u>	<u>Description</u>	<u>Amount</u>
Konica Minolta Business Solutions USA Inc.	1408	May Service for Copier C364E	41.13
Konica Minolta Business Solutions USA Inc.	1409	Meter Charges for Copier C364E	161.07
Metropolitan St. Louis Sewer District (MSD)	1410	Sewage	61.89
Mitel	1411	Telephone Service	13.10
The Segal Company (Midwest), Inc.	1412	PAS Request for Proposal	17,100.00
Specialty Mailing	1413	Daily Pick-Up	210.00
Specialty Mailing	1414	Postcard Printing	222.83
Specialty Mailing	1415	Envelope Printing	1,388.17
Vecmar Corporation	1416	Panini Vision One Check Scanner	365.00
The Edgar Lomax Company	1417	1st Quarter 2024 Management Fee	79,830.22
<b>Date Paid May 31, 2024</b>			
Office Payroll	ACH	Office Payroll	11,720.57
AXA Equitable	ACH	457 Contributions	400.00
Integrated Payroll Services (IPS)	ACH	Payroll Processing Fee	64.87
Louis Cross III	1452	Reimbursement 4/3/2024	170.18
Louis Cross III	1453	Reimbursement 3/5/2024	170.18
Louis Cross III	1454	Reimbursement 3/26/2024	202.47
Randy Elam	1455	Reimbursement	120.00
National Association of Securities Professionals (NASP)	1456	Conference - 4 Members	1,000.00
National Council on Teacher Retirement	1457	Conference - Susan Kane	1,590.00
Scottish Rite Cathedral Preservation Association, Inc	1458	Parking - May and June	292.00
Specialty Mailing	1459	Postcard Printing	1,865.54
Vecmar Computer Solutions	1460	Panini Vision One Check Scanner	365.00
<b>TOTAL</b>			<b>\$425,234.06</b>

# Public School Retirement System of the City of St. Louis, Missouri

## Actuarial Valuation Report

Plan Year

January 1, 2024 – December 31, 2024

June 2024

**BUCK**

A Gallagher Company

June 2024

Ms. Susan Kane  
*Executive Director*  
PSRS of the City of St. Louis  
3641 Olive Street, Suite 300  
St. Louis, MO 63108-3601

**Re: Actuarial Certification of January 1, 2024 Valuation**

Dear Members of the Public School Retirement System of the City of St. Louis Board:

Buck Global, LLC (Buck) has been retained to complete the actuarial valuation for the Public School Retirement System of the City of St. Louis ("System") for the plan year beginning January 1, 2024. The results of that valuation are included in this report.

The computations herein were performed as of January 1, 2024. They were determined on the basis of employee data and financial data furnished as of January 1, 2024 and December 31, 2023, respectively, by System staff. The actuary did not verify the data submitted but did perform tests for consistency and reasonableness.

The purposes of the valuation are to:

- (1) determine the required annual contributions from the board of education, the retirement system, and the charter schools; and
- (2) present the valuation results of the System as of January 1, 2024.

This report is submitted in accordance with Section 169.450-16 Revised Statutes of Missouri (R.S. Mo.). The required contribution to the System from the board of education, the retirement system, and the charter schools is computed in accordance with Section 169.490 R.S. Mo. The amount of the required contribution is stated in Section 1.2: Required Annual Contribution. Information with respect to financial disclosures under GASB 67 and 68 may be found in a separate report.

In preparing this valuation, we have employed generally accepted actuarial methods and assumptions, in conjunction with member data and financial information provided to us by the System, to determine a reasonable and sound value for the System liability. The member data has not been audited, but it has been reviewed and found to be consistent, both internally and with prior years' data. The validity of the valuation results is dependent upon the accuracy of the data and financial information provided.

In our opinion, the actuarial assumptions used are reasonable, taking into account the experience of the System and reasonable long-term expectations. In our professional judgement, the combined effect of the assumptions is expected to have no significant bias. The actuary performs an analysis of System experience periodically and recommends changes if, in the opinion of the actuary, assumption changes are needed to more accurately reflect expected future experience. The Experience Study for the period January 1, 2016 to December 31, 2020 was prepared by Buck and approved by the Board for use beginning with the January 1, 2022 actuarial valuation and will remain in effect for valuation purposes until such time as the Board adopts revised assumptions. The next Experience Study will be based on the period from January 1, 2021 to December 31, 2025 and upon approval by the Board will

be the basis of valuations performed from January 1, 2026 through January 1, 2031. A summary of all assumptions and methods is presented in Section 3.9 of this report.

Where presented, references to “funded ratio” and “unfunded accrued liability” typically are measured on an actuarial value of assets basis. It should be noted that the same measurements using market value of assets would result in different funded ratios and unfunded accrued liabilities. Moreover, the funded ratio presented is appropriate for evaluating the need and level of future contributions but makes no assessment regarding the funded status of the plan if the plan were to settle (i.e. purchase annuities) for a portion or all of its liabilities.

Future actuarial measurements may differ significantly from current measurements due to plan experience differing from that anticipated by the economic and demographic assumptions, increases or decreases expected as part of the natural operation of the methodology used for these measurements, and changes in plan provisions or applicable law. Because of limited scope, Buck performed no analysis of the potential range of such future differences.

Buck prepared this report for use by the Retirement System and its auditors in reviewing the operation of the System, including the determination of contributions to be made to the System. Use of this report by other parties or for any other purpose may not be appropriate and may result in mistaken conclusions due to failure to understand applicable assumptions, methodologies, or the inapplicability of the report for that purpose. Because of the risk of misinterpretation of actuarial results, Buck recommends requesting its advance review of any statement, document, or filing to be based on information contained in this report. Buck will accept no liability for any such statement, document or filing made without its prior review.

Actuarial Standards of Practice (“ASOPs”) 27 and 35 ask the actuary to disclose the information and analysis used to support the actuary’s determination that the assumptions selected by the Board do not significantly conflict with what, in the actuary’s professional judgment, are reasonable for the purpose of the measurement. In the case of the Board’s selection of expected return on assets (“EROA”), the signing actuaries have used economic information and tools provided by Buck’s Financial Risk Management (“FRM”) practice. A spreadsheet tool created by the FRM team converts averages, standard deviations, and correlations from Buck’s Capital Markets Assumptions (“CMA”) that are used for stochastic forecasting into approximate percentile ranges for the arithmetic and geometric average returns. It is intended to suggest possible reasonable ranges for EROA without attempting to predict or select a specific best estimate rate of return. It takes into account the duration (horizon) of investment and the target allocation of assets in the portfolio to various asset classes. Based on the actuary’s analysis, including consistency with other assumptions used in the valuation and the percentiles generated by the spreadsheet described above, the actuary believes the EROA does not significantly conflict with what, in the actuary’s professional judgment, is reasonable for the purpose of the measurement.

Actuarial Standard of Practice No. 56 provides guidance to actuaries when performing actuarial services with respect to designing, developing, selecting, modifying, using, reviewing, or evaluating models. Buck uses third-party software in the performance of annual actuarial valuations and projections. The model is intended to calculate the liabilities associated with the provisions of the plan using data and assumptions as of the measurement date under the funding rules specified in this report. The output from the third-party vendor software is used as input to an internally developed model that applies applicable funding rules to the derived liabilities and other inputs, such as plan assets and contributions, to generate many of the exhibits found in this report. Buck has an extensive review process in which the results of the liability calculations are checked using detailed sample life output, changes from year to year are summarized by source, and significant deviations from expectations are investigated. Other funding outputs and the internal model are similarly reviewed in detail and at a higher level for accuracy, reasonability, and consistency with prior results. Buck also reviews the third-party model when significant changes are made to the software. This review is performed by experts within Buck who are familiar with applicable funding rules, as well as the manner in which the model generates its output. If significant changes are made to the internal model, extra checking and review

are completed. Significant changes to the internal model that are applicable to multiple clients are generally developed, checked, and reviewed by multiple experts within Buck who are familiar with the details of the required changes.

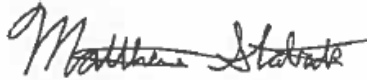
The undersigned meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein, and are available to answer questions regarding this report.

We believe that the assumptions and methods used for funding purposes are individually and in aggregate, a reasonable representation of anticipated experience under the plan and meet the parameters set by the Actuarial Standards of Practice (ASOPs). We believe that this report conforms with the requirements of the Missouri statutes, and where applicable, other federal and accounting laws, regulations and rules, as well as actuarial principles and practices in accordance with all ASOPs.

Sincerely,



Michael A. Ribble, FSA, EA, MAAA, FCA  
Principal, Wealth Consulting



Matthew Staback, FSA, EA, MAAA, CERA, FCA  
Senior Consultant, Wealth Consulting

Buck Global, LLC (Buck)

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# Report Highlights

This report has been prepared by Buck to:

- Present the results of a valuation of the Public School Retirement System of the City of St. Louis (“System”) as of January 1, 2024; and
- Determine the required annual contribution for 2025.

This report is divided into four sections:

Section 1 contains the results of the valuation. It includes the experience of the System during the 2023 plan year, the actuarially required costs, and funded levels.

Section 2 contains asset information. It includes market value of assets, the calculation of actuarial value of assets, the expense & contingency reserve, and asset returns.

Section 3 describes the basis of the valuation. It summarizes the System provisions, provides information relating to the System members, and describes the funding methods and actuarial assumptions used in determining liabilities and costs. Also included is historical information about the System.

Section 4 contains the Actuarial Standards of Practice (ASOP) 51 disclosure and the Low-default Risk Obligation Measure required by ASOP 4. This section will provide insight of potential risks to the system.

## Experience Gains and Losses

Actuarial gains (or losses) result from differences between the actual experience of the System and the expected experience based upon the actuarial assumptions. Annual gains (or losses) should be expected because short-term deviations from expected long-term average experience are common.

For the 2023 plan year, total (net) actuarial loss due to plan experience was about \$54.3 million. The experience may be broken into three components:

1. **Investment:** Approximately \$39.8 million loss is attributable to the System’s actuarial value of assets (AVA) rate of return on assets, which was 2.91% for plan year 2023, or 4.09% lower than the assumed rate of return of 7.0%. The loss resulted from returns being lower than expected. Even though the Plan saw a market value return of 10.29% during 2023, the large 2022 loss is still being recognized, resulting in the AVA return being below the expected 7.0%.
2. **Actuarial Liability:** Approximately \$15.0 million loss is attributable to the demographic experience of the Plan. The Plan experienced higher than expected reported compensation during 2023, which was the main source of the loss. However, the Plan’s total liability loss was reduced by actuarial gains resulting from higher-than-expected number of reported deaths during 2023.
3. **Other:** The Plan recognizes other gain/losses in addition to investment and actuarial liability through actual versus expected contributions and expense & contingency reserve. Approximately \$0.6 million gain is attributable to the Plan’s expense & contingency reserve experience, which resulted from the actual expense & contingency reserve being lower-than-expected. However, the Plan experienced a \$0.1 loss from contributions due to actual contributions being lower-than-expected.

## Actuarial Assumption and Method Changes

For the 2024 valuation, no assumptions or methods were changed. A detailed description of the actuarial assumptions and methods appears in section 3.9.

## Normal Cost

The annual normal cost contribution with an interest adjustment increased from \$24.8 million in 2023 to \$26.3 million in 2024. This increase is primarily due to the large increase in covered payroll and increase in active population. Covered payroll increased from \$285.9 million to \$308.1 million. The annual normal cost rate as a percentage of covered payroll decreased from 8.66% in 2023 to 8.55% in 2024.

## Amortization Payment of Unfunded Actuarial Accrued Liability

The actuarial accrued liability contribution is determined as the amount necessary to amortize the remaining Unfunded Actuarial Accrued Liability (UAAL). The Plan implemented a 15-year, level dollar, closed amortization period with layered amortization for future changes as of January 1, 2022. The initial UAAL as of January 1, 2022 will be paid off in 15 years from initial payment. Any deviations in UAAL due to actuarial gains and losses, assumptions changes, and plan amendments will be amortized over a new 15-year period. The total amortization payment with an interest adjustment increased from \$37.9 million to \$43.6 million. A detailed description of the layered amortization payments can be seen in section 1.3. The amortization payment component of the contribution rate increased from 13.24% to 14.16% of covered payroll. Under the plan's funding policy to determine the Actuarially Determined Contribution (ADC), we expect the ADC to increase as a percentage of covered payroll in the near term due to the recognition of the 2022 asset loss assuming no future gains or losses. After the 2022 asset loss is fully recognized, future ADC amounts are expected to decline as a percentage of payroll until after 18 years (three additional years of 2022 asset loss recognition, plus 15 years of amortization of the last year of recognition of the 2022 asset loss) when the unfunded is fully paid and then remain level as a percent of payroll. Absent future gains and losses and assuming the plan sponsor contributes the actuarially determined contribution, the funded status of the pension trust is expected to increase to 100% in 18 years (three additional years of 2022 asset loss recognition, plus 15 years of amortization of the last year of recognition of the 2022 asset loss). To the extent statutory contribution rates are less than ADC rates, additional actuarial losses will increase future ADC rates.

## Actuarially Determined Employer Contribution

The Actuarially Determined Employer Contribution (ADEC) is determined annually and equals the normal cost with an interest adjustment plus the Amortization Payment of UAAL with an interest adjustment less expected member contributions. Expected member contributions for 2024 were 8.77% of covered payroll. For plan year 2024, the actuarially determined employer contribution is \$43.0 million as compared to \$38.3 million for plan year 2023. This increase is primarily due to the recognition of the 2022 loss and payroll being higher than expected. The total employer cost rate increased from 13.41% to 13.94% due to the changes described above.

The Actuarially Determined Contribution and Actuarially Determined Employer Contribution shown in this report are compliant with the definition of a reasonable actuarially determined contribution under ASOP 4 Section 3.21. The balance among benefit security, intergenerational equity, and stability or predictability of actuarially determined contributions, the timing and duration of expected benefit payments, the nature and frequency of plan amendments, and relevant input from the principal were taken into account when determining the actuarial cost method, smoothing period for the actuarial value of assets and the amortization period for any unfunded actuarial accrued liability.

## Required contribution and timing

In 2001, the Board of Education agreed to institute a one-year lag for payments of the annual required contributions due from SLPS for future years. Therefore, this actuarial valuation is used to determine the annual required contribution (ARC) payment from SLPS for plan year 2024, due to the Plan no later than December 31, 2025. Due to legislation passed August 28, 2017, the contribution rate is set as a fixed percentage rather than an actuarially determined percentage. Because of the statutory required contribution rate, the dollar amount of the ARC due from SLPS no later than December 31, 2025 increased from \$25.0 million for plan year 2023 to \$25.7 million for plan year 2024. The increase in statutory required contribution amount resulted from a higher covered compensation in 2024 compared to 2023.

As a percentage of covered payroll in plan year 2024, the contribution rate decreased from 13.50% for plan year 2023 to 13.00% for plan year 2024. Charter Schools pay both employer and member contributions as they occur shortly after each payroll period; therefore, this actuarial valuation is used to determine the contribution rate of 13.00% that Charter Schools should be paying beginning with payroll periods ending on or after January 1, 2024.

# Summary and Comparison of Principal Valuation Results

## Annual Required Contribution

	Board of Education	Retirement System	Charter Schools	Total
<b>2024</b>				
Normal Cost Contribution	\$ 16,892,938	\$ 52,662	\$ 9,403,155	\$ 26,348,755
Actuarial Accrued Liability Contribution	27,975,654	87,211	15,572,153	43,635,018
Member Contributions	<u>(17,329,493)</u>	<u>(54,023)</u>	<u>(9,646,155)</u>	<u>(27,029,671)</u>
Actuarially Determined Employer Contribution (ADEC)	\$ 27,539,099	\$ 85,850	\$ 15,329,153	\$ 42,954,102
Covered Payroll	\$ 197,538,920	\$ 615,805	\$ 109,956,545	\$ 308,111,270
ADEC as % of Covered Payroll	13.94%	13.94%	13.94%	13.94%
Statutory Required Contribution Rate	13.00%	13.00%	13.00%	13.00%
Statutory Annual Required Contribution (ARC)	\$ 25,680,060	\$ 80,055	\$ 14,294,351	\$ 40,054,466
<b>2023</b>				
Normal Cost Contribution	\$ 16,026,862	\$ 53,182	\$ 8,676,410	\$ 24,756,454
Actuarial Accrued Liability Contribution	24,515,502	81,350	13,271,877	37,868,729
Member Contributions	<u>(15,723,981)</u>	<u>(52,177)</u>	<u>(8,512,440)</u>	<u>(24,288,598)</u>
Actuarially Determined Employer Contribution (ADEC)	\$ 24,818,383	\$ 82,355	\$ 13,435,847	\$ 38,336,585
Covered Payroll	\$ 185,118,414	\$ 614,280	\$ 100,216,947	\$ 285,949,641
ADEC as % of Covered Payroll	13.41%	13.41%	13.41%	13.41%
Statutory Required Contribution Rate	13.50%	13.50%	13.50%	13.50%
Statutory Annual Required Contribution (ARC)	\$ 24,990,986	\$ 82,928	\$ 13,529,288	\$ 38,603,202

	January 1, 2024	January 1, 2023
<b>System Assets</b>		
Expense and Contingency Reserve	\$ 12,837,383	\$ 12,582,184
Market Value, Excluding Expense & Contingency Reserve	\$ 835,332,532	\$ 805,285,795
Actuarial Value	\$ 916,023,414	\$ 940,664,216
<b>System Liabilities</b>		
Unfunded Actuarial Accrued Liability (UAAL)	\$ 382,566,491	\$ 343,375,959
Entry Age Normal (EAN) Actuarial Accrued Liability	\$ 1,298,589,905	\$ 1,284,040,175
<b>EAN Funding Ratio</b>		
Actuarial Value Funding Ratio	70.5%	73.3%
Market Value Funding Ratio	64.3%	62.7%

# Analysis of the Valuation

## (1) Investment Experience

Our actuarial calculations were based upon the assumption that the System's assets earn 7.00% for 2023. The approximate market value rate of return during 2023 was 10.29%. The approximate actuarial value rate of return was 2.91%. The actuarial value rate of return accounts for the Plan's loss on assets in 2023 being smoothed over the next 5 years' valuations.

## (2) Demographic Experience

The number of active members increased from 4,940 to 5,000 for the period. The average service of active members increased from 7.7 to 7.9, the average age increased slightly, and the average covered payroll increased by \$3,737 (6.5%). There were small changes in the inactive statistics. The membership statistics are provided in Sections 3.3 through 3.8 of this report.

## (3) Salary Increases

The average covered payroll increased by 6.5% between January 1, 2023 and January 1, 2024. Total annual covered payroll increased by 7.8% between January 1, 2023 and January 1, 2024.

## (4) Changes in Methods from the Prior Valuation

There have been no changes in methods since the prior valuation.

## (5) Changes in Assumptions from the Prior Valuation

There have been no changes in assumptions since the prior valuation.

## (6) Changes in Benefit Provisions from the Prior Valuation

There have been no changes in benefit provisions since the prior valuation.

## (7) Other Changes

There have been no other changes since the prior valuation.

## (8) Summary

The overall effect of experience during the period resulted in a decreased change in the Entry Age Normal funding ratio utilizing the actuarial value of assets from 73.3% to 70.5%. The total actuarially determined contribution rate increased from 13.41% to 13.94% of covered payroll.

## (9) Comments on the Valuation

The Plan experienced an investment loss due to unfavorable returns in 2022. However, the Plan was able to limit the volatility of the actuarially determined employer contributions (ADEC) and funded status with the Plan's actuarial value of assets, which smooth gains and losses over a 5-year period. Although the Plan experienced favorable returns in 2023, the gains were not enough to outpace the 2022 loss. Unless favorable asset returns occur in upcoming years, the Plan should anticipate the ADEC to increase and funded status to decrease as the deferred loss from the 2022 asset experience will continue to be smoothed into the actuarial value of assets.

# Section 1 - Valuation Results

This section sets forth the results of the actuarial valuation.

- Section 1.1 Determination of Actuarially Determined Employer Contributions (ADEC)
- Section 1.2 Required Annual Contribution
- Section 1.3 Amortization Schedule
- Section 1.4 Development of Actuarial Experience Gain (Loss)
- Section 1.5 Actuarial Balance Sheet as of January 1, 2024
- Section 1.6 Prioritized Solvency Test
- Section 1.7 Schedule of Funding Progress

## Section 1 (continued)

### 1.1 Determination of Actuarially Determined Employer Contributions (ADEC)

	<u>2024</u>	<u>2023</u>
A. Number of Participants		
Active	5,000	4,940
Tier 1 Active	1,923	2,137
Tier 2 Active	3,077	2,803
In Pay Status	4,226	4,310
Retirees	3,779	3,846
Beneficiaries	254	260
Disabled	193	204
Deferred Vested	1,025	1,002
Nonvested with Balance	<u>3,810</u>	<u>3,566</u>
TOTAL	14,061	13,818
B. Covered Payroll	\$ 308,111,270	\$ 285,949,641
Tier 1: Members Hired prior to January 1, 2018	140,068,773	144,687,034
Tier 2: Members Hired on or after January 1, 2018	168,042,497	141,262,607
C. Annual Benefits Payable to Retired Participants and Beneficiaries	\$ 103,359,431	\$ 104,746,239
D. Actuarial Liability - Entry Age Normal		
Active	\$ 384,942,594	\$ 351,990,366
In Pay Status	\$ 845,699,029	\$ 867,806,864
Retirees	798,507,042	818,478,133
Beneficiaries	21,125,354	22,010,643
Disabled	26,066,633	27,318,088
Deferred Vested	48,023,224	46,306,207
Nonvested with Balance	<u>19,925,058</u>	<u>17,936,738</u>
TOTAL	\$1,298,589,905	\$1,284,040,175
E. Plan Assets - Actuarial Value	\$ 916,023,414	\$ 940,664,216
F. Entry Age Normal Unfunded Actuarial Accrued Liability (D. - E.)	\$ 382,566,491	\$ 343,375,959
G. Entry Age Normal Funded Ratio (D. / E.)	70.5%	73.3%
H. Total Normal Cost	\$ 25,472,303	\$ 23,932,967
I. Total Normal Cost with Interest Adjustment	\$ 26,348,755	\$ 24,756,454
As a Percentage of Covered Payroll (I. / B.)	8.55%	8.66%
J. Amortization Payment of Unfunded Actuarial Accrued Liability	\$ 42,183,564	\$ 36,609,082
K. Amortization Payment with Interest Adjustment	\$ 43,635,018	\$ 37,868,729
As a Percentage of Covered Payroll (K. / B.)	14.16%	13.24%
L. Actuarially Determined Contributions (I. + K.)	\$ 69,983,773	\$ 62,625,183
M. Expected Member Contributions <sup>1</sup>	\$ 27,029,671	\$ 24,288,598
As a Percent of Covered Payroll (M. / B.)	8.77%	8.49%
N. Actuarially Determined Employer Contribution (L. - M.)	\$ 42,954,102	\$ 38,336,585
As a Percentage of Covered Payroll	13.94%	13.41%

<sup>1</sup>Tier 1 Expected Member Contributions are 8.5% in 2024 and 8.0% in 2023. Tier 2 Contributions are 9.0% in 2024 and 2023.

## Section 1 (continued)

### 1.2 Required Annual Contribution

Actuarially Determined Employer Contribution (ADEC):

	Board of Education	Retirement System	Charter Schools	Total
Normal Cost Contribution	\$ 16,892,938	\$ 52,662	\$ 9,403,155	\$ 26,348,755
Actuarial Accrued Liability Contribution	27,975,654	87,211	15,572,153	43,635,018
Member Contributions	<u>(17,329,493)</u>	<u>(54,023)</u>	<u>(9,646,155)</u>	<u>(27,029,671)</u>
ADEC	\$ 27,539,099	\$ 85,850	\$ 15,329,153	\$ 42,954,102
Covered Payroll	\$ 197,538,920	\$ 615,805	\$ 109,956,545	\$ 308,111,270
ADEC as % of Covered Payroll	13.94%	13.94%	13.94%	13.94%

Statutory Annual Required Contribution (ARC):

	Board of Education	Retirement System	Charter Schools	Total
Covered Payroll	\$ 197,538,920	\$ 615,805	\$ 109,956,545	\$ 308,111,270
ARC as % of Covered Payroll	13.00%	13.00%	13.00%	13.00%
Statutory Annual Required Contribution (ARC)	\$ 25,680,060	\$ 80,055	\$ 14,294,351	\$ 40,054,466

## Section 1 (continued)

### 1.3 Amortization Schedule

Date Established	Original Base	Outstanding Balance 1/1/2023	Amortization (Gain)/Loss	Outstanding Balance 1/1/2024	Amortization (Gain)/Loss	Remaining Years
January 1, 2022	\$ 336,645,221	\$ 323,248,550	\$ 34,543,772	\$ 308,914,112	\$ 34,543,772	13
January 1, 2023	20,127,409	20,127,409	2,065,310	19,326,446	2,065,310	14
January 1, 2024	54,325,933	0	0	54,325,933	5,574,482	15
Total				\$ 382,566,491	\$ 42,183,564	

## Section 1 (continued)

### 1.4 Development of Actuarial Experience Gain (Loss)

<b>A. Asset gain (loss)</b>	
1 Actuarial Value of Assets 1/1/2023	\$ 940,664,216
2 Contributions (Total)	62,547,610
3 Benefit payments	(112,122,039)
4 Interest on (1), (2), and (3) at 7.00%	<u>64,140,736</u>
5 Expected Actuarial Value of Assets as 1/1/2024	\$ 955,230,523
6 Change in Actuarial Value of Assets due to Change in Expense and Contingency Reserve	625,554
7 Expected Actuarial Value of Assets as of 1/1/2024	955,856,077
8 Actual Actuarial Value of Assets as of 1/1/2024	916,023,414
9 Gain (loss) due to assets: (8) - (7)	\$ (39,832,663)
<b>B. Liability gain (loss)</b>	
1 Actuarial Liability as of 1/1/2023	\$ 1,284,040,175
2 Normal cost as of 1/1/2023	23,932,967
3 Benefit payments	(112,122,039)
4 Interest on (1), (2), and (3) at 7.00%	<u>87,700,220</u>
5 Expected actuarial liability as of 1/1/2024	\$ 1,283,551,323
6 Actual actuarial liability as of 1/1/2024	1,298,589,905
7 Gain (loss) due to liabilities: (5) - (6)	\$ (15,038,582)
<b>C. Contribution gain (loss)</b>	
1 Expected Employer and Employee Contributions with interest	\$ 64,779,993
2 Actual Employer and Employee Contributions with interest	<u>64,699,751</u>
3 Gain (loss) due to contributions: (2) - (1)	\$ (80,242)
<b>D. Expense and Contingency Reserve gain (loss)</b>	
1 Expected Expense and Contingency Reserve	\$ 13,462,937
2 Actual Expense and Contingency Reserve	<u>12,837,383</u>
3 Gain (loss) due to expense and contingency reserve: (1) - (2)	\$ 625,554
<b>E. Total actuarial gain (loss): A + B + C + D</b>	<b>\$ (54,325,933)</b>

# Section 1 (continued)

## 1.5 Actuarial Balance Sheet as of January 1, 2024

### Actuarial Assets

Actuarial value of present assets	\$	916,023,414
Actuarial present value of future participant contributions		166,571,634
Actuarial present value of future employer contributions		<u>367,263,515</u>
Total present and future assets	\$	1,449,858,563

### Actuarial Liabilities

Actuarial present value of benefits now payable	\$	845,699,029
Actuarial present value of benefits payable in the future:		
Active participants	\$	536,211,252
Terminated vested participants		48,023,224
Terminated nonvested participants		19,925,058
Total payable in the future		<u>604,159,534</u>
Total liabilities for benefits	\$	1,449,858,563
Surplus / (deficit)		0

## Section 1 (continued)

### 1.6 Prioritized Solvency Test

Valuation Date	Active Participants' Accumulated Contributions	Retirees, Beneficiaries and Inactive Participants	Active Participants (employer-financed)	Actuarial Value of Assets	Percent of Present Value Covered by Valuation Assets		
	(1)	(2)	(3)		(1)	(2)	(3)
January 1							
1999	\$ 130,705,014	\$ 276,290,128	\$ 303,953,494	\$ 694,250,672	100%	100%	95%
2000	129,398,364	353,852,977	288,213,016	770,090,498	100%	100%	100%
2001	127,086,325	414,052,293	269,590,438	828,097,298	100%	100%	100%
2002	116,506,785	476,104,516	372,221,726	861,128,076	100%	100%	72%
2003	115,570,837	492,633,382	361,818,972	873,260,102	100%	100%	73%
2004	106,021,476	528,287,121	364,459,284	901,996,455	100%	100%	73%
2005	89,710,662	518,880,414	368,306,240	935,328,638	100%	100%	89%
2006	90,001,111	661,353,685	319,920,373	983,828,243	100%	100%	73%
2007	96,223,413	712,467,372	305,409,824	1,003,428,983	100%	100%	64%
2008	98,112,123	781,006,957	249,244,208	1,014,923,381	100%	100%	54%
2009	104,576,264	801,995,237	187,035,147	963,851,408	100%	100%	31%
2010	110,054,510	805,831,292	195,185,151	950,709,944	100%	100%	18%
2011	103,178,297	842,643,351	169,510,764	944,356,735	100%	100%	0%
2012	116,268,566	850,498,527	189,084,439	925,389,359	100%	95%	0%
2013	120,355,959	849,412,565	190,553,739	914,494,335	100%	93%	0%
2014	114,092,991	896,477,122	164,014,835	922,922,386	100%	90%	0%
2015	116,755,946	892,626,625	156,682,397	926,905,797	100%	91%	0%
2016	120,507,482	887,757,927	157,501,063	915,391,079	100%	90%	0%
2017	122,746,557	933,916,821	166,666,305	901,076,683	100%	83%	0%
2018	122,241,799	935,005,411	178,661,824	899,816,911	100%	83%	0%
2019	126,636,422	932,068,226	179,448,673	886,156,011	100%	81%	0%
2020	130,619,480	934,865,605	176,132,159	888,759,194	100%	81%	0%
2021	135,068,312	928,763,007	157,461,633	894,251,149	100%	82%	0%
2022 <sup>2</sup>	137,779,168	940,721,438	201,346,468	943,201,853	100%	86%	0%
2023	152,726,632	932,049,809	199,263,734	940,664,216	100%	85%	0%
2024	166,571,634	913,647,311	218,370,960	916,023,414	100%	82%	0%

<sup>2</sup>Prioritized Solvency Test reflects Entry Age Normal effective January 1, 2022. Years prior to 2022 used Projected Unit Credit

## Section 1 (continued)

### 1.7 Schedule of Funding Progress

Plan Year	Actuarial Value of Assets (AVA) (a)	Actuarial Accrued Liability (AAL) (b)	Unfunded AAL (UAAL) (b - a)	Funded Ratio (a/b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll ((b-a) / c)
1/1/2015	\$ 926,905,797	\$ 1,192,678,372	\$ 265,772,575	77.7%	\$ 245,699,583	108.2%
1/1/2016	915,391,079	1,196,846,239	281,455,160	76.5%	252,127,288	111.6%
1/1/2017	901,076,683	1,258,219,995	357,143,312	71.6%	260,223,066	137.2%
1/1/2018	899,816,911	1,266,012,715	366,195,804	71.1%	265,773,659	137.8%
1/1/2019	886,156,011	1,268,885,279	382,729,268	69.8%	263,772,380	145.1%
1/1/2020	888,759,194	1,274,573,564	385,814,370	69.7%	272,973,377	141.3%
1/1/2021	894,251,149	1,257,782,934	363,531,785	71.1%	264,676,845	137.3%
1/1/2022 <sup>3</sup>	943,201,853	1,279,847,074	336,645,221	73.7%	259,440,417	129.8%
1/1/2023	940,664,216	1,284,040,175	343,375,959	73.3%	285,949,641	120.1%
1/1/2024	916,023,414	1,298,589,905	382,566,491	70.5%	308,111,270	124.2%

<sup>3</sup>Actuarial Accrued Liability (AAL) method changed from Frozen Entry Age to Entry Age Normal level percent of pay effected January 1, 2022. AAL shown in the Schedule of Funding Progress table above is on an Entry Age Normal level percentage of pay actuarial cost method for all years.

## Section 2 - Valuation of the System's Assets

This section of the report shows the development of the actuarial value of the assets of the System and provides information regarding the expense and contingency reserve, investment results and the various assets of the System.

The amount of assets used in the actuarial valuation is known as the "actuarial value of assets." The method is discussed in the summary of methods and assumptions, section 3.9. The development of the actuarial value of assets is shown in section 2.1. An important element in the development of the actuarial value of assets is the expense and contingency reserve. The amount of the reserve is determined pursuant to a policy adopted by the Board of Trustees. The history of the reserve is presented in section 2.2. A summary of member census information for the expense and contingency reserve can be found in section 3.5.

As shown in section 2.3, the fund had a rate of return of 2.91% on an actuarial value basis, which is 4.09% below the assumed rate of return of 7.00% for plan year 2023. The rate of return on an actuarial value basis is intended to be a more stable rate of return and fluctuate less than rates of return on a market value basis. The rate of return on an actuarial basis is not always a fair measure of the annual investment performance of the fund. Another indicator of actual performance during the year is the rate of return on a market value basis which was 10.29% for plan year 2023, also presented in section 2.3.

## Section 2 (continued)

### 2.1 Development of the Actuarial Value of Assets

A.	Market value of assets (MVA) on January 1, 2023	\$	817,867,979
B.	Member Contributions		24,617,494
C.	Employer Contributions		37,930,116
D.	Benefits paid		(112,122,039)
E.	Administrative Expenses		(1,665,012)
F.	Investment return (net of investment expenses only)		81,541,377
G.	Market value of assets on January 1, 2024		848,169,915
H.	Expense and Contingency Reserve as of January 1, 2024		12,837,383
I.	MVA on January 1, 2024 minus Expense & Contingency Reserve (G. - H.)		835,332,532
J.	Yield for the 2023 plan year based upon Market Value of Assets		10.29%
K.	Expected Return on Assets	\$	55,487,710
L.	Gain/(Loss)		
(a)	2023	\$	26,053,667
(b)	2022		(169,223,026)
(c)	2021		N/A
(d)	2020		N/A
(e)	2019		N/A
M.	Amount to be Recognized		
(a)	2023	\$	5,210,733
(b)	2022		(33,844,605)
(c)	2021		N/A
(d)	2020		N/A
(e)	2019		N/A
N.	Amount not Recognized		
(a)	2023 (La x 4/5)	\$	20,842,934
(b)	2022 (Lb x 3/5)		(101,533,816)
(c)	2021 (Lc x 2/5)		N/A
(d)	2020 (Ld x 1/5)		N/A
(e)	2019 (Le x 0/5)		N/A
(f)	Total		(80,690,882)
O.	Actuarial value of assets at January 1, 2024, (I) - (Nf)	\$	916,023,414
P.	Minimum Corridor of Actuarial Value of Assets (80% x I.)		668,266,026
Q.	Maximum Corridor of Actuarial Value of Assets (120% x I.)		1,002,399,038
R.	Actuarial value of assets at January 1, 2024 adjusted for limits	\$	916,023,414
S.	Yield for the 2023 plan year based upon the Actuarial Value of Assets		2.91%

## Section 2 (continued)

### 2.2 The Expense and Contingency Reserve

Effective January 1, 1996, the Board of Trustees revised Rule X, which governs the determination of the amount of the expense and contingency reserve. The expense portion of the reserve is the sum of:

1. The estimated annual operating expenses for the ensuing year;
2. An amount equal to the liability for non-insurance supplements;
3. An amount equal to the liability for insurance supplements for those participants participating in the program on January 1; and
4. The estimated amount of insurance supplements to be paid for participants expected to retire and participate in the program during the ensuing year.

The investment contingency portion of the reserve was established to help cover significant shortfalls in the actuarial rate of return. However, the entire contingency reserve was released in 2009.

Below is a history of the expense and contingency reserve:

January 1	Expense Reserve	Investment Contingency Reserve	Total Expense and Contingency Reserve
1998	\$ 30,891,555	\$ 24,100,041	\$ 54,991,596
1999	22,142,759	45,972,067	68,114,826
2000	27,992,032	50,003,862	77,995,894
2001	29,837,776	50,003,743	79,841,519
2002	23,527,529	50,003,743	73,531,272
2003	24,952,255	37,759,976	62,712,231
2004	26,028,780	37,759,976	63,788,756
2005	27,170,188	45,115,876	72,286,064
2006	32,534,770	45,115,876	77,650,646
2007	29,864,976	50,732,410	80,597,386
2008	31,987,370	57,234,574	89,221,944
2009	30,555,388	0	30,555,388
2010	29,903,107	0	29,903,107
2011	29,480,465	0	29,480,465
2012	29,564,563	0	29,564,563
2013	29,181,897	0	29,181,897
2014	30,439,781	0	30,439,781
2015	29,868,370	0	29,868,370
2016	29,537,454	0	29,537,454
2017	30,921,897	0	30,921,897
2018	30,751,247	0	30,751,247
2019	30,776,068	0	30,776,068
2020	30,244,590	0	30,244,590
2021	30,004,728	0	30,004,728
2022	29,625,803	0	29,625,803
2023	12,582,184	0	12,582,184
2024	12,837,383	0	12,837,383

<sup>4</sup>Effective January 1, 2023, expense & contingency reserve is calculated based on cost information and participant enrollment provided from the Plan including renegotiated rates under Medical Advantage. See section 3.8 for full details.

# Section 2 (continued)

## 2.3 Investment Performance

There are several different methods of approximating the rates of return on investments of the trust fund. Following is a brief comparison of the actuarial assumed rate of return as compared with rates of return on market and actuarial value bases:

### a. Market Value Basis

The rate of return on a market value basis is the ratio of the appreciation (or depreciation) of assets less contributions plus disbursements to the market value at the beginning of the year plus the average of the receipts and disbursements made during the year. This may be approximated as follows:

i.	A = Market value of assets as of January 1, 2023	\$	817,867,979
ii.	B = Market value of assets as of January 1, 2024		848,169,915
iii.	C = Contributions during the period		62,547,610
iv.	D = Distributions during the period		113,787,051
v.	Rate of return: $\frac{B - A + D - C}{A + 0.5 * (C - D)}$		10.29%
vi.	Actuarial assumed rate of return for 2023		7.00%
vii.	Difference between actual and assumed rates of return (v) - (vi)		3.29%

### b. Actuarial Value Basis

The rate of return on an actuarial value basis is approximated using the same method:

i.	A = Actuarial value of assets as of January 1, 2023	\$	940,664,216
ii.	B = Actuarial value of assets as of January 1, 2024		916,023,414
iii.	C = Contributions during the period		62,547,610
iv.	D = Distributions during the period		113,787,051
v.	Rate of return: $\frac{B - A + D - C}{A + 0.5 * (C - D)}$		2.91%
vi.	Actuarial assumed rate of return for 2023		7.00%
vii.	Difference between actual and assumed rates of return (v) - (vi)		-4.09%

# Section 2 (continued)

## 2.4 Summary of Investment Yield Performance

January 1	Market Value of Assets (MVA)	Actuarial Value of Assets (AVA)	MVA Rate of Return	AVA Rate of Return
2017	\$ 850,180,422	\$ 901,076,683	5.31%	5.51%
2018	914,082,259	899,816,911	15.22%	6.85%
2019	819,449,893	886,156,011	-4.69%	4.50%
2020	893,295,602	888,759,194	16.10%	6.56%
2021	914,776,954	894,251,149	8.85%	7.04%
2022	972,827,656	943,201,853	12.51%	11.76%
2023	817,867,979	940,664,216	-10.87%	3.31%
2024	848,169,915	916,023,414	10.29%	2.91%

## Section 3 - Basis of the Valuation

In this section, the basis of the valuation is presented and described. This information – the provisions of the System and the census of members – is the foundation of the valuation, since these are the present facts upon which benefit payments will depend.

The effects of administering the System's plan provisions have a direct impact on actuarial costs. The System uses the entry age normal actuarial cost method calculated on page 8 for actuarial funding and actuarial financial reporting purposes.

A summary of the System's provisions is provided in Section 3.1, the legislative history of the System is provided in Section 3.2, and member census information is shown in Section 3.3 to Section 3.8.

The valuation is based upon the premise that the System will continue in existence, so that future events must also be considered. These future events are assumed to occur in accordance with the actuarial assumptions and concern such events as the earnings of the fund; the number of members who will retire, die or terminate their services; their ages at such termination and their expected benefits.

The actuarial assumptions and the actuarial cost method, or funding method, which have been adopted to guide the sponsor in funding the System in a reasonable and acceptable manner, are described in Section 3.9.

A guide to actuarial terminology used in this report is included as Section 3.10.

## Section 3 (continued)

### 3.1 Summary of Plan Provisions

#### Participants

All persons regularly employed by the board of education, charter schools, and members of the board of trustees are in the System.

#### Retirement age

Normal

Age 65 or any age if age plus the years of credited service equals or exceeds 80 (Rule of 80).

Early

Age 60 with 5 years of service

#### Service retirement allowance

- a. 2.00% (1.25% if terminated prior to July 1, 1999 or 1.75% if hired on or after January 1, 2018) times years of credited service, subject to a maximum of 60%
- b. Times average final compensation (AFC)
- c. Subject to a maximum of 60% of AFC.
  - i. AFC is the highest average compensation for any three consecutive years of the last 10 years of service.
  - ii. Compensation is the regular wages plus what the employer pays towards the participant's health and welfare benefits.
  - iii. Minimum monthly benefit is \$10.00 for each year of credited service, up to 15 years, retirement age 65 and over.
  - iv. Unused sick leave is added to a participant's credited service and age.

#### Early retirement benefit

Service retirement allowance reduced five-ninths of one percent for each month of commencement prior to age 65 or the age at which the Rule of 80 (Rule of 85 if terminated prior to August 28, 2017) would have been satisfied had the member continued working until that age, if earlier.

#### Disability benefit

Service retirement allowance using actual service, or 25% of AFC if larger, provided that in no case will the benefit exceed that payable if service had continued to age 65.

- a. Disability must be incurred while a member as determined by the medical board and approved by the board of trustees.
- b. The participant must have a minimum of five years of credited service and not be eligible for normal retirement.

Continued disability is subject to routine verification.

#### Withdrawal benefit

Accumulated contributions of participant with interest credited to the participant's account.

## Section 3 (continued)

### 3.1 Summary of Plan Provisions

#### Vested benefit

Full vesting on termination of employment after at least five years of service is provided if contributions are left with the System. The full accrued benefit is payable at age 65 or a reduced early retirement benefit prior to age 65.

#### Retirement options

In lieu of the benefit paid only over the lifetime of the participant, a reduced benefit payable for life of participant with:

- Option 1 Same retirement allowance continued after death to the beneficiary.
- Option 2 One-half of the retirement allowance continued after death to the beneficiary.
- Option 3 Same retirement allowance continued after death to the beneficiary. If the beneficiary predeceases the participant, the retirement allowance is adjusted back to the unreduced allowance.
- Option 4 One-half of retirement allowance continued after death to the beneficiary. If the beneficiary predeceases the participant, the retirement allowance is adjusted back to the unreduced allowance.
- Option 5 Increased retirement allowance is provided up to age 62, such that benefit provided prior to age 62 is approximately equal to the sum of the reduced retirement allowance paid after age 62 and Social Security.
- Option 6 Options 1 and 5 combined.
- Option 7 Options 2 and 5 combined.

#### Survivor benefits

If an active participant dies after completing 18 months of service, leaving a surviving spouse or other dependent beneficiaries, survivor benefits are payable. The widow or dependent beneficiary may elect to receive either a refund of accumulated contributions, or:

- a. A survivor who is the widow at least age 62 and married to a participant for at least one year receives \$60 per month.
- b. A widow with dependent, unmarried children under age 22 receives \$60 per month plus \$60 per dependent child, not to exceed \$180 per month. The benefit ceases when youngest child is age 22 and resumes again under (a) at age 62.
- c. If no benefits are payable under (a) or (b), minor children may receive a benefit of \$60 per child or \$180 divided among them if more than three children.
- d. If no benefits are payable under (a), (b) or (c), a dependent parent or parents may receive or share \$60 per month upon attaining age 62.

If an active participant dies after completing 5 years of service, the widow or dependent beneficiary may elect to receive either a refund of accumulated contributions or:

- a. If the survivor is the widow, a survivor benefit calculated as if the participant had been age 60 at death and elected Option 1, plus \$60 per dependent child not to exceed \$180 per month.
- b. If there is no widow, a survivor benefit calculated as if the participant had been age 60 at death and elected Option 1.

## Section 3 (continued)

### 3.1 Summary of Plan Provisions

#### Return of contributions upon death

If after the death of a participant, no further monthly benefits are payable to a beneficiary under an optional form of payment, or under the survivor benefit provisions, the participant's beneficiary shall be paid the excess, if any, of the participant's accumulated contributions over all payments made to or on behalf of the deceased participant.

#### DROP

Effective July 1, 2001, active participants may elect to enter the deferred retirement option plan (DROP) for up to four years. Upon entering the DROP, the participant's retirement benefit is frozen and credited to the participant's DROP account. At the end of the DROP, or upon earlier termination of employment, the DROP account is paid in a lump sum or installments, at the participant's option. During the DROP, the participant continues as an active participant, but does not pay contributions. To enter the DROP the participant must be age 65 or meet the Rule of 85. The DROP program is no longer available, ending June 30, 2008.

#### Contributions by participants

Participants hired before January 1, 2018 contribute 5.50% of compensation in 2018. This rate increases 0.50% per year until it reaches 9.00%. After this, the contribution rate will remain at 9.00% of compensation.

Participants hired on or after January 1, 2018 contribute 9.00% of compensation.

Accumulated contributions are credited at the rate of interest established by the board of trustees. The current crediting rate is 5% per year.

#### Contributions by employers

The employer contribution rate will be set at a flat 16.00% of covered payroll for Plan year 2018. This contribution rate shall be decreased by 0.50% in each subsequent Plan year until reaching 9.00% of covered payroll. After this, the employer contribution rate will remain at 9.00% of covered payroll.

#### Changes in Provisions from Prior Valuation

None.

## Section 3 (continued)

### 3.2 Legislative History of the Retirement System

On and after January 1, 1944, all persons employed by the board of education on a full-time permanent basis are participants of the System as a condition of employment. In 1961, provisions regarding benefits and member contribution levels were revised for all future members of the board of education. Participants of the System at that time were granted the right to remain under the "old plan" and have their membership governed by the provisions of the law in effect prior to 1961. These old plan participants have both benefits and contributions based on a \$3,000 maximum annual compensation. Old plan participants have been given the option to transfer into the revised plan at various times since 1961.

Effective October 13, 1969, legislation permitted the reinstatement of credited service lost during the years 1944 to 1947 inclusive when the married women teachers rule was in effect.

Effective August 31, 1972, legislation resulted in the following changes:

- Purchase of past service credit by paying contributions for service claimed plus interest.
- Service as extended substitute teacher.
- Service of re-employed participants lost on prior terminations.
- Service out-state Missouri and outside the state of Missouri.
- Service lost by those who elected to stay out of the retirement plan either temporarily or to date.
- Old plan participants who wished to become new plan participants could do so by paying the differential in participant contributions under the new and old plans, plus interest.
- Dependent beneficiary on death of participant before retirement but after age 60 or age 55 with 30 years service may receive option 1 benefit as if participant had retired under such option.
- A participant with five or more years of service and prior to age 65 may be retired with a disability benefit if the medical board certifies that such participant is mentally or physically totally incapacitated for further performance of duty.
- Minimum retirement benefit at age 65 or after 10 years service is \$50.00 per month.

On February 10, 1975, the Missouri Supreme Court handed down a decision supporting HB 613 (Section 169.585 of state statutes), which granted increased benefits to retired teachers. The increases apply to those teachers who retired after June 30, 1957, and prior to January 1, 1971. Technically, those retirees are retained as "advisors and supervisor" and receive a "salary" of \$5 per month for each year of service, with a maximum of \$75. This salary plus the regular retirement benefit cannot exceed \$150 per month. To the extent that assets are depleted because of this law, future district contributions will increase. Because these benefits are paid as "salaries," coming out of investment income along with other expenses of operation, there will be less money available for crediting of interest to the various funds at the end of the year.

## Section 3 (continued)

### 3.2 Legislative History of the Retirement System

Effective August 13, 1978 legislation resulted in the following changes:

- The service retirement allowance and projected service retirement allowance was changed to 1-1/4% of average final compensation per year of credited service. The participant's allowance plus his Social Security primary insurance amount could not exceed 80% of his average final compensation. Participants born before 1917 receive the larger of the allowances calculated under the new formula and the formula in effect immediately before it.
- Credited service no longer limited to a maximum of 35 years.
- Two new joint and survivor optional forms of payment were added which provide for the participant's pension to be adjusted back to his unreduced pension in the event his spouse predeceases him.
- Contributions from participants shall be 3% of compensation.
- End of period for purchasing prior service or outside service extended from December 31, 1973 to December 31, 1980. Deleted requirement of electing to purchase out-state or outside the state of Missouri service within one year of completing five years of credited service.
- Gives board of trustees the power to establish regulations, methods and factors that may be needed to calculate primary Social Security benefits.
- Dependent beneficiary on death of participant before retirement with five or more years of credited service may receive option 1 benefit as if the participant had retired under that option as of the date of his death.
- Allow retired educational secretaries to serve as part-time or temporary substitute educational secretary up to a maximum of 360 hours per school year without a reduction in the retired member's retirement allowance or requiring the retired members to contribute to the retirement system.

Effective September 28, 1979, legislation resulted in the following changes:

- Accumulated and unused days of sick leave shall be included in computing a participant's age and credited service at retirement.
- Participants who have attained age 62 and who have 30 or more years of credited service may retire and receive a service retirement allowance without reduction for early retirement. The early retirement reduction for participants who retire with 30 or more years of credited service but who have not attained age 62 on their retirement date shall be determined on the basis of the number of months by which their age at retirement is less than age 62.
- Benefits to survivors of a participant who dies while a member and after having at least 18 months of credited service are as follows:
  - (a) Surviving spouse age 62 or over: \$60 per month.
  - (b) Surviving spouse with unmarried dependent children under age 22: \$60 per month, plus \$30 per month for each eligible child, with a maximum of \$150 per month.
  - (c) Unmarried dependent children under age 22: \$60 per month for each eligible child, with a maximum of \$120 per month. This benefit is payable if the benefit in (b) is not payable.
  - (d) Dependent parent(s): \$60 per month, provided no benefits are payable under (a), (b) or (c) above.

## Section 3 (continued)

### 3.2 Legislative History of the Retirement System

Effective September 28, 1981, legislation resulted in the following changes:

- The provision limiting service retirement and projected service retirement allowances to 80% of average final compensation less Social Security was removed for future retirees.
- The minimum monthly benefit payable to participants retiring on or after age 65 with 10 or more years of service was increased to \$75.
- Old plan participants were extended the option to transfer into the current System by paying the difference in participant contributions plus interest. Such election to be made on or before December 31, 1984. Retired participants who retired prior to January 1, 1955, may be consultants at a "salary" equal to \$4 for each year of retirement prior to January 1, 1982. Total "salaries" as a "school consultant" and "special school advisor and supervisor" are limited to \$250 per month.
- The retirement system may contribute as part of its administrative expenses toward health, life and similar insurance for retirees.
- The actuarial cost method was changed from the "entry age cost method" to the "frozen entry age cost method." The period for amortizing "supplements" to the unfunded actuarial accrued liability was set at 50 years from the time the "supplement" is created.
- Several changes were made dealing with the administration and operation of the System.
- Investment powers were broadened.

Effective September 28, 1984, legislation resulted in the following changes:

- Dependent beneficiary on death of employed, active participant before retirement with five or more years of service may receive option 1 benefit as if the participant had attained age 55 (if less than 55 at his death) and had retired under option 1 as of the date of his death.
- In addition to the option 1 death benefit, a surviving spouse may receive \$30 per month for each unmarried dependent child, provided that the total benefit does not exceed the greater of \$150 or the option 1 benefit.
- Surviving spouse benefits do not cease on remarriage.
- Dependent children's benefits do not require that the child remain a full-time student.
- Participants retired on disability may elect to receive an actuarial equivalent benefit under options 1 through 4.
- Retired participants who retired on or after January 1, 1976, may be employed as school consultants and receive a salary and insurance benefits provided other retirants.

## Section 3 (continued)

### 3.2 Legislative History of the Retirement System

Effective August 13, 1986, legislation resulted in the following changes:

- A participant with 30 years of credited service who is between the ages of 55 and 62, upon certification by the board of education, is eligible for a supplemental early retirement benefit payable to age 62. This provision remains in effect until December 31, 1991.
- Benefits to a surviving spouse for dependent children are increased from \$30 to \$60 per month, with a maximum of \$240 per month, including the \$60 for the surviving spouse.
- Supplemental pay to retired participants employed as "school consultants" is increased by \$2 per month for each year between the participant's date of retirement and December 31, 1986

Effective June 19, 1987, legislation resulted in the following changes:

- Reinstated the option for "old plan" participants to elect "new plan" membership by paying the difference in contributions accumulated with interest.
- Increased the minimum benefit for participants retiring on or after age 65 to \$10 per month for each year of credited service, up to a maximum of 15 years.
- Several changes were made dealing with the accounting, administration, and operation of the System.

Effective August 13, 1988, legislation resulted in the following changes:

- Made provisions for children's benefits uniform, providing \$60 per month per child, up to a maximum of \$180 per month, under both subsections 169.460(13) and (15) survivor benefits.
- Supplemental pay to retired participants of \$2 per month for each year of retirement up to December 31, 1988.

Effective June 14, 1989, legislation resulted in the following changes:

- The maximum on compensation was removed.
- Average final compensation is based on the highest three consecutive years, rather than the highest five consecutive years.
- Participants may retire with unreduced benefits at any age, if their age plus credited service equals or exceeds 85 (the "Rule of 85").

Effective May 31, 1990, legislation resulted in the following change:

- Supplemental pay of \$2 per month for each year of retirement up to December 31, 1990.

Effective August 28, 1993, legislation resulted in the following change:

- Supplemental pay of \$3 per month for each year of retirement up to December 31, 1993.

## Section 3 (continued)

### 3.2 Legislative History of the Retirement System

Effective August 28, 1996, legislation resulted in the following changes:

- Provision was added for the purchase of service for certain periods of layoff.
- The investment trustee position was eliminated and the position of school administrator trustee was added.
- Cost-of-living increases for participants who retired prior to August 28, 1996, with at least 15 years of credited service. The cost-of-living increases are up to 3% in one year, with a cumulative maximum of 10%.
- The board of education is authorized to increase retirement benefits and the participant contribution rate, subject to several conditions.

Effective August 28, 1997, legislation resulted in the following change:

- Cost-of-living increases extended to participants who retired prior to August 28, 1997, with at least 15 years of credited service. The cost-of-living increases are up to 3% in one year, with a cumulative maximum of 10%.

In accordance with the statutory authority granted the board of education in 1996, the board of education made the following changes:

- Participant contributions were increased to 4.5%, effective July 1, 1998; to 5.0%, effective July 1, 1999; and, if necessary to 5.5%, effective July 1, 2000.
- The service retirement allowance was changed to 2.00% of average final compensation per year of credited service, subject to a maximum of 60% of average final compensation, effective for participants who retired after June 29, 1999.
- A “catch-up” cost-of-living adjustment (COLA) is provided for participants who retired prior to June 30, 1999, and survivors of participants who retired or died prior to June 30, 1999. The amount of the “catch-up” COLA is equal to 65% of the amount by which the participant’s original benefit would have increased due to increases in the CPI, in excess of any supplements or COLA increases being received by the participant. The “catch-up” COLA is effective July 1, 2000.
- The board of education agreed to contribute 8.03% of covered payroll for 1998, 1999, and 2000, in order to fund the benefit increase and the “catch-up” COLA.

In accordance with the statutory authority granted the board of education in 1996, the board of education made the following changes:

- Effective January 1, 2001, all participants who retired prior to January 1, 2000, received a 3% cost-of-living increase.
- Effective July 1, 2001, a DROP was made available until June 30, 2005, at which time the program will be evaluated to determine whether or not it should be extended. Eligible participants may elect to enter the DROP for up to four years.
- In conjunction with the DROP, employers will contribute at 8.00% of covered payroll for 2001. The contribution rate for subsequent years will be based on the rate determined by the actuarial valuation for the January 1 of the year preceding the year the contribution is due.

## Section 3 (continued)

### 3.2 Legislative History of the Retirement System

Effective August 28, 2002, legislation resulted in the following changes:

- Purchase of service rules were updated.
- The System may accept qualified transfers of funds for the purchase of service.
- Clarified provisions relating to charter school participation in the System.
- Option 5, the level income option is added.
- Replaced the specific actuarial cost method in the statutes with a provision that the method adopted by the board of trustees may be any method in accordance with generally accepted actuarial standards. The amortization period for the UAAL may not exceed 30 years.

Effective August 28, 2017, legislation resulted in the following changes:

- Replaced the normal pension eligibility requirement where a member's age plus credited service equals not less than eighty-five (the "Rule of 85") with not less than eighty (the "Rule of 80").
- For members hired for the first time on or after January 1, 2018, the multiplier in the annual pension benefit formula (credited service x pension multiplier x average final compensation) was reduced from two percent (2%) to one and three-fourths percent (1.75%).
- Beginning January 1, 2018, the member contribution rate of five percent (5%) of compensation shall increase by one-half of one percent (0.5%) annually until such time as the percentage equals nine percent (9%).
- For member's hired for the first time on or after January 1, 2018, the member contribution rate shall be nine percent (9%) of compensation.
- For calendar year 2018, the actuarially determined annual employer contribution rate shall be replaced with sixteen percent (16%) of total member compensation for each employer which, for each calendar year thereafter, shall decrease by one-half of one percent (0.5%) until calendar year 2032, when the annual employer contribution rate shall equal nine percent (9%) of total member compensation for each employer for that year and all subsequent years.

## Section 3 (continued)

### 3.3 Changes in System Participation

	Active	Retirees	Beneficiaries	Disabled	Total In Pay Status	Deferred Vested	Nonvested with Balance	Total Terminated Records	Total
Total as of January 1, 2023	4,940	3,846	260	204	4,310	1,002	3,566	4,568	13,818
New Entrants	993								993
Rehires/Transfers	68					(26)	(42)	(68)	0
Retirements	(81)	102			102	(21)		(21)	0
Disablements				2	2	(2)		(2)	0
Beneficiaries			20		20				20
Deaths		(169)	(25)	(13)	(207)				(207)
Deferred Vested	(127)					127		127	0
Nonvested Terminations - Account Balance	(463)						463	463	0
Refunds Paid in 2023	(329)					(55)	(185)	(240)	(569)
Nonvested Termination	(1)								(1)
Data Adjustments			(1)		(1)	0	8	8	7
Total as of January 1, 2024	5,000	3,779	254	193	4,226	1,025	3,810	4,835	14,061

## Section 3 (continued)

### 3.4 Member Census Information

As of January 1	2024	2023
<b>Active Members</b>		
Number	5,000	4,940
Average Age	43.8	43.5
Average Service	7.9	7.7
Average Covered Payroll	\$ 61,622	\$ 57,885
<b>Vested Terminated Members</b>		
Number	1,025	1,002
Average Account Balance	\$ 37,482	\$ 36,987
<b>Non-vested Terminated Members</b>		
Number	3,810	3,566
Average Account Balance	\$ 5,230	\$ 5,030
<b>Retired Benefit Recipients</b>		
Number	3,779	3,846
Average Age	75.8	75.5
Average Monthly Benefit	\$ 2,142	\$ 2,128
<b>Beneficiary Benefit Recipients</b>		
Number	254	260
Average Age	79.4	79.4
Average Monthly Benefit	\$ 1,046	\$ 1,058
<b>Disabled Benefit Recipients</b>		
Number	193	204
Average Age	69.8	69.6
Average Monthly Benefit	\$ 1,300	\$ 1,282

# Section 3 (continued)

## 3.5 Member Census Information – Medical Coverage

As of January 1	2024	2023
<b>No Medical Coverage</b>		
Number	980	1,016
Average Age	75.4	75.0
<b>Medicare Advantage</b>		
Number	1,506	1,395
Average Age	76.8	76.0
<b>Not Medicare Advantage</b>		
Number	292	461
Average Age	77.1	77.8
<b>Total</b>		
Number	2,778	2,872
Average Age	76.3	75.9

## Section 3 (continued)

### 3.6 Distributions of Active Members

Schedule of Active Member Valuation Data (Last Ten Years)					
<u>Plan Year</u>	<u>Number of Active Members</u>	<u>Number of Employers</u>	<u>Annual Payroll</u>	<u>Average Annual Pay</u>	<u>% Increase in Average Pay</u>
2011	4,336		218,308,928	50,348	0.40%
2012	4,784		234,703,040	49,060	-2.56%
2013	4,786		225,894,414	47,199	-3.79%
2014	4,880		243,277,760	49,852	5.62%
2015	5,011	20	245,699,352	49,032	-1.64%
2016	5,034	21	252,127,288	50,085	2.15%
2017	5,101	19	260,223,066	51,014	1.85%
2018	5,138	20	265,773,659	51,727	1.40%
2019	5,050	20	263,772,380	52,232	0.98%
2020	5,108	22	272,973,377	53,440	2.30%
2021	4,984	22	264,676,845	53,105	-0.63%
2022	4,594	19	259,440,417	56,474	6.34%
2023	4,940	17	285,949,641	57,885	2.50%
2024	5,000	16	308,111,270	61,622	6.46%

## Section 3 (continued)

### 3.6 Distributions of Active Members

#### Years of Service By Age Charter Schools

Age	Years of Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	
Under 25	99	0	0	0	0	0	0	0	0	99
25 - 29	273	24	0	0	0	0	0	0	0	297
30 - 34	269	107	10	0	0	0	0	0	0	386
35 - 39	161	66	37	4	0	0	0	0	0	268
40 - 44	132	46	16	17	2	0	0	0	0	213
45 - 49	105	30	17	16	8	1	0	0	0	177
50 - 54	86	27	21	12	6	1	0	0	0	153
55 - 59	72	24	13	5	0	1	1	0	0	116
60 - 64	42	12	7	8	2	1	0	0	0	72
65 - 69	13	9	7	4	0	0	0	0	0	33
70 & Up	5	0	2	0	0	0	0	0	0	7
<b>Total</b>	<b>1,257</b>	<b>345</b>	<b>130</b>	<b>66</b>	<b>18</b>	<b>4</b>	<b>1</b>	<b>0</b>	<b>0</b>	<b>1,821</b>

#### Years of Service By Age School District

Age	Years of Service									Total
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+	
Under 25	153	1	0	0	0	0	0	0	0	154
25 - 29	279	28	0	0	0	0	0	0	0	307
30 - 34	255	98	15	0	0	0	0	0	0	368
35 - 39	187	84	33	8	0	0	0	0	0	312
40 - 44	165	71	58	43	6	0	0	0	0	343
45 - 49	131	75	42	46	62	10	0	0	0	366
50 - 54	140	56	52	37	59	45	5	0	0	394
55 - 59	101	69	45	44	56	27	9	2	0	353
60 - 64	91	57	59	35	29	25	19	13	1	329
65 - 69	38	36	25	12	11	12	10	8	6	158
70 & Up	29	11	18	4	5	8	3	3	7	88
<b>Total</b>	<b>1,569</b>	<b>586</b>	<b>347</b>	<b>229</b>	<b>228</b>	<b>127</b>	<b>46</b>	<b>26</b>	<b>14</b>	<b>3,172</b>

## Section 3 (continued)

### 3.6 Distributions of Active Members

#### Years of Service By Age

#### Total

Age	Years of Service									Total	
	0 - 4	5 - 9	10 - 14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40+		
Under 25	252	1	0	0	0	0	0	0	0	0	253
25 - 29	552	52	0	0	0	0	0	0	0	0	604
30 - 34	524	205	25	0	0	0	0	0	0	0	754
35 - 39	348	150	70	12	0	0	0	0	0	0	580
40 - 44	297	117	74	60	8	0	0	0	0	0	556
45 - 49	236	105	59	62	70	11	0	0	0	0	543
50 - 54	226	83	73	49	65	46	5	0	0	0	547
55 - 59	174	93	58	50	56	28	10	2	0	0	471
60 - 64	135	71	66	44	31	26	19	13	1	0	406
65 - 69	51	45	32	16	11	12	10	8	6	0	191
70 & Up	34	11	20	4	5	8	3	3	7	0	95
Total	2,829	933	477	297	246	131	47	26	14	0	5,000

## Section 3 (continued)

### 3.7 Distributions of Inactive Members

#### Deferred Vested and Nonvested

Account Balance	Vested	Non-Vested	Total
0 - 1,000	0	712	712
1,000 - 5,000	0	1,633	1,633
5,000 - 10,000	3	888	891
10,000 - 25,000	373	557	930
25,000 - 50,000	438	18	456
50,000 - 75,000	133	2	135
75,000 - 100,000	51	0	51
100,000+	27	0	27
<b>Total</b>	<b>1,025</b>	<b>3,810</b>	<b>4,835</b>

#### Retirees, Beneficiaries and Disabled

Option	Service Benefit	Disability Benefit	Survivor Benefit	All
0	3,179	155	13	3,347
1	127	10	124	261
2	72	5	24	101
3	190	14	53	257
4	172	5	36	213
5	23	1	0	24
6	13	3	3	19
7	3	0	1	4
<b>Total</b>	<b>3,779</b>	<b>193</b>	<b>254</b>	<b>4,226</b>

#### Annual Benefit

Option	Service Benefit	Disability Benefit	Survivor Benefit	All
0	\$ 83,294,523	\$ 2,382,282	\$ 147,402	\$ 85,824,207
1	2,256,758	133,955	1,628,765	4,019,478
2	1,871,405	117,333	209,117	2,197,855
3	4,191,045	229,675	819,648	5,240,368
4	4,631,191	109,652	358,941	5,099,784
5	547,922	9,911	0	557,833
6	249,439	27,362	20,966	297,767
7	72,357	0	3,978	76,335
<b>Total</b>	<b>\$ 97,114,640</b>	<b>\$ 3,010,170</b>	<b>\$ 3,188,817</b>	<b>\$ 103,313,627</b>

## Section 3 (continued)

### 3.8 Schedule of Retirees and Beneficiaries Added/Removed From Rolls

Plan Year	Added to Payroll		Removed from Payroll		Payroll Year-End		% Increase in Annual Allowances	Average Annual Allowance
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances		
2009	N/A		N/A		N/A		N/A	N/A
2010	N/A		N/A		4,370		N/A	N/A
2011	373		156		4,587	\$98,927,501	N/A	\$21,567
2012	135	\$2,606,505	182	\$2,793,752	4,540	\$98,768,933	-0.16%	\$21,755
2013	164	\$3,544,756	188	\$2,699,920	4,516	\$99,629,314	0.87%	\$22,061
2014	313	\$7,711,256	140	\$2,288,004	4,689	\$105,061,832	5.45%	\$22,406
2015	163	\$3,774,578	228	\$3,783,237	4,624	\$105,066,268	0.00%	\$22,722
2016	151	\$3,279,162	188	\$3,058,449	4,587	\$105,295,884	0.22%	\$22,955
2017	145	\$3,114,108	171	\$2,978,925	4,561	\$105,434,220	0.13%	\$23,116
2018	158	\$4,044,180	193	\$3,526,969	4,526	\$105,976,561	0.51%	\$23,415
2019	162	\$3,400,180	188	\$3,450,225	4,500	\$105,995,116	0.02%	\$23,554
2020	161	\$3,739,591	184	\$2,728,795	4,477	\$106,259,608	0.25%	\$23,735
2021	143	\$3,675,006	234	\$4,350,523	4,386	\$105,502,094	-0.71%	\$24,054
2022	168	\$3,679,768	191	\$3,788,412	4,363	\$105,333,657	-0.16%	\$24,142
2023	148	\$3,234,579	201	\$3,934,795	4,310	\$104,664,363	-0.64%	\$24,284
2024	123	\$2,704,530	207	\$4,007,623	4,226	\$103,313,627	-1.31%	\$24,447

# Section 3 (continued)

## 3.9 Summary of Methods and Assumptions

The following assumptions and methods were selected by the Board and used in this analysis. The plan’s actuaries perform an experience study every 5 years and discuss anticipated future trends with the Public School Retirement System of the City of St. Louis, Missouri to ensure appropriate and reasonable assumptions and methods for the purpose of the measurement. The last experience study was completed in December 2021.

### Interest

7.00% per annum, which includes a 2.50% allowance for inflation; 7.00% is net of investment expenses.

### Participant account interest crediting rate

2.0% per annum.

### Expenses

The rate of investment return assumed is net of investment expenses. Expected administrative expenses based on actual administrative expenses in the prior year. Administrative expenses are paid out of the expenses and contingency reserve determined in Section 2.2.

### Mortality – Healthy Lives

PubG-2010 (Below Median) Mortality Table, amount weighted, projected fully generationally using projection scale MP-2021. The mortality assumption for retired participants receiving benefits is increased by 2% for males and 10% for females.

### Beneficiary Mortality

PubG-2010 (Below Median) Mortality Table, amount weighted, projected fully generationally using projection scale MP-2021.

### Disability Mortality

PubT/G-2010 Mortality Disability Table, amount weighted, projected fully generationally using projection scale MP-2021.

### Withdrawal

Withdrawals are assumed to occur at rates based on actual experience of the retirement system. During the first five years of membership, withdrawals are assumed to occur at the following rates:

Year of Membership	Non-charter school members	Charter school members
1 <sup>st</sup>	22.5%	35.0%
2 <sup>nd</sup>	22.5%	30.0%
3 <sup>rd</sup>	20.0%	25.0%
4 <sup>th</sup>	20.0%	20.0%
5 <sup>th</sup>	15.0%	20.0%

The rates used after the first five years of membership are shown in Table 1.

## Section 3 (continued)

### 3.9 Summary of Methods and Assumptions

#### Salary scale

Salaries are assumed to increase at the rate of 5.0% per year for the first 5 years of employment and 3.50% thereafter.

#### Disability

Disabilities are assumed to occur at rates based on the actual experience of the retirement system. The rates used are shown in Table 3.

#### Retirement

Retirements occur at rates based on the actual experience of the retirement system. The age-related rates used are shown in Table 2. The rates are different for those eligible to retire under the Rule of 80 and those not eligible to retire under the Rule of 80.

#### Deferred Vested

The liability for deferred vested members is assumed to be 125% of the member's total accumulated contributions.

#### Optional Form

The optional form selected at retirement is assumed to be a single life annuity.

#### Family Structure

The probability of a participant being married, and the probable number of children are based on a table constructed by the Social Security Administration, modified to reflect the experience of the retirement system. The rates used are shown in Table 4. For married participants, husbands are assumed to be 3 years older than their wives.

#### Gender

Members with no gender provided in the member data by the System are assumed to be female.

#### Usage of Cash-out Option

Participants terminating in vested status are given the option of taking a refund of their accumulated participant contributions instead of a deferred retirement benefit. Active members who terminate in the future with a vested benefit are assumed to take a deferred vested annuity, unless a refund of contributions and interest is greater than the actuarial present value of their vested deferred benefit.

#### Future Benefit Increases or Additional Benefits

When funding is adequate, the Board may authorize cost of living adjustments (COLAs), as noted in the summary of plan provisions. This valuation assumes that no future COLAs will be awarded.

#### Actuarial Valuation Method – Entry Age Normal

Entry Age Normal cost method. Under this method, the actuarial value of projected benefits for each individual participant is allocated as a level percentage of compensation over the working lifetime of the participant between the date of employment and assumed date of exit.

## Section 3 (continued)

### 3.9 Summary of Methods and Assumptions

#### Amortization of Unfunded Liability

Amortization is based on a 15-year closed, level dollar amount. All future changes in the accrued liability due to amendments, experience gains and losses, and assumption changes are amortized over a 15-year closed, layered method. The initial amortization base was created for the unfunded actuarial accrued liability as of January 1, 2022.

#### Employer Contribution – interest adjustment

The total contributions include an interest adjustment of one-half year's interest at the valuation interest rate to better reflect timing of contributions.

#### Valuation of Assets

The actuarial value of assets is based upon a smoothed market value method. Under this method, asset returns in excess of or less than the expected investment return on market value of assets will be reflected in the actuarial value of assets over a five-year period. The plan's actuarial value of assets will be set equal to the plan's market value of assets less the expense and contingency reserve as of January 1, 2022. The calculation of the Actuarial Value of Assets is based on the following formula:

$$MV - 80\% \times G/(L)_1 - 60\% \times G/(L)_2 - 40\% \times G/(L)_3 - 20\% \times G/(L)_4 - \text{Expense and Contingency Reserve}$$

MV = the market value of assets as of the valuation date

$G/(L)_i$  = the asset gain or (loss) for the i-th year preceding the valuation date

#### Expense and Contingency Reserve

##### Medicare - Inactive

The Medicare portion of the Expense and Contingency Reserve is based on actual costs provided by the Plan as of January 1, 2023. The Plan's monthly cost for members who are not covered under Medicare Advantage is assumed to remain the same in future years. The Plan's monthly cost for members covered under Medicare Advantage are assumed to be as follows:

Year	Plan's Monthly Cost
2024-2025	\$ 0
2026	\$ 20
2027	\$ 40
2028	\$ 60
2029+	\$ 80

##### Dental and Vision - Inactive

The dental and vision portion of the Expense and Contingency Reserve is based on actual costs provided by the Plan as of January 1, 2023. It is assumed the costs in which the Plan will cover in the form of a subsidy will remain the same in future years.

## Section 3 (continued)

### 3.9 Summary of Methods and Assumptions

Medical, Dental, and Vision - Active

50% of active members are assumed to elect medical, dental, and vision in the future. The total premium for these three equals \$89.10 based on current plan cost for members not in Medicare Advantage. The 50% assumption is based the number of current inactive members who elected Medicare coverage.

#### Changes in Methods & Assumptions from the Prior Valuation

- None

# Section 3 (continued)

## 3.9 Summary of Methods and Assumptions

**Table 1**  
**Withdrawal Rates**  
**Annual Rates Per 1,000 Members**

Age	Rate	Age	Rate
20	170.0	45	76.0
21	170.0	46	73.0
22	170.0	47	70.0
23	170.0	48	69.0
24	170.0	49	68.0
25	167.0	50	67.0
26	164.0	51	67.0
27	161.0	52	65.0
28	158.0	53	60.0
29	155.0	54	55.0
30	152.0	55	50.0
31	149.0	56	47.0
32	145.0	57	45.0
33	141.0	58	43.0
34	137.0	59	41.0
35	133.0	60	39.0
36	129.0	61	0.0
37	120.0	62	0.0
38	111.0	63	0.0
39	102.0	64	0.0
40	93.0		
41	88.0		
42	85.0		
43	82.0		
44	79.0		

# Section 3 (continued)

## 3.9 Summary of Methods and Assumptions

Table 2  
Retirement Rates  
Annual Rates Per 1,000 Members

Age	Rule of 80 Rate	Not Rule of 80 Rate
50 - 51	200.0	N/A
52 - 54	150.0	N/A
55	200.0	N/A
56 - 59	150.0	N/A
60	180.0	75.0
61 - 63	180.0	100.0
64	180.0	175.0
65	350.0	250.0
66 - 71	250.0	150.0
72	1,000.0	1,000.0

## Section 3 (continued)

### 3.9 Summary of Methods and Assumptions

**Table 3**  
**Disability Rates**  
**Annual Rates Per 1,000 Members**

Age	Males	Rate	Females	Age	Males	Rate	Females
20	0.00		0.00	45	1.50		1.00
21	0.00		0.00	46	1.60		1.10
22	0.00		0.00	47	1.70		1.20
23	0.00		0.00	48	1.80		1.30
24	0.00		0.00	49	1.90		1.40
25	0.00		0.00	50	2.00		1.50
26	0.00		0.00	51	2.30		1.70
27	0.00		0.00	52	2.50		1.90
28	0.00		0.00	53	2.80		2.10
29	0.00		0.00	54	3.00		2.50
30	0.40		0.40	55	3.30		3.00
31	0.40		0.40	56	3.50		3.50
32	0.40		0.40	57	3.80		4.00
33	0.40		0.40	58	4.00		4.00
34	0.40		0.40	59	4.50		4.00
35	0.40		0.40	60	5.00		4.00
36	0.50		0.45	61	5.50		4.00
37	0.50		0.50	62	6.00		4.00
38	0.60		0.60	63	6.00		4.00
39	0.70		0.70	64	6.00		4.00
40	0.80		0.75	65	6.00		4.00
41	1.00		0.80				
42	1.10		0.85				
43	1.30		0.90				
44	1.40		0.95				

## Section 3 (continued)

### 3.9 Summary of Methods and Assumptions

Table 4  
Family Structure

Male	Age		Age of youngest child	Average number of children	Probability of being married	Probability of children if married
	Male	Female				
20	17		2	.90	.30	.50
21	18		2	.90	.35	.50
22	19		2	.98	.40	.50
23	20		2	.98	.46	.53
24	21		3	1.05	.53	.56
25	22		3	1.13	.60	.59
26	23		4	1.20	.67	.62
27	24		4	1.28	.74	.65
28	25		4	1.35	.76	.67
29	26		5	1.43	.78	.69
30	27		5	1.50	.80	.71
31	28		6	1.58	.82	.73
32	29		6	1.65	.84	.75
33	30		7	1.80	.85	.76
34	31		7	1.95	.86	.77
35	32		8	2.10	.87	.78
36	33		8	2.10	.87	.79
37	34		9	2.10	.87	.80
38	35		9	2.30	.87	.79
39	36		10	1.95	.87	.78
40	37		10	1.88	.87	.77
41	38		11	1.80	.87	.76
42	39		11	1.73	.87	.75
43	40		11	1.73	.87	.72
44	41		12	1.65	.87	.69
45	42		12	1.65	.86	.66
46	43		12	1.58	.86	.63
47	44		12	1.58	.86	.60
48	45		12	1.50	.85	.56
49	46		12	1.43	.85	.52

## Section 3 (continued)

### 3.9 Summary of Methods and Assumptions

**Table 4**  
**Family Structure**  
**(continued)**

Male	Age		Age of youngest child	Average number of children	Probability of being married	Probability of children if married
	Female					
50	47		13	1.43	.85	.48
51	48		13	1.35	.85	.44
52	49		13	1.35	.85	.40
53	50		13	1.35	.85	.37
54	51		13	1.35	.84	.34
55	52		13	1.28	.84	.31
56	53		13	1.28	.83	.28
57	54		13	1.28	.83	.25
58	55		13	1.28	.83	.23
59	56		13	1.20	.82	.21
60	57		13	1.20	.81	.19
61	58		13	1.20	.80	.17
62	59		13	1.20	.79	.15
63	60		13	1.20	.78	.13
64	61		13	1.20	.77	.11
65	62		13	1.13	.76	.09
66	63		13	1.13	.75	.07
67	64		13	1.13	.74	.05
68	65		13	1.13	.73	.04
69	66		13	1.05	.72	.03
70	67		13	1.05	.71	.02
71	68		13	1.05	.70	.01

## Section 3 (continued)

### 3.10 Definition of Actuarial Terms

#### Accrued benefit

The benefit earned by a participant as of the date at which the determination is made payable in the form of an annual benefit commencing at normal retirement age. The accrued benefit is payable for the member's lifetime only, however if the total monthly payments at the member's death are less than contributions accumulated with interest, the remaining member contribution balance will be paid to the member's beneficiary.

#### Accumulated plan benefits

The accrued benefits and any other benefits, whether vested or not, that have been earned by the participants covered by the plan as of the date at which the determination is made. These other benefits include any death, early retirement or disability benefits provided under the plan.

#### Actuarial accrued liability

Equal to the actuarial present value of future benefits less the present value of future annual normal costs.

#### Actuarial cost method

The method for allocating the actuarial present value of a pension plan's benefits and expenses to various time periods. An actuarial cost method is also referred to as a funding method.

#### Actuarial gain/(loss)

The difference between the plan's actual experience and that expected based upon a set of actuarial assumptions. A gain occurs when the experience of the plan is more favorable (in terms of cost) than the assumptions projected; a loss occurs when experience is less favorable. May also be referred to as experience gains/(losses).

#### Actuarial present value

See present value.

#### Actuarial valuation

The determination, as of a valuation date, of the annual normal cost, actuarial accrued liability, actuarial value of assets and related actuarial present values for a pension plan.

#### Actuarial value of assets

The value of cash, investments and other property belonging to a pension plan determined by the actuary for the purpose of an actuarial valuation. Actuarial asset methods are generally designed to reduce fluctuations in asset value due to large variations in returns from year to year. Actuarial values are generally a smoothed market value that recognize gains and losses over time.

#### Amortization

The spreading of a present value or a cost over a period of years. A plan's unfunded actuarial accrued liability is amortized over a period of years.

## Section 3 (continued)

### 3.10 Definition of Actuarial Terms

#### Fiscal year

The year on which the plan sponsor maintains its financial records.

#### Funded

Provided by plan assets. A liability is fully funded when assets exceed or equal the liability.

#### Normal cost

That portion of the actuarial present value of pension plan benefits and expenses which is allocated to a valuation year by the actuarial cost method.

#### Normal retirement age

An age defined in the plan for purposes of establishing when a terminated participant is entitled to an accrued benefit.

#### Normal retirement benefit

The benefit payable when it commences at the normal retirement age.

#### Participant

A person covered by a pension plan in accordance with its terms including active participants, retired participants and beneficiaries, vested terminations, and vested transfers.

#### Plan year

The year on which the plan maintains its financial records.

#### Present value

The value of an amount or series of amounts payable at various times, determined as of a given date by the application based on a particular set of actuarial assumptions. It is a single sum which reflects the time value of money and the probabilities of payment.

#### Rate of return

The actual or expected investment income as a percentage of a plan's average assets.

#### System

Public School Retirement System of the City of St. Louis, Missouri.

#### Unfunded actuarial accrued liability

The excess of the actuarial accrued liability over the actuarial value of assets.

#### Vested benefit

A benefit that is not forfeited if the participant terminates employment.

## Section 4 – Risk Information

Funding future retirement benefits prior to when those benefits become due involves assumptions regarding future economic and demographic experience. These assumptions are applied to calculate actuarial liabilities, current contribution requirements and the funded status of the system. However, to the extent future experience deviates from the assumptions used, variations will occur in these calculated values. These variations create risk to the system. Understanding the risks to the funding of the system is important. Actuarial Standard of Practice No. 51 (“ASOP 51”) requires certain disclosures of potential risks to the system and provides useful information for intended users of actuarial reports that determine system contributions or evaluate the adequacy of specified contribution levels to support benefit provisions.

Under ASOP 51, risk is defined as the potential of actual future measurements deviating from expected future measurements resulting from actual future experience deviating from actuarially assumed experience.

It is important to note that not all risk is negative, but all risk should be understood and accepted based on knowledge, judgement and educated decisions. Future measurements may deviate in ways that produce positive or negative financial impacts to the system.

In the actuary’s professional judgment, the following risks may reasonably be anticipated to significantly affect the system’s future financial condition.

- Investment risk – potential that the investment return will be different than the 7.00% expected in the actuarial valuation
- Longevity risk – potential that participants live longer than expected from the valuation mortality assumptions
- Contribution risk – potential that the contribution will be different than the recommended contribution in the actuarial valuation

The following information is provided to comply with ASOP 51 and furnish beneficial information on potential risks to the system. This list is not all-inclusive; it is an attempt to identify the most significant risks and how those risks might affect the results shown in this report.

## Section 4 (continued)

Note that ASOP 51 does not require the actuary to evaluate the ability or willingness of the system sponsor to make contributions to the system when due, or to assess the likelihood or consequences of potential future changes in law. In addition, this valuation report is not intended to provide investment advice or to provide guidance on the management or reduction of risk. Buck welcomes the opportunity to assist in such matters as part of a separate project or projects utilizing the appropriate staff and resources for those objectives.

### Investment Risk

System costs are very sensitive to the market return. Any lower than assumed return on assets will increase costs:

- The lower market return will cause the market value of assets to be lower than expected.
- The plan uses a 5-year smoothing method of assets based on the difference between the actual investment income and the expected income to help mitigate volatility year over year.
- Historical experience of market returns is shown in Section 2.4: Summary of Investment Yield Performance. This historical experience illustrates how returns can vary over time.

The Plan invests in a diversified portfolio with the objective of maximizing investment returns at a reasonable level of risk. However, Actuarial Standard of Practice No. 4 (“ASOP 4”) requires the actuary to disclose a Low-Default-Risk Obligation Measure (“LDRM”) of plan liabilities and provide commentary to help intended users of this report understand the significance of the LDRM with respect to funded status, contributions, and participant benefit security.

The LDRM is based on discount rates derived from low-default-risk fixed income securities whose cash flows are reasonably consistent with the pattern of benefits expected to be paid in the future. The LDRM represents what the Plan’s liability would be if the Plan invested its assets solely in a portfolio of high-quality bonds whose cash flows approximately match future benefit payments. The LDRM as of January 1, 2024 is \$1,547,267,735 based on a discount rate of 5.17%. The difference between the LDRM and the Actuarial Accrued Liability can be thought of as representing the expected taxpayer savings / (cost) from investing in the plan’s diversified portfolio compared to investing only in high-quality bonds. It may also be thought of as the cost of reducing investment risk.

The interest rate used for the LDRM was determined by calculating a single equivalent discount rate using projected benefit payments and the Buck Above Median Yield Curve as of December 29, 2023. Note the interest rate used for the LDRM is based on bond yields applicable at the time of the measurement and will therefore vary for different measurement dates. All other assumptions are the same as those used for funding purposes as shown in this report.

Actuaries play a role in helping the Board determine funding methods and policies that can achieve affordable and appropriate contributions and risk management. The funded status based on Actuarial Accrued Liability and the Actuarially Determined Contributions are determined using the expected return on assets which reflects the actual investment portfolio. Since the assets are not invested in an all-bond portfolio, the LDRM does not indicate the Plan’s funded status or progress, nor does it provide information on necessary plan contributions.

## Section 4 (continued)

With respect to security of participant benefits, if this plan were to be funded on an LDRM basis, participant benefits currently accrued as of the measurement date may be considered more secure as investment risk may be significantly reduced. However, the assets being invested in a diversified portfolio does not mean the participant benefits are not secure. Security of participant benefits relies on a combination of the assets in the plan, the investment returns generated on those assets, and the promise of future contributions from the plan sponsors. Reducing investment risk by investing solely in bonds may significantly increase Actuarially Determined Contributions and therefore increase contribution risk by decreasing the ability of the plan sponsor to make necessary contributions to fund the benefits. Unnecessarily high contribution requirements in the near term may not be affordable and could imperil plan sustainability and benefit security. Participant benefits will remain secure if reasonable and appropriate contributions with managed risk are calculated and paid.

### Longevity Risk

System costs will be increased as participants are expected to live longer. This is because:

- Benefits are paid over a longer lifetime when life expectancy is expected to increase. The longer duration of payments leads to higher liabilities.
- Health care has been improving which increases the life expectancy of participants. As health care improves, costs to the system will increase.
- The mortality assumption for the System does assume future improvement in mortality. Any improvement in future mortality greater than that expected by the current mortality assumption would lead to increased costs for the System.

### Contribution Risk

There is a risk associated with the employer's contribution when the actual amount and recommended amount differ. This is because:

- When the actual contribution is lower than the recommended contribution the System may not be sustainable in the long term.
- Any underpayment of the contribution will increase future contribution amounts to help pay off the additional Unfunded Actuarial Accrued Liability associated with any lower than recommended contribution amounts.
- Because of the legislative changes made to the employer contribution amounts, this is a significant risk to the plan. The actuarially determined contribution in this valuation is 13.41% of covered payroll. However, the annual required contribution due to the changes is 13.50% of covered payroll.

## Section 4 (continued)

### System Maturity Measures:

There are certain measures that may aid in understanding the significant risks to the system.

Ratio of Retired Liability to Total Liability	As of January 1 <sup>st</sup>				
	2020	2021	2022	2023	2024
1. Retirees and Beneficiaries	891,935,875	879,008,937	882,739,730	867,806,864	845,699,029
2. Total Accrued Liability	1,423,729,232	1,397,928,681	1,279,847,074	1,284,040,175	1,298,589,905
3. Ratio [(1) / (2)]	62.6%	62.9%	69.0%	67.6%	65.1%

A mature system will often have a ratio above 60 - 65 percent. A higher percentage will generally indicate an increased need for asset / liability matching.

Ratio of Cash Flow to Assets	As of December 31 <sup>st</sup>				
	2019	2020	2021	2022	2023
1. Contributions	60,922,391	59,429,613	62,107,170	63,828,456	62,547,610
2. Benefit Payments	113,101,170	112,681,273	113,687,442	114,552,519	112,122,039
3. Cash Flow [(1) - (2)]	(52,178,779)	(53,251,660)	(51,580,272)	(50,724,063)	(49,574,429)
4. Market Value of Assets	893,295,602	914,776,954	972,827,656	817,867,979	848,169,915
5. Ratio [(3) / (4)]	-5.84%	-5.82%	-5.30%	-6.20%	-5.84%

When this cash flow ratio is negative more cash is being paid out than deposited in the fund. Negative cash flow means the fund needs to rely on investment returns to cover benefit payments and at the same time may need to invest in more liquid assets to cover the benefit payments. More liquid assets may not garner the same returns as less liquid assets and therefore increase the investment risk. However, the low magnitude of the ratio implies there may already be enough liquid assets to cover the benefit payments, less investment return is needed to cover the shortfall, or only a small portion of assets will need to be converted to cash. Therefore, the investment risk is likely not amplified at this time. This maturity measure should be monitored for continual negative trend with greater magnitude.

## Section 4 (continued)

Contribution Volatility	As of January 1 <sup>st</sup>				
	2020	2021	2022	2023	2024
1. Market Value of Assets	893,295,602	914,776,954	972,827,656	817,867,979	848,169,915
2. Payroll	272,973,377	264,676,845	259,440,417	285,949,641	308,111,270
3. Asset Volatility Ratio (AVR) [(1) / (2)]	3.27	3.46	3.75	2.86	2.75
4. Accrued Liability	1,423,729,232	1,397,928,680	1,279,847,074	1,284,040,175	1,298,589,905
5. Liability Volatility Ratio (LVR) [(4) / (2)]	5.22	5.28	4.93	4.49	4.21

Systems that have higher asset-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to investment return. For example, a system with an asset-to-payroll ratio of 10 may experience twice the contribution volatility due to investment return volatility than a system with an asset-to-payroll ratio of 5. Systems that have higher liability-to-payroll ratios experience more volatile employer contributions (as a percentage of payroll) due to changes in liability. For example, if an assumption change increases the liability of two systems by the same percent the system with a liability-to-payroll ratio of 10 may experience twice the contribution volatility than a system with a liability-to-payroll ratio of 5.