



## October Financial Reporting & Expenses

Succeeding this cover page are the STRS Ohio financial reports & expenses for the period ending Oct. 31, 2019. The unaudited reports that follow are:

- *Statement of Changes in Net Position* — This statement reflects fiscal year-to-date additions and deductions to the plans' net position. Items such as contributions, investment income and benefit payments are included in this financial report.
- *Actual Expenses vs. Budget* — This report reflects current month operating expenses and fiscal year-to-date expenses compared to fiscal year-to-date pro-rata budgeted amounts approved by the Board. In addition to operating expenses, a similar comparison is made of capital and State of Ohio expenses.
- *Expense Notes* — This report provides helpful explanations around larger or infrequent expenses.
- *Detailed Operating Expenses* — This report provides the specific companies or individuals paid by STRS Ohio for operating expenses during the month.

STRS Ohio's funds are held in trust for the sole benefit of the retirement system's members and their beneficiaries. Benefits paid by STRS Ohio are funded by contributions from Ohio's public educators and their employers and the investment returns generated by the assets in which those contributions are invested. STRS receives no general revenue funds — in other words, none of the State of Ohio's budget is expended to support STRS Ohio's benefits or operations.

STRS Ohio' operating expenses are paid solely out of investment returns — no member contributions or tax dollars are expended. STRS Ohio's operating budget is approved by the retirement system's board of trustees, who under Ohio law act as fiduciaries to the retirement system's members. Additionally, prior to approval by the STRS Ohio Board, the operating budget is, by law, reviewed by the Ohio Retirement Study Council, which is comprised of members of the Ohio House and Senate, three members appointed by the Governor, as well as the executive directors of Ohio's five public retirement systems.

Questions about the reports attached can be sent to [ContactUs@strsoh.org](mailto:ContactUs@strsoh.org).

**State Teachers Retirement System of Ohio**  
 Statement of Changes in Net Position  
 For the Period July 1, 2019 through October 31, 2019

	<b>Defined Benefit Plans</b>	<b>Defined Contribution</b>	<b>Postemployment Healthcare</b>	<b>Totals</b>
<b>Additions:</b>				
<b>Contributions:</b>				
Member	520,740,783	36,521,992		\$557,262,775
Employer	554,402,413	14,202,997		\$568,605,410
Transfers from Defined Contribution Plan	6,793,453	(6,793,453)		
Government reimbursements			17,783,563	17,783,563
Benefit recipient healthcare premiums			101,290,251	101,290,251
Other retirement systems	10,005,652			10,005,652
Total contributions	<u>1,091,942,300</u>	<u>43,931,536</u>	<u>119,073,814</u>	<u>1,254,947,650</u>
<b>Net investment income (loss)</b>	<b><u>1,958,287,755</u></b>	<b><u>49,712,245</u></b>	<b><u>95,000,000</u></b>	<b><u>2,103,000,000</u></b>
<b>Total additions</b>	<b>\$3,050,230,055</b>	<b>\$93,643,782</b>	<b>\$214,073,814</b>	<b>\$3,357,947,650</b>
<b>Deductions:</b>				
Service retirement	2,267,015,938			2,267,015,938
Disability retirement	65,850,719			65,850,719
Survivor benefits	41,316,004			41,316,004
Health care			191,857,645	191,857,645
Other	9,689,775			9,689,775
Total benefit payments	<u>2,383,872,436</u>		<u>191,857,645</u>	<u>2,575,730,081</u>
Refunds to members who have withdrawn	95,548,274	24,209,702		119,757,976
Administrative expenses	39,910,125		807,679	40,717,804
<b>Total deductions</b>	<b><u>\$2,519,330,835</u></b>	<b><u>\$24,209,702</u></b>	<b><u>\$192,665,324</u></b>	<b><u>\$2,736,205,861</u></b>
<b>Net increase (decrease)</b>	<b>\$530,899,220</b>	<b>\$69,434,079</b>	<b>\$21,408,490</b>	<b>\$621,741,789</b>
<b>Net position held in trust for pension and postemployment healthcare benefits</b>				
<b>Beginning of year</b>	<b><u>74,096,239,886</u></b>	<b><u>1,630,305,466</u></b>	<b><u>3,872,157,689</u></b>	<b><u>79,598,703,041</u></b>
<b>End of period</b>	<b><u>\$74,627,139,106</u></b>	<b><u>\$1,699,739,545</u></b>	<b><u>\$3,893,566,179</u></b>	<b><u>\$80,220,444,830</u></b>

**STATE TEACHERS RETIREMENT SYSTEM**  
 Actual Expenses vs. Budget  
 For the Month and Fiscal Year-to-Date Ended October 31, 2019

	October	September	Year-to-Date	Expected Budget-to-Date	Annual Budget	Prior Year-to-Date
Compensation	\$ 11,784,249	\$ 3,986,686	\$ 25,860,399	\$ 27,437,478	\$ 63,432,100	\$ 26,773,063
Fringe Benefits	2,153,381	1,337,139	6,465,648	6,841,715	18,134,800	6,290,204
Professional and Technical Services	1,576,868	272,826	4,025,669	4,498,908	11,166,500	3,817,913
Repairs and Maintenance	526,542	363,953	2,209,865	1,833,332	5,874,900	1,865,973
Travel and Vehicles	69,831	65,874	165,770	183,390	705,500	163,334
Communications	163,418	251,851	537,698	647,682	2,018,200	725,442
Utilities	75,850	84,645	312,931	311,682	1,018,000	329,659
Supplies and Materials	93,827	37,592	283,229	352,207	899,800	354,259
Other Expenses	534,539	33,145	743,549	708,249	1,160,700	645,093
<b>Total Operating Expenses</b>	<b>\$ 16,978,505</b>	<b>\$ 6,433,711</b>	<b>\$ 40,604,758</b>	<b>\$ 42,814,643</b>	<b>\$ 104,410,500</b>	<b>\$ 40,964,940</b>
Capital Budget	\$ 145,460	\$ 11,254	\$ 185,291	\$ 185,291	\$ 4,930,900	\$ 153,883
State of Ohio Expenses	\$ 56,424	\$ 186	\$ 113,046	\$ 113,046	\$ 363,500	\$ 146,067
Capital Budget Carryover: Fiscal 2019	\$ 0	\$ 0	\$ 34,259	\$ 34,259	\$ 1,855,979	\$ 144,021

Staffing Information:	October	September	August
Budgeted FTE Associates	535	535	535
Full Time Equivalent Associates	520	517	516
Open FTE Positions	19	19	20

\_\_\_\_ Ms. Walters \_\_\_\_ moved, seconded by \_\_\_\_ Mr. Price \_\_\_\_, that the report be accepted and the expenditures for the month ending October 31, 2019 in the total amount of \$17,180,389 be approved.

**STATE TEACHERS RETIREMENT SYSTEM**

Actual Expenses vs. Budget

For the Month and Fiscal Year-to-Date Ended October 31, 2019

	October	September	Year-to-Date	Expected Budget-to-Date	Annual Budget	Prior Year-to-Date
<b>COMPENSATION</b>						
Salary and Wages	\$ 3,980,441	\$ 3,959,999	\$ 17,922,246	\$ 17,892,865	\$ 51,690,500	\$ 17,669,652
Other Compensation	3,634	3,599	13,127	8,396	23,100	8,561
Incentive Compensation	7,780,238	0	7,780,238	9,400,000	9,400,000	8,886,078
Unused Vacation and Sick Leave	3,759	6,128	84,405	84,405	2,088,700	161,790
Overtime	8,452	10,460	37,783	29,211	94,500	32,657
Service Awards	7,725	6,500	22,600	22,600	135,300	14,325
Total Compensation	\$ 11,784,249	\$ 3,986,686	\$ 25,860,399	\$ 27,437,478	\$ 63,432,100	\$ 26,773,063
<b>FRINGE BENEFITS</b>						
OPERS Employer Cost	\$ 1,305,147	\$ 563,659	\$ 3,279,978	\$ 3,543,429	\$ 8,320,600	\$ 3,260,420
Medical/Hospitalization Insurance	643,161	626,644	2,497,925	2,583,333	7,750,000	2,329,646
Medicare	170,059	57,036	370,245	322,927	932,900	381,902
Dental Insurance	48,201	48,713	194,660	190,359	566,000	198,621
Educational Assistance	9,875	3,671	31,146	47,615	110,000	43,547
Workers' Compensation	(52,320)	7,490	(25,874)	38,077	110,000	(30,531)
Life Insurance	23,336	23,367	93,219	73,160	235,000	79,374
Disability Insurance	8,242	8,564	33,529	32,520	95,300	34,055
Wellness	(2,320)	(2,005)	(9,180)	0	0	(8,900)
Unemployment Compensation	0	0	0	10,295	15,000	2,070
Total Fringe Benefits	\$ 2,153,381	\$ 1,337,139	\$ 6,465,648	\$ 6,841,715	\$ 18,134,800	\$ 6,290,204
<b>PROFESSIONAL AND TECHNICAL SERVICES</b>						
Actuary	\$ 13,952	\$ 13,263	\$ 73,902	\$ 75,975	\$ 255,000	\$ 73,970
Audit	59,576	0	59,576	61,561	207,500	58,200
Banking Expense	0	0	381	44,678	75,000	15,878
Board Election Processing	0	0	0	0	72,000	0
Contract Services	0	83,059	85,779	50,816	462,700	37,824
Custodial Banking Fees	422,916	0	423,886	572,500	2,250,000	544,245
Data Management and Analytics	29,500	0	29,500	35,000	140,000	48,375
Disaster Recovery	872	1,002	2,806	15,689	69,400	2,947
Employment Verification	853	1,516	2,818	1,451	5,500	2,462
Health Care Consultant	0	0	0	28,000	112,000	6,250
Insurance Consultant	15,000	0	30,000	30,968	90,000	32,000
Investigative Services	1,244	1,315	3,675	2,277	15,900	1,952
Investment Consultant	136,699	20,834	178,366	180,000	720,000	176,487
Investment Research Services	161,646	44,825	1,635,787	1,849,855	2,950,000	1,645,521
Legal Fees	65,950	779	67,121	95,000	285,000	(67,100)
Medical Examinations	35,124	23,280	103,463	103,318	350,000	89,979
Other Consulting Services	48,512	36,937	132,274	120,890	529,400	143,902
Quotation and Analytic Services	572,470	11,972	1,080,725	1,186,800	2,373,600	954,603
Real Estate Contract Services	5,000	0	16,184	13,750	55,000	27,794
Recruitment Fees	349	26,117	74,535	23,713	128,500	6,075
Temporary Employment Services	7,205	7,927	24,891	6,667	20,000	16,549
Total Professional/Technical Services	\$ 1,576,868	\$ 272,826	\$ 4,025,669	\$ 4,498,908	\$ 11,166,500	\$ 3,817,913

October Expenses vs. Budget  
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	October	September	Year-to-Date	Expected Budget-to-Date	Annual Budget	Prior Year-to-Date
<b>REPAIRS AND MAINTENANCE</b>						
Building Maintenance and Equipment	\$ 91,266	\$ 44,733	\$ 266,532	\$ 247,983	\$ 720,000	\$ 245,960
Copiers	7,455	11,889	31,144	37,757	100,000	34,530
Data Processing Equipment	406,727	230,185	1,785,230	1,378,931	4,459,800	1,411,683
Elevators	108	0	108	1,508	90,000	1,222
Mail Center Equipment	2,794	258	9,303	7,210	21,500	6,391
Property Tax and Leases	9,056	9,057	36,225	36,350	270,100	36,325
Safety and Security Equipment	8,095	65,833	74,645	117,167	188,500	122,496
Trash Removal	1,041	1,998	6,678	6,425	25,000	7,366
<b>Total Repairs and Maintenance</b>	<b>\$ 526,542</b>	<b>\$ 363,953</b>	<b>\$ 2,209,865</b>	<b>\$ 1,833,332</b>	<b>\$ 5,874,900</b>	<b>\$ 1,865,973</b>
<b>TRAVEL AND VEHICLES</b>						
Gasoline	\$ 989	\$ 777	\$ 2,269	\$ 2,508	\$ 7,600	\$ 2,556
Staff and Board Travel	68,271	64,884	162,555	177,388	686,900	157,781
Vehicle Maintenance	571	213	946	3,494	11,000	2,997
<b>Total Travel and Vehicles</b>	<b>\$ 69,831</b>	<b>\$ 65,874</b>	<b>\$ 165,770</b>	<b>\$ 183,390</b>	<b>\$ 705,500</b>	<b>\$ 163,334</b>
<b>COMMUNICATIONS</b>						
Courier Services	\$ 2,277	\$ 1,853	\$ 6,778	\$ 7,003	\$ 25,200	\$ 6,265
Outsourced Distribution	30,274	1,138	37,042	42,598	121,000	28,054
Photography / Media	0	0	0	0	5,000	0
Postage	68,285	160,996	262,225	386,667	1,160,000	504,119
Printing	37,050	62,480	133,262	112,601	397,000	88,766
Telecommunications	25,532	25,384	98,391	98,813	310,000	98,238
<b>Total Communications</b>	<b>\$ 163,418</b>	<b>\$ 251,851</b>	<b>\$ 537,698</b>	<b>\$ 647,682</b>	<b>\$ 2,018,200</b>	<b>\$ 725,442</b>
<b>UTILITIES</b>						
Electricity	\$ 67,068	\$ 72,488	\$ 253,922	\$ 273,093	\$ 800,000	\$ 290,744
Natural Gas	2,553	5,095	22,121	21,052	120,000	29,338
Oil	0	0	0	0	18,000	0
Water	6,229	7,062	36,888	17,538	80,000	9,577
<b>Total Utilities</b>	<b>\$ 75,850</b>	<b>\$ 84,645</b>	<b>\$ 312,931</b>	<b>\$ 311,682</b>	<b>\$ 1,018,000</b>	<b>\$ 329,659</b>
<b>SUPPLIES AND MATERIALS</b>						
Equipment Supplies	\$ 73,085	\$ 22,507	\$ 207,867	\$ 251,515	\$ 592,700	\$ 262,232
Food Service Supplies	4,668	4,699	17,500	18,000	54,000	12,183
Office Supplies	4,164	4,791	16,265	21,267	52,000	21,200
Personal Computer Software	1,300	2,518	7,702	21,968	61,000	23,576
Publications/Subscriptions	6,306	1,670	22,257	28,782	100,100	24,470
Uniforms	4,304	1,407	11,638	10,675	40,000	10,598
<b>Total Supplies and Materials</b>	<b>\$ 93,827</b>	<b>\$ 37,592</b>	<b>\$ 283,229</b>	<b>\$ 352,207</b>	<b>\$ 899,800</b>	<b>\$ 354,259</b>

October Expenses vs. Budget  
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	October	September	Year-to-Date	Expected Budget-to-Date	Annual Budget	Prior Year-to-Date
<b>OTHER EXPENSES</b>						
Board Employer Reimbursement	\$ 0	\$ 0	\$ 0	\$ 0	\$ 3,000	\$ 0
Conferences and Seminars	3,086	4,892	21,720	17,829	100,400	14,128
Dues and Licenses	32,242	4,872	57,882	14,847	162,600	12,131
Equipment Rental	0	0	0	0	0	0
Insurance	469,611	0	582,521	584,000	584,000	544,035
Member/Employer Education Programs	13,397	12,532	36,515	46,700	140,100	36,159
Miscellaneous Expense	1,500	1,208	7,652	2,819	21,200	3,246
Other Board Expense	202	324	815	817	3,800	823
Other Staff Expense	4,308	3,121	7,972	7,633	22,900	1,447
Training	10,193	6,196	28,472	33,604	122,700	33,124
<b>Total Other Expenses</b>	<b>\$ 534,539</b>	<b>\$ 33,145</b>	<b>\$ 743,549</b>	<b>\$ 708,249</b>	<b>\$ 1,160,700</b>	<b>\$ 645,093</b>
<b>Total Operating Expenses</b>	<b>\$ 16,978,505</b>	<b>\$ 6,433,711</b>	<b>\$ 40,604,758</b>	<b>\$ 42,814,643</b>	<b>\$ 104,410,500</b>	<b>\$ 40,964,940</b>

	October	September	Year-to-Date	Expected Budget-to-Date	Annual Budget	Prior Year-to-Date
Building Improvements	\$ 1,240	\$ 874	\$ 2,114	\$ 2,114	\$ 3,226,500	\$ 153,883
Furniture & Fixtures	0	0	0	0	0	0
Audio Visual	0	0	0	0	0	0
Information Processing	0	0	0	0	744,000	0
Maintenance	98,824	10,380	109,204	109,204	327,400	0
Miscellaneous	0	0	0	0	0	0
Office	0	0	0	0	45,500	0
Telecommunications	0	0	0	0	0	0
Vehicles	0	0	0	0	28,500	0
Computer Software	45,396	0	73,973	73,973	559,000	0
<b>Total Capital Budget</b>	<b>\$ 145,460</b>	<b>\$ 11,254</b>	<b>\$ 185,291</b>	<b>\$ 185,291</b>	<b>\$ 4,930,900</b>	<b>\$ 153,883</b>
<b>Total State of Ohio Expenses</b>	<b>\$ 56,424</b>	<b>\$ 186</b>	<b>\$ 113,046</b>	<b>\$ 113,046</b>	<b>\$ 363,500</b>	<b>\$ 146,067</b>
<b>Capital Budget Carryover:</b>						
Fiscal 2019	\$ 0	\$ 0	\$ 34,259	\$ 34,259	\$ 1,855,979	\$ 144,021

## October 2019 Expense Notes

### General Comments

Actual fiscal year-to-date operating expenses total \$40.6 million, which is approximately \$2.2 million under the expected budget. Incentive Compensation is lower than the budgeted amount by approximately \$1.6 million.

### Fringe Benefits

Related fringe benefits are higher in October due to Incentive Compensation. Educational Assistance was provided for five associates in October. Workers' Compensation reflects a rebate from Bureau of Worker's Compensation that was given to employers as a result of above average investment returns and fewer claims statewide.

### Professional and Technical Services

Audit includes fees for the annual financial statement audit. One quarter of global custody, collateral and performance charges are included in Custodial Banking Fees. Retiree health care information services are included in Data Management and Analytics. Quarterly retainer fees are included in Insurance Consultant. Quarterly investment board consultant services and monthly alternative investment consultant fees are included in Investment Consultant. Investment Research Services includes annual trader forum fees and quarterly trade management system and fundamental research services. Legal Fees include fees paid to outside counsel. Other Consulting Services includes the annual CEM investment benchmarking study. Quotation and Analytic Services include quarterly Bloomberg charges.

### Repairs and Maintenance

UPS equipment and building automation system maintenance are included in Building Maintenance and Equipment. Data Processing Equipment includes quarterly STaRS maintenance and quantitative investment software maintenance.

### Communications

Annual member statements and benefit plan summary brochures are included in Outsourced Distribution. Postage includes the open health care enrollment information. Printing includes the benefit plan summary brochures.

### Supplies and Materials

Letter acknowledgement forms, replacement desktop and laptop computers, benefit deposit advices and federal 1099-R tax forms are included in Equipment Supplies. Annual city business journal subscriptions are included in Publications/Subscriptions.

### Other Expenses

Dues and Licenses include annual membership fees to the Council of Institutional Investors and National Conference on PERS. Annual premiums for fiduciary risk are included in Insurance. Online technology courses and building operation software training is included in Training.

### Capital Budget

Capital items for October include HVAC controller boxes, electric car charging stations and two IT change orders for STaRS.

### State of Ohio Expenses

The second quarterly payment for the Ohio Retirement Study Council was paid in October.

**STATE TEACHERS RETIREMENT SYSTEM**  
**Detailed Operating Expenses**  
**For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
<b>Compensation</b>		
Salaries & Wages	STRS OHIO	11,775,797
	<b>Total</b>	<b>11,775,797</b>
Overtime	STRS OHIO	8,452
	<b>Total</b>	<b>8,452</b>
	<b>Total Salaries and Wages</b>	<b>11,784,249</b>
<b>Fringe Benefits</b>		
OPERS Employer Cost	STRS OHIO	1,305,147
	<b>Total</b>	<b>1,305,147</b>
Medical/Hospitalization Insurance	ANDREA L GARNER	200
	ANDREW VICEN	200
	ANKIT GUPTA	333
	BRENDA L TRITTSCHUH	400
	BRET BORDER	400
	CAROL N CLARK	400
	CASSANDRA REESE	400
	DAN J ROBERTS	400
	DEVON W MAESTRI	400
	DORENE M BROWNING	200
	ERIN RITTER	200
	JAMES A PETERMAN	200
	JAMES H RITTER	400
	JAY W ALSPAUGH	400
	JEFFREY L LIESER	400
	JENNIFER L PEERY	400
	JOHN D MORROW	400
	JULIA A VISKANTA	400
	KASEY HORAN	200
	KATHY BOETTCHER	200
	KATHY K HOFFMANNBECK	200
	KEIRRA KARSHNER	400
	KEN C CHEE	400
	KEVIN D DEVRIES	400
	LEO M WILHELM	200
	LINDA M HORNE	400
	LOURDES R DUDANEY	400
	MABEL CHOW BROWN	400
	MARIN SOEUNG	400
	MARK MAXWELL	400
	MATTHEW E WORLEY	400
	MEDICAL CLAIMS	645,000
	MEI ZHANG	400
	MICHAEL A TAYLOR	400
	MICHAEL C BOBER	400
	MICHAEL MILLER	400
	MICHAEL SCHANTZ	400
	MISC. RECEIPTS	(5,752)
	NATHAN DRAKE	200
	NEAL J HUSTON	400
	PAUL M SNYDER	200
	RICHARD A HARMAN JR	400
	RICHARD E FISCHBACH	400
	RONALD J MCKILLIP	200
	RYAN W COLLINS	400
	SHELBY OSBORNE	400
	STACEY WIDEMAN	200
	STRS OHIO	(89,056)



**STATE TEACHERS RETIREMENT SYSTEM**  
**Detailed Operating Expenses**  
**For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
	SUSAN D YOUNG	400
	TAMLA D COLE	200
	TERENCE M HERBST	400
	THOMAS C CHAEL	400
	THOMAS S COUNTS	400
	UNITED HEALTHCARE INSURANCE CO	74,036
	VENKATA D KANTAMNENI	400
	VINAY CHERUKUPALLY	400
	WILLIAM A SHURMAN	400
	YI ZHANG	200
	YING SHI	400
	<b>Total</b>	<b>643,161</b>
Medicare	STRS OHIO	170,059
	<b>Total</b>	<b>170,059</b>
Dental Insurance	DELTA DENTAL	48,515
	MISC. RECEIPTS	(314)
	<b>Total</b>	<b>48,201</b>
Educational Assistance	ALEX GRUBER	1,570
	INTERNATIONAL INSTITUTE OF BUS ANALYSIS	125
	MISC. RECEIPTS	(948)
	SOUTHERN NEW HAMPSHIRE UNIVERSITY	9,420
	STRS OHIO	(292)
	<b>Total</b>	<b>9,875</b>
Workers' Compensation	MISC. RECEIPTS	(76,109)
	SHEAKLEY UNISERVICE INC	25
	STRS OHIO	23,764
	<b>Total</b>	<b>(52,320)</b>
Life Insurance	LINCOLN NATIONAL LIFE INSURANCE COMPANY	23,336
	<b>Total</b>	<b>23,336</b>
Disability Insurance	LINCOLN NATIONAL LIFE INSURANCE COMPANY	8,242
	<b>Total</b>	<b>8,242</b>
Wellness	OHIOHEALTH/WORK HEALTH	160
	STRS OHIO	(2,480)
	<b>Total</b>	<b>(2,320)</b>
	<b>Total Fringe Benefits</b>	<b>2,153,381</b>
<b>Professional and Technical Services</b>		
Actuary	CHEIRON INC	13,952
	<b>Total</b>	<b>13,952</b>
Audit	CLIFTONLARSONALLEN LLP	59,500
	TREASURER STATE OF OHIO	76
	<b>Total</b>	<b>59,576</b>
Custodial Banking Fees	NORTHERN TRUST	422,916
	<b>Total</b>	<b>422,916</b>
Data Management and Analytics	IBM CORPORATION	29,500
	<b>Total</b>	<b>29,500</b>
Disaster Recovery	FIFTH THIRD BANK-CORP CARD	50
	FIREPROOF RECORDS CENTER	571
	RECOVERY POINT SYSTEMS	251
	<b>Total</b>	<b>872</b>

**STATE TEACHERS RETIREMENT SYSTEM**  
**Detailed Operating Expenses**  
**For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
Employment Verification	OHIOHEALTH/WORK HEALTH	389
	SCREENPOINTE INC	464
	<b>Total</b>	<b>853</b>
Insurance Consultant	ALPHA RISK MANAGEMENT INC	15,000
	<b>Total</b>	<b>15,000</b>
Investigative Services	LEXISNEXIS RISK SOLUTIONS	1,244
	<b>Total</b>	<b>1,244</b>
Investment Consultant	CALLAN LLC	115,866
	CLIFFWATER LLC	20,833
	<b>Total</b>	<b>136,699</b>
Investment Research Services	DTCC ITP LLC	3,681
	INSTITUTIONAL INVESTOR	14,500
	REFINITIV US LLC	101,633
	TRADEWEB LLC	1,600
	VIRTU ITG PLATFORMS LLC	32,756
	WILSHIRE ASSOCIATES INC	7,476
	<b>Total</b>	<b>161,646</b>
Legal Fees	MUNGER TOLLES AND OLSON LLP	2
	NEWHOUSE PROPHATER KOLMAN & HOGAN LLC	1,540
	PRYOR CASHMAN LLP	480
	TUCKER ELLIS LLP	63,923
	WARREN COUNTY PROBATE COURT	5
	<b>Total</b>	<b>65,950</b>
Medical Examinations	ADRIENNE SAXTON MD LLC	875
	ALBERT J KOLIBASH JR MD	460
	CASE CONSULTANTS OF OHIO LLC	750
	CLAIRE V WOLFE MD	1,180
	DELANEY SMITH MD	525
	DISABILITY & IMPAIRMENT EVALUATIONS, INC	4,050
	DONALD C MANN MD INC	2,550
	JAMES N ALLEN, MD	900
	JAMES R. HAWKINS, M.D.	3,000
	JEFFERY C HUTZLER MD	540
	JON KRONBERG MD	500
	MARC COOPERMAN MD	460
	MARJORIE C GALLAGHER MD	2,355
	MARTIN J GOTTESMAN MD	7,514
	MEDICAL EVALUATORS LLC	2,200
	MITCHELL E NAHRA MD	1,350
	OHIO ENT	255
	ORTHOPEDIC ONE	1,275
	OSU NEUROSCIENCE CENTER LLC	790
	PHYSICAL MEDICINE, SPORTS & INDL LLC	500
	RICHARD KOLETSKY MD	495
	RONALD L WHISLER MD	820
	STEIMAN NEUROLOGY GROUP INC	1,425
STEPHEN F PARISER, MD	100	
WRIGHT STATE PHYSICIANS	255	
<b>Total</b>	<b>35,124</b>	
Other Consulting Services	CALFEE HALTER AND GRISWOLD LLP	6,000
	CEM BENCHMARKING INC	35,000
	FIFTH THIRD BANK	7,512
	<b>Total</b>	<b>48,512</b>

**STATE TEACHERS RETIREMENT SYSTEM**  
**Detailed Operating Expenses**  
**For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
Quotation and Analytic Service	BLOOMBERG FINANCE LP	569,083
	NYSE MARKET INC	2,452
	OPTIONS PRICE REPORTING AUTHORITY LLC	504
	TSX INC	431
	<b>Total</b>	<b>572,470</b>
Real Estate Contract Services	ANTHONY CIOCHETTI	5,000
	<b>Total</b>	<b>5,000</b>
Recruitment Fees	HIRE TALENT EVENTS INC	349
	<b>Total</b>	<b>349</b>
Temporary Employment Services	DAWSON RESOURCES	3,697
	FIBERCARE	1,408
	OFFICE TEAM	2,100
	<b>Total</b>	<b>7,205</b>
	<b>Total Professional and Technical Services</b>	<b>1,576,868</b>
<b>Repairs and Maintenance</b>		
Building Maintenance and Equipment	AMBIUS LLC 05	1,573
	AMERICAN ELECTRIC MOTOR SERVICE INC	150
	BOILER TECH INC	525
	BUCK AND SONS LANDSCAPE SERVICE INC	1,179
	CONSOLIDATED ELECT DIST	460
	CONTRACT SWEEPERS & EQUIPMENT INC	6,060
	FASTSIGNS	732
	FIBERCARE	4,390
	FIFTH THIRD BANK-CORP CARD	526
	FIREPROOF RECORDS CENTER	166
	GRAINGER INC	982
	GREGORY J RUESS	180
	I SUPPLY COMPANY	5,880
	JOHNSON CONTROLS INC	32,253
	JOHNSTONE SUPPLY	331
	LOMBARDI WATER MANAGEMENT INC	1,421
	LOWES BUSINESS ACCOUNT	57
	MCMASTER-CARR SUPPLY COMPANY	599
	NOFZIGER DOOR SALES OF COLUMBUS	210
	OHIO POWER TOOL INC	180
	PEPCO	129
	PRAXAIR DISTRIBUTION INC	94
	SCOTSMAN MID-OHIO	170
	SPEER MECHANICAL	6,098
	TERMINIX	401
	VERTIV CORPORATION	26,242
	WESTWATER SUPPLY CO	278
	<b>Total</b>	<b>91,266</b>
Copiers	BLUE TECHNOLOGIES COLUMBUS INC	35
	CANON FINANCIAL SERVICES INC	3,804
	GORDON FLESCH CO INC	3,056
	IMPACT NETWORKING LLC	10
	MT BUSINESS TECHNOLOGIES INC	550
	<b>Total</b>	<b>7,455</b>
Data Processing Equipment	BLOOMBERG FINANCE LP	6,910
	FIFTH THIRD BANK-CORP CARD	191
	LINODE.COM	49
	MEMSQL INC	38,400
	MISC. RECEIPTS	(59)
	NICE SYSTEMS INC	8,754

**STATE TEACHERS RETIREMENT SYSTEM**  
**Detailed Operating Expenses**  
**For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
	ORACLE AMERICA INC	74
	PEAK-RYZEX INC	7,203
	RESOLVER INC	1,455
	SHI CORP	1,232
	TEACUP SOFTWARE INC	761
	VITECH SYSTEMS GROUP	337,506
	XEROX CORPORATION	4,251
	<b>Total</b>	<b>406,727</b>
Elevators	FIFTH THIRD BANK-CORP CARD	108
	<b>Total</b>	<b>108</b>
Mail Center Equipment	ABS MONEY SYSTEMS INC	1,500
	PITNEY BOWES GLOBAL FINANCIAL SVC LLC	1,294
	<b>Total</b>	<b>2,794</b>
Property Tax and Leases	HOLLINGSWORTH CAPITAL PARTNERS COLS LLC	9,056
	<b>Total</b>	<b>9,056</b>
Safety & Security Equipment	ATLAS INDUSTRIAL CONTRACTORS LTD	1,620
	CAMTRONICS COMMUNICATION COMPANY	960
	ELECTROCOMM COLUMBUS CORP	626
	FIFTH THIRD BANK-CORP CARD	771
	GRAYBAR	2,741
	KOORSEN FIRE AND SECURITY INC	1,377
	<b>Total</b>	<b>8,095</b>
Trash Removal	MISC. RECEIPTS	(32)
	REPUBLIC SERVICES #046	237
	WASTE MANAGEMENT INC	836
	<b>Total</b>	<b>1,041</b>
	<b>Total Repairs and Maintenance</b>	<b>526,542</b>
<b>Travel and Vehicles</b>		
Gasoline	FIFTH THIRD BANK-CORP CARD	989
	<b>Total</b>	<b>989</b>
Staff and Board Travel	AARON BLACK	557
	AC HOTELS BY MARRIOTT	255
	ALAN E MUENCH	374
	ALLIANCE BERNSTEIN LP	280
	AMERICAN EXPRESS COMPANY	13,615
	AMERICAN FEDERATION OF TEACHERS	10
	ANDREW J MARFURT	1,448
	ANTHONY WEBB	685
	ARTHUR B. LARD	123
	BRIAN R ENGSTROM	505
	CAROL L CORRETHERS	193
	CASSANDRA REESE	48
	DALE L PRICE	520
	DANIEL P GRIFFIN	1,102
	DORI L DEJARNETTE	940
	DRURY INN & SUITES	1,098
	ERIC NEWBERG	422
	F RUSSELL NICHOLSON III	466
	FINDLAY INN & CONFERENCE CENTER	237
	FREDERICK SETON STALEY III	1,075
	GRANT EDWARDS	617
	GREGORY A TAYLOR	1,260
	HOPE D INGRAM	523
	HOPE K SHORT	80

**STATE TEACHERS RETIREMENT SYSTEM  
Detailed Operating Expenses  
For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
	INSTITUTIONAL VENTURE PARTNERS	(50)
	JACOB R CLARK	55
	JANET PROEHL	637
	JASON A SAUER	188
	JASON T JARVIS	346
	JASON W BAKER	200
	JEFFREY A GILDER	478
	JEFFREY A RHODES	171
	JOHN A BUCH	84
	JOHN D MORROW	83
	JOHN M LEE	3,933
	JOSEPH B LUBELSKI	551
	JOSHUA JOHNSTON	197
	JULIA A VISKANTA	781
	JUSTIN MAURER	659
	KALYAN SIKDAR	582
	KARLA L SMITH	1,029
	KEITH O HANSON	1,164
	KELLEY S MCCHRISTY	69
	KEVIN D DEVRIES	906
	KIMBERLY R MOORE	306
	KEVIN HUMPHRIES	471
	LANNY D WELLY	1,297
	LAWRENCE M TEDESCHI	1,891
	LEO M WILHELM	1,076
	LERA STURGELL	989
	LOUISE H SINGER	985
	LYNN A HOOVER	1,221
	MARK A STOLL	845
	MICHAEL J NEHF	862
	MICHAEL R RILEY	520
	MICHELE HILLEARY	643
	MISC. RECEIPTS	(93)
	NIK TAN	2,728
	PAUL M SNYDER	14
	PING ZHOU	1,121
	RAJ K MENON	5,153
	REBECCA BLUMENSHEID	50
	RICHARD A HARMAN JR	1,201
	RITA J WALTERS	622
	ROBERT MCFEE	194
	ROBERT W STEIN	330
	SCOTT J HUNT	98
	SHARA D BAILEY	654
	STEPHEN M REYNARD	1,386
	STEPHEN W EHLERS	853
	STEVE JANOWIAK	453
	STEVEN J LUETTGEN	160
	STUART L OW	447
	TAMLA D COLE	59
	THOMAS SWOGGER	738
	TODD WOLFORD	12
	W ALEXANDER MULLIN	2,054
	WILLIAM A SHURMAN	34
	YOEL MAYERFELD	401
	<b>Total</b>	<b>68,271</b>
Vehicle Maintenance	BYERS CHRYSLER, LLC	416
	GOODYEAR AUTO SERVICE CENTER	155
	<b>Total</b>	<b>571</b>
	<b>Total Travel and Vehicles</b>	<b>69,831</b>

**STATE TEACHERS RETIREMENT SYSTEM**  
**Detailed Operating Expenses**  
**For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
<b>Communications</b>		
Courier Services	FEDEX	37
	RAINBOW EXPRESS INC	1,472
	UNITED PARCEL SERVICE	768
	<b>Total</b>	<b>2,277</b>
Outsourced Distribution	BAESMAN GROUP INC	18,328
	THE OLD TRAIL PRINTING CO INC	11,946
	<b>Total</b>	<b>30,274</b>
Postage	LORTON DATA INC.	282
	MISC. RECEIPTS	(10)
	RESERVE ACCOUNT	65,000
	STATE MAIL SERVICE-PRESORT	2,306
	THE OLD TRAIL PRINTING CO INC	707
	<b>Total</b>	<b>68,285</b>
Printing	BAESMAN GROUP INC	4,179
	THE OLD TRAIL PRINTING CO INC	30,106
	WESTERN STATES ENVELOPE & LABEL	2,765
	<b>Total</b>	<b>37,050</b>
Telecommunications	AT&T	102
	INTRADO ENTERPRISE COLLABORATION INC	94
	T-MOBILE	75
	TIME WARNER CABLE	407
	VERIZON WIRELESS	3,791
	WOW BUSINESS	1,783
	XO COMMUNICATIONS	19,280
	<b>Total</b>	<b>25,532</b>
	<b>Total Communications</b>	<b>163,418</b>
<b>Utilities</b>		
Electricity	AMERICAN ELECTRIC POWER	64,146
	CITY OF WESTERVILLE	2,922
	<b>Total</b>	<b>67,068</b>
Natural Gas	COLUMBIA GAS OF OHIO	2,553
	<b>Total</b>	<b>2,553</b>
Water	COLUMBUS CITY TREASURER	6,229
	<b>Total</b>	<b>6,229</b>
	<b>Total Utilities</b>	<b>75,850</b>
<b>Supplies and Materials</b>		
Equipment Supplies	ADVANCED MEDIA TECHNOLOGIES INC	90
	APPLE COMPUTER, INC.	5,295
	CDW GOVERNMENT INC	6,180
	CINTAS CORPORATION	740
	FASTSIGNS	35
	FIFTH THIRD BANK-CORP CARD	439
	GORDON FOOD SERVICE	2,428
	I SUPPLY COMPANY	1,252
	IT SAVVY	6,927
	JODI L WELLS	25
	LOWES BUSINESS ACCOUNT	131
	MNJ TECHNOLOGIES DIRECT INC	14,336
	OFFICE DEPOT INC	138
	QUALITY POOLS	256

**STATE TEACHERS RETIREMENT SYSTEM  
Detailed Operating Expenses  
For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
	RR DONNELLEY AND SONS COMPANY	30,440
	SOUNDCOM SYSTEMS	968
	STATE INDUSTRIAL PRODUCTS	608
	THE MILLCRAFT PAPER COMPANY	1,410
	USI, INC.	29
	VALLEY GRINDING	40
	VERITIV OPERATING COMPANY	1,318
	<b>Total</b>	<b>73,085</b>
Food Service Supplies	AVI FOOD SYSTEMS INC	1,473
	FIFTH THIRD BANK-CORP CARD	102
	GORDON FOOD SERVICE	19,914
	KROGER-COLUMBUS CUSTOMER CHARGES	590
	MATTHEW CHRISTY	12
	MISC. RECEIPTS	(9,942)
	READY REFRESH	41
	SAM'S CLUB	277
	SCHNEIDER'S BAKERY INC	296
	STRS OHIO	(9,085)
	TREASURER STATE OF OHIO	990
	<b>Total</b>	<b>4,668</b>
Office Supplies	BLICK ART MATERIALS	68
	CAPITOL OFFICE SUPPLY	105
	CLASSIC COMPUTER PRODUCTS	446
	GRAINGER INC	81
	INDEPENDENT STATIONERS INC	995
	NEOPOST USA INC	344
	OFFICE DEPOT INC	54
	PITNEY BOWES INC	410
	STAPLES BUSINESS ADVANTAGE	1,413
	ULINE INC	248
	<b>Total</b>	<b>4,164</b>
Personal Computer Software	CDW GOVERNMENT INC	1,300
	<b>Total</b>	<b>1,300</b>
Publications/Subscriptions	AMERICAN CITY BUSINESS JOURNALS	2,550
	BARRON'S	239
	CRAIN COMMUNICATIONS INC	110
	DIRECTV	180
	FIFTH THIRD BANK-CORP CARD	707
	MATTHEW BENDER & CO INC	909
	NARASIMHA R VADREVU	75
	NATIONAL REAL ESTATE INVESTOR	129
	OIL& GAS JOURNAL, a div of PENNWELL	129
	RELX INC DBA LEXISNEXIS	339
	STANTON WEST	115
	THE ECONOMIST	233
	THE NEW YORK TIMES	162
	WOLTERS KLUWER LEGAL & REGULATORY US	429
	<b>Total</b>	<b>6,306</b>
Uniforms	CINTAS CORPORATION	3,226
	ECONOMY	142
	UNIFIRST CORPORATION	936
	<b>Total</b>	<b>4,304</b>
	<b>Total Supplies and Materials</b>	<b>93,827</b>
<b>Other Expenses</b>		
Conferences and Seminars	ARMA GREATER COLUMBUS OHIO CHAPTER	20

**STATE TEACHERS RETIREMENT SYSTEM**  
**Detailed Operating Expenses**  
**For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
	CONTINUITY PROFESSIONALS OF OHIO	25
	DAVID S TACKETT	419
	FIFTH THIRD BANK-CORP CARD	186
	HUMAN RESOURCES ASSOCIATION-CENTRAL OH	285
	MARK A REED	538
	MISC. RECEIPTS	(99)
	OHIO SOCIETY OF CPAS	419
	RYAN (YEON BAE) KONG	419
	STATE & LOCAL GOVT BENEFITS ASSOCIATION	500
	STEVE JANOWIAK	374
	<b>Total</b>	<b>3,086</b>
Dues and Licenses	CONTINUITY PROFESSIONALS OF OHIO	50
	COUNCIL OF INSTITUTIONAL INVESTORS	24,800
	DAVID S TACKETT	435
	DORENE M BROWNING	27
	INFORMATION SYS AUDIT & CONTROL ASSOC	705
	NARASIMHA R VADREUVU	195
	NATIONAL CONFERENCE ON PERS	3,070
	NATL ASSOC OF PUBLIC PENSION ATTORNEYS	1,200
	OHIO ETHICS COMMISSION	60
	OHIOHEALTH/WORK HEALTH	105
	PAUL KUHN	88
	PING ZHOU	362
	PUBLIC RELATIONS SOCIETY OF AMERICA	385
	REBECCA L RYAN	183
	SOCIETY FOR HUMAN RESOURCE MANAGEMENT	209
	THOMAS SWOGGER	183
	TODD W HOHENSTEIN	185
	<b>Total</b>	<b>32,242</b>
Insurance	ARC EXCESS & SURPLUS, LLC	469,611
	<b>Total</b>	<b>469,611</b>
Member Education Programs	AC HOTELS BY MARRIOTT	754
	COSHOCTON VILLAGE INN & SUITES	350
	ELIZABETH S SCHMITZ	1,121
	EMBASSY SUITES	981
	EMPLOYER WORKSHOP CANCELATION	25
	FIFTH THIRD BANK-CORP CARD	652
	FINDLAY INN & CONFERENCE CENTER	298
	HAMPTON INN & SUITES	600
	HOLIDAY INN	4,731
	MISC. RECEIPTS	(76)
	OASIS CONFERENCE CENTER	546
	QUALITY INN	680
	STILLWAGON ENTERPRISES	1,035
	STONE RIDGE GOLF CLUB LLC	600
	THE MANDALAY	1,100
	<b>Total</b>	<b>13,397</b>
Miscellaneous	CAPITOL SQUARE REVIEW & ADVISORY BOARD	200
	FIFTH THIRD BANK-CORP CARD	601
	FIREPROOF RECORDS CENTER	352
	INFOSTORE LLC	31
	MAPLE LEE FLOWERS	81
	NATL ASSOC OF STATE RETIREMENT ADMIN	100
	OHIO SECRETARY OF STATE'S OFFICE	5
	STRS OHIO	24
	TL SAVAGE INC	106
	<b>Total</b>	<b>1,500</b>



**STATE TEACHERS RETIREMENT SYSTEM**  
**Detailed Operating Expenses**  
**For the Month Ended October 31, 2019**

<u>ACCOUNT</u>	<u>VENDOR</u>	<u>AMOUNT</u>
Other Board Expense	MISCELLANEOUS EXPENSE	202
	<b>Total</b>	<b>202</b>
Other Staff Expense	BENJAMIN T DEUTSCHLE	87
	DANIEL P GRIFFIN	20
	DONATO'S PIZZERIA LLC	74
	FIFTH THIRD BANK-CORP CARD	696
	GENEVA SUBER	29
	HALO BRANDED SOLUTIONS INC	240
	HEATHER SHARPE	126
	JENNIFER MONTENARO	694
	JODI L WELLS	56
	LESLIE JAYE ORD	44
	MARY ELLEN GRANT	1,568
	MEAGAN R HELTON	217
	MISCELLANEOUS EXPENSE	949
	STRS OHIO	(814)
	SUZAN J WALTERS	175
	VANESSA SCHUMM WELCH	35
	VINAY CHERUKUPALLY	112
	<b>Total</b>	<b>4,308</b>
Training	CAMPUS FIRE SAFETY COM LLC	295
	FIFTH THIRD BANK-CORP CARD	375
	GARY M RUSSELL	55
	HDI/UBM LLC	3,745
	INTERNATIONAL AVAYA USERS GROUP	1,300
	JOHNSON CONTROLS INC	4,185
	TRAINUP.COM	238
	<b>Total</b>	<b>10,193</b>
	<b>Total Other Expenses</b>	<b>534,539</b>
<hr/>		
	<b>Total Operating Expenses</b>	<b>16,978,505</b>
<hr/>		
State of Ohio Expenses	OHIO RETIREMENT STUDY COUNCIL	56,259
	TREASURER STATE OF OHIO	164
	<b>Total State of Ohio Expenses</b>	<b>56,424</b>