General Pension and Retirement Plan

GENERAL PENSION BOARD OF TRUSTEES MEETING
WEDNESDAY, APRIL 10, 2024, 11:30 AM
OR IMMEDIATELY FOLLOWING THE POLICE PENSION BOARD MEETING
HAGLER/MASON CONFERENCE ROOM
SECOND FLOOR, CITY HALL

Any person who decides to appeal any decision of the Pension Board with respect to any matter considered at such meeting will need a record of the proceedings, and for such purpose, may need to ensure that a verbatim record of the proceedings is made, which record includes the testimony and evidence upon which the appeal is to be based.

I. CALL TO ORDER

II. DETERMINATION OF A QUORUM

III. APPROVAL OF MINUTES
   a. December 13, 2023 meeting
   b. February 14, 2024 meeting

IV. OFFICER AND MEMBER REPORTS

V. ATTORNEY'S REPORT

VI. ADMINISTRATOR'S REPORT

VII. UNFINISHED BUSINESS
   a. Approval of payment of invoices for management fees for the period ending December 31, 2023 from the following:
      - Advent Capital Management, LLC in the amount of $12,782.88

The City of Pensacola adheres to the Americans With Disabilities Act and will make reasonable accommodations for access to City services, programs and activities. Please call 435-1606 (or TDD 435-1666) for further information. Requests must be made at least 48 hours in advance of the event in order to allow the City time to provide the requested services.

- DePrince, Race and Zollo, Inc. in the amount of $7,656.00
- Fiduciary Management, Inc. in the amount of $8,178.00
- Frontier Capital Management in the amount of $11,066.52
- Garcia Hamilton & Associates in the amount of $2,851.02
- Integrity Fixed Income, Inc. in the amount of $19,785.62
- Polen Capital in the amount of $16,640.61
- Sawgrass Asset Management in the amount of $10,239.68
- SSI Investment Management in the amount of $11,681.00
- Vulcan Value Partners, LLC in the amount of $11,946.34

b. Approval of payment of invoice from Burgess Chambers & Associates, Inc. in the amount of $12,500.00 for the period ending December 31, 2023

c. Approval of payment of invoice from Cavanaugh Macdonald Consulting, LLC in the amount of $3,544.00

d. Approval of payment of invoice from The Law Office of Gary B. Leuchtman, PLLC in the amount of $13,395.50

e. Approval of payment of invoice from Award Masters, Inc. in the amount of $154.50

f. Approval of Widow's Notices of Pension for Georgia L. Sunday and Sally R. Gonzalez

VIII. NEW BUSINESS

a. Review of General Pension Actuarial Audit Quotes

- Aon
- Buck - A Gallagher Company
- Foster & Foster - Actuaries and Consultants
- Segal

IX. REQUESTS FROM THE PUBLIC / EMPLOYEES PRESENT

X. ADJOURNMENT

Amy Lovoy

Amy Lovoy
Plan Administrator

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PENSACOLA
FLORIDA'S FIRST & FUTURE

MINUTES OF MEETING
GENERAL PENSION BOARD
DECEMBER 13, 2023

The trustees of the City of Pensacola General Pension Plan met this date.

Members Present:
Mick Novota, Chairman
William "Rusty" Wells, Secretary (attended by Teams meeting)
Laura Amentler
Larry Porto
Debra Little
Amy Miller

Members Absent:
None

Others Present:
Earl Denney Integrity Fixed Income Management (attended by Teams meeting)
Christopher Caputo, Integrity Fixed Income Management (attended by Teams meeting)
Gregory Gosch, Nuveen (attended by Teams meeting)
Larry Cole, Burgess Chambers & Associates (attended by Teams meeting)
Gary Leuchtman, Leuchtman Law
Lauren Pride, Leuchtman Law
Richard Russo, Help Desk Technician
Chris Johnston, Digital Media Specialist
Michelle Madril, Payroll & Retirement Manager (attended by Teams meeting)
Amy Lovoy, Finance Director
Alexandra Daily, Assistant to Finance Director

The meeting was called to order by Chairman Novota at 11:30 a.m. Chairman Novota stated there was a quorum present.

Ms. Miller made a motion to approve the minutes of the November 8, 2023 meeting. Ms. Amentler seconded the motion and it passed unanimously.

Ms. Miller noted that she had to leave the meeting prematurely and requested that the Board move Agenda Item 9 – New Business and Agenda Item 8 – Unfinished Business up to the top of the Agenda. The Board agreed.

Ms. Miller made a motion to approve payment of the following invoice for the completion of the GASB 75 for Fiscal Year 23:

- Cavanaugh Macdonald Consulting, LLC in the amount of $23,000.00

Ms. Amentler seconded the motion and it passed unanimously.

Chairman Novota expressed his intent to vacate the Chair. After some discussion, Ms. Amentler and Ms. Miller were nominated for the Chair position. Ms. Miller withdrew her nomination and the Board unanimously elected Ms. Amentler as Chair. Ms. Amentler will take over as the office of Chairman at the next General Pension meeting.

After further discussion, Ms. Miller was unanimously elected as Vice Chair of the General Pension Board.

Ms. Little made a motion to approve the following Notice of Pension:

Tracy C. Pickens
Type of Pension: DROP
Effective Date: 10.2.23
Monthly Pension: $1,998.00
Annual Pension: $23,976.00

After some discussion, Ms. Amentler seconded the motion and it passed unanimously.

After having some additional time to review and discuss the product that Churchill from Nuveen presented, Ms. Miller made a motion to approve investing $5,000,000 with Churchill from Nuveen. Ms. Little seconded the motion and it passed unanimously.

Mr. Leuchtman notified the General Pension Board that he has already negotiated a side letter with Churchill for the Fire Pension Board that has provided some cost savings and would like to do use the same side letter for the General Pension Board. The General Pension Board agreed.

Ms. Miller left the meeting at 11:53 a.m.

Mr. Earl Denney and Mr. Christopher Caputo with Integrity reviewed their customized LDI strategy in detail with the General Pension Board that was approved at the last meeting. Several points of interest highlighted included:

- Reducing interest rate risk by investing assets to match overall duration of pension liabilities as modeled by your plan actuary.
- Managing credit risk by maintaining portfolio credit profile comparable to pension liabilities.
- Reducing issuer credit risk by diversifying issuer exposure.
- The portfolio will be monitored and rebalanced as benefits are distributed and projected liabilities are updated by your actuary.

Mr. Cole reviewed the General Pension and Retirement Fund – Investment Policy with the General Pension Board.

After some discussion, Ms. Little made a motion to approve the General Pension and Retirement Fund – Investment Policy. Ms. Amentler seconded the motion and it passed unanimously.

Mr. Cole then reviewed the General Pension and Retirement Fund – Addendum to Statement of Investment Policy for Integrity Fixed Income Management with the General Pension Board.

After some discussion, Ms. Little made a motion to approve the General Pension and Retirement Fund – Addendum to Statement of Investment Policy for Integrity Fixed Income Management. Ms. Amentler seconded the motion and it passed unanimously.

Chairman Novota brought forth a discussion regarding an audit of the General Pension Board's actuary, Todd Green with Cavanaugh Macdonald Consulting. After some discussion, the General Pension Board made the decision to obtain a scope and estimated pricing on receiving a peer review on the current actuary's Pensacola General Pension and Retirement Fund Valuation Results – September 30, 2022 and instructed the Plan Administrator to coordinate the same with a number of other actuaries active in the Florida public pension plan arena.

There being no further business to come before the Board, the meeting was adjourned at 12:45 p.m.

Amy Lovoy

Amy Lovoy
Plan Administrator

PENSACOLA
FLORIDA'S FIRST & FUTURE

MINUTES OF MEETING
GENERAL PENSION BOARD WORKSHOP
FEBRUARY 14, 2024

The trustees of the City of Pensacola General Pension Plan held a workshop this date.

Members Present:
Mick Novota
William "Rusty" Wells
Laura Picklap

Members Absent:
Larry Porto
Amy Miller
Debra Little

Others Present:
W. Marc Davis, Sawgrass Asset Management
Larry Cole, Burgess Chambers and Associates (by Teams Meeting)
Gary Leuchtman, Pension Attorney
Lauren Pride, Attorney
Richard Russo, Help Desk Technician
Amy Lovoy, Plan Administrator
Michelle Madril, Payroll & Retirement Manager
Alexandra Daily, Executive Assistant to Finance Director

The workshop was called to order by Chairman Amentler at 11:40 a.m. Chairman Amentler stated there was not a quorum present to hold a meeting.

W. Marc Davis with Sawgrass Asset Management addressed the Board and provided a review of the quarterly performance of the diversified large growth equity portfolio for the period ending December 31, 2023. He stated the total value of the portfolio as of December 31, 2023 was $7,745,483.00. Mr. Davis stated that the portfolio had an 11.02% rate of return (net of fees) for the quarter ending December 31, 2023. The one-year return for the period ending on December 31, 2023 was 29.60% (net of fees), the three-year return for the period ending on December 31, 2023 was 10.59% (net of fees) and the five-year return for the period ending on December 31, 2023 was 16.39% (net of fees).

The report from Sawgrass Asset Management is on file.

Mr. Larry Cole with Burgess Chambers & Associates addressed the Board and reviewed the total Fund's performance for the quarter ending December 31, 2023. Mr. Cole stated the total return for the quarter ending on December 31, 2023 was 7.1% net of fees. The return for one-year period ending on December 31, 2023 was 10.3%, the return for the three-year period ending on December 31, 2023 was 1.1% and the return for five-year period ending on December 31, 2023 was 6.8% all net of fees. He stated the total value of the Fund as of December 31, 2023 was $147,353,428.00. Mr. Cole then reviewed the individual money managers and asset allocation.

The report from Burgess Chambers & Associates is on file.

Ms. Lovoy updated the General Pension Board on status of the General Pension Board's request in acquiring the services of a reviewing actuary to perform a level one, full-scope actuarial audit replicating the original actuarial valuation, based on the same census data for the General Pension. She noted that the General Pension Board should be expecting four quotes to be submitted by the end of the week. The quotes will be reviewed at the next meeting.

Chairman Amentler presented to Mick Novota a plaque thanking him for his dedication and leadership while serving as the 2013-2023 General Pension Board Retirement Plan Chairman.

The following information items were noted:

- Statement of Changes to Cash Balances for November 2023 and December 2023

There being no further business to come before the Board, the workshop was adjourned at 1:08 p.m.

Amy Lovoy

Amy Lovoy
Plan Administrator

tel (212) 482.1600
fax (212) 480.9655
www.adventcap.com
888 Seventh Avenue, 31st Floor
New York, New York 10019

ADVENT
CAPITAL MANAGEMENT, LLC

January 2024

Cheryl Jackson
City of Pensacola - General*
Payroll & Retirement Manager (339)
222 West Main Street
Pensacola, FL 32502

Dear Cheryl Jackson

Please find enclosed the Management Fee Invoice for Advent Capital Management LLC for the period ending December 31, 2023.

Advent Capital Management
STATEMENT OF MANAGEMENT FEES

Portfolio Value as of 10-31-23	6,402,693.63
Portfolio Value as of 11-30-23	6,823,216.41
Portfolio Value as of 12-31-23	5,948,406.75
Average of 3 Months	6,391,438.93
6,391,439 @ 0.8000% per annum	12,782.88
Quarterly Management Fee	12,782.88
TOTAL DUE AND PAYABLE	**12,782.88**

Please remit payment via wire or check to

Domestic Wire
Bank Name: Bank of New York Mellon
Account Name: Advent Capital Management
ABA Number: 021-000-018
Account Number: 630-226-3025

International Wire
Correspondent Bank: Bank of New York, Frankfurt
Swift Code: IRVTDEFX
Account Number: 4688009710
IBAN: DE60503303004688009710

Benificiary Bank: Bank of New York Mellon, NY
Swift Code: IRVTUS3N
For final credit: Advent Capital Management
Account Number: 630-226-3025

Check
Advent Capital Management, LLC
888 Seventh Avenue - 31st Floor
New York, NY 10019
Attention: Accounting/Finance Department

If you have any questions regarding this invoice, please contact Patricia Miller at pmiller@adventcap.com or 212-479-0619.

Best regards,

Robert J. White
Chief Financial Officer

DRZ | Investment Advisors

250 S Park Ave
Suite 250
Winter Park, FL 32789
(407) 420-9903

Invoice

Invoice Date	Invoice #
1/12/2024	202304053

Due upon receipt

City of Pensacola General Pension
Retirement Fund
Michelle Madril
MMadril@CityofPensacola.com

Description	Portfolio Value	Quarterly Fee
U.S. Large-Cap Value account		
Management fees-Quarter ended December 31, 2023	6,379,792	7,656.00
Annual Fee Schedule: 0.48% on balance (0.60% net 20% discount)		
cc: Melanie Winslow with Burgess Chambers: MWinslow@BurgessChambers.com		

Please remit payment checks to:
DePrince, Race & Zollo, Inc.
ATTN: Angela Johnston, CFO
250 Park Ave. South, Suite 250
Winter Park, FL 32789

Invoice questions: AR@DRZ-Inc.com
Audit requests: Compliance@DRZ-Inc.com

Wire and ACH Instructions:
Account Name: DePrince, Race & Zollo, Inc.
Account #: 4007002407
ABA/Routing#: 063114661
Cogent Bank, 1113 Saxon Blvd
Orange City, FL 32763
*****Please include Invoice# in Special instructions/Originator to Beneficiary Info*****

Quarterly Management Fee Due **$7,656.00**

FIDUCIARY
MANAGEMENT, INC.
Investment Counsel

January 15, 2023

Ms. Michelle Madril

CITY OF PENSACOLA GENERAL PENSION AND RETIREMENT FUND
STATEMENT OF MANAGEMENT FEES
Fiduciary Management, Inc.

For The Period October 1, 2023 to December 31, 2023	
Portfolio Valuation as of 12-31-23	5,947,735
5,947,735 @ 0.5500% per annum	8,178
Quarterly Management Fee	8,178
TOTAL DUE AND PAYABLE	**8,178**

Remit to:
Accounts Receivable
Fiduciary Management, Inc.
790 N. Water Street
Suite 2100
Milwaukee, WI 53202

Fiduciary Management, Inc.'s Wire Instructions:
Bank name: Johnson Bank
ABA routing Number: 075911852
Account Number: 1002052254
Account name: Fiduciary Management, Inc.
Address: 790 N. Water Street, Suite 2100, Milwaukee, WI 53202

****PLEASE NOTE OUR NEW ADDRESS****

FRONTIER CAPITAL MANAGEMENT CO., LLC 99 Summer Street, Boston, MA 02110 *tel* 617-261-0777
frontiercap.com

Invoice Date: 1/16/2024
Invoice Number: 0032815-IN

The City of Pensacola
222 West Main Street
Pensacola, FL 32502

Billing Details

Billing Period: 10/1/2023 - 12/31/2023

Account Name: Pensacola General Pension and Retirement Fund

Date	Assets in USD
10/31/2023	$4,096,691.00
11/30/2023	$4,599,111.00
12/31/2023	$4,584,025.00

Asset Basis: $13,279,827.00 / 3 = $4,426,609.00

Management Fee Calculation

4,426,609.00 X 1% X 1/4 =	$11,066.52

Billing Summary

Management Fee	$11,066.52

Total Current Charges: $11,066.52

Thank you for investing with Frontier Capital Management.
Payment is due within 30 days of invoice date.

If you have any questions, please contact Finance at (617) 261-0777 or via e-mail at finance@frontiercap.com

Check Payable to: *Frontier Capital Mgmt Co.*
PO Box 970010
Boston, MA 02297-0010

Wiring Instructions: *Bank: First Republic Bank,*
Location: San Francisco, CA
ABA # 321-081-669
Account Name: Frontier Capital Mgmt Co.
Account Number: 8000-2007-921

INVOICE # 39211

GARCIA HAMILTON & ASSOCIATES, L.P.

5 HOUSTON CENTER
1401 MCKINNEY, SUITE 1600
HOUSTON, TX 77010
TEL: (713) 853-2322
FAX: (713) 853-2308
WWW.GARCIAHAMILTONASSOCIATES.COM

February 1, 2024

CITY OF PENSACOLA GENERAL PENSION AND RETIREMENT PLAN (3050000226) pcolag

GARCIA HAMILTON & ASSOCIATES
STATEMENT OF MANAGEMENT FEES

For the Period October 1, 2023 through November 27, 2023	
Portfolio Valuation with accrued as of 12-27-23	7,235,687.00
7,235,687 @ 0.2500% per annum	4,522.30
Quarterly Management Fee	4,522.30
Prorated for 58 days out of 92	2,851.02
TOTAL DUE AND PAYABLE	**$ 2,851.02**

INVOICE 357173

Pensacola General Employees

Integrity Fixed Income Management, LLC
651 Bryn Mawr Street
Orlando, FL 32804

ATTENTION:

Pensacola-Gen Emp P&Rtrmnt Fnd
180 Governmental Center
Pensacola, FL 32521

PERIOD: **10/01/23 - 12/31/23**

TOTAL ASSETS: **33,131,018.61**

FEE STRUCTURE: Assets Under Management									
0.00	-	30,000,000.00	x	100.0000%	30,000,000.00	@6.2500	BPS/qtr	18,750.00
30,000,000.00	+		x	100.0000%	3,131,018.61	@5.0000	BPS/qtr	1,565.51
					33,131,018.61			**20,315.51**
Fee Structure Subtotal								**20,315.51**

Discount	
79 days @.25 bps, 13 days @ 20bps	-529.89

Fee Structure Subtotal	20,315.51
Discounts	-529.89
Account Management Fee	**19,785.62**

polen capital — Going beyond.

Amy Lovoy
City of Pensacola
P.O. Box 12901
Pensacola, FL 32501

REMITTANCE COPY

January 4, 2024

STATEMENT OF MANAGEMENT FEES

Quarterly Fee calculated for assets under management as of December 31, 2023 for the billing period from October 1, 2023 to December 31, 2023.

Custodian Account Number:	1001012866
Account Number:	CITY0137
Account Name:	CITY OF PENSACOLA GENERAL PENSION AND RETIREMENT FUND

Management Fee Calculation Detail

	Breakpoints	Annual Rate (%)	Account Assets	Fee
Total Portfolio:	Balance	0.650	$10,156,892	$16,640.61

Please remit the total fee amount to Polen Capital at the address indicated below. Payment for this invoice can be sent via mail or wire:

By Mail	Overnight Address	By Wire
Check payable to: Polen Capital Management P.O. Box 919766 Orlando, FL 32891-9766	Lockbox Department Attn: Polen Capital Management LLC #919766 7699 Golf Channel Drive Orlando, FL 32819	Truist Bank 1000 Peachtree St., N.E., Atlanta, GA ABA: 061 000 104 Account Name: Polen Capital Management LLC Account #: 1000214295577

SEC RULE 204.3 REQUIRES US TO OFFER IN WRITING TO DELIVER TO YOU UPON REQUEST A WRITTEN DISCLOSURE STATEMENT CONTAINING INFORMATION CONCERNING OUR BACKGROUND AND BUSINESS PRACTICES.

Keep a copy of this invoice for tax purposes.

polencapital.com
Boca Raton | Boston | London
1825 NW Corporate Blvd., Suite 300 - Boca Raton, FL 33431
Telephone: +1 (561)-241-2425

SAWGRASS
ASSET MANAGEMENT LLC

INVOICE

TO
Pensacola General Employees Pension
Attn: Michelle Madril
180 Governmental Center
Pensacola, Florida 32502

DATE 01/09/24
INVOICE # peng1l2s-123123
CUSTODIAL ACCT # 3050000164

PAYMENT IS DUE UPON RECEIPT
RELATIONSHIP MANAGER Brian K. Monroe
CONTACT (904)493-5505 | monroeb@saw-grass.com

For The Period Ending 12/31/2023	
Portfolio Value with Accrued Interest as of 12/31/2023	$7,745,483.00
Percent of Total	44.63

Brackets	Rates		Management Fee
0 – $10,000,000	0.5500	$10,000,000 @ 0.245% per annum	6,136.13
Over $10,000,000	0.5000	$7,356,269 @ 0.223% per annum	4,103.55

TOTAL DUE AND PAYABLE	**$10,239.68**

If you have any questions concerning this invoice, please contact your Relationship Manager at the details above or email operations@saw-grass.com.
Thank You for Your Business

To Pay via Wire/EFT/ACH

RECEIVING FINANCIAL INSTITUTION:	AMERIS BANK 225 SOUTH MAIN STREET MOULTRIE, GA 31768
ROUTING NUMBER:	061201754
BENEFICIARY NAME:	SAWGRASS ASSET MANAGEMENT
BENEFICIARY ACCOUNT NUMBER:	2048793943
BENEFICIARY ADDRESS:	5000 SAWGRASS CIRCLE, SUITE 32 PONTE VEDRA BEACH, FL 32082

To Pay via Check
SAWGRASS ASSET MANAGEMENT
ATTN: ACCTS RECEIVABLE
5000 SAWGRASS CIRCLE, SUITE 32
PONTE VEDRA BEACH, FL 32082
(904) 493-5500

SSI Investment Management

City of Pensacola General
Pension and Retirement Plan
ATTN: Ms. Michelle Madril
222 W. Main Street
Pensacola, FL 32502

Invoice Date:	January 22, 2024
Invoice #:	002024-0020
SSI Account #:	100821
Account Name:	City of Pensacola General Pension and Retirement Plan
Custodian:	Regions Trust
Custodian Acct #:	3050000191

SSI MANAGEMENT FEE

For the Period October 1, 2023 through December 31, 2023

Date	Asset Value	Quarterly Rate	Fee
10/31/2023	$6,212,709		
11/30/2023	$6,606,427		
12/31/2023	$5,703,441		
Total	$18,522,577		
3-Month Average	$6,174,192	0.1875%	$11,577
Prorated Fee Adj.			$104*

Investment Management Fee Due: **$11,681**

**Fee adjustment based on 12/5/2023 withdrawal of $1,250,000 x 0.1875% x 4/90 days*

Please remit payment via wire using instructions below or via check to SSI's office:
First Republic Bank
(877) 743-7777
ABA# 321081669
SSI Investment Management
Account # 80007591110

Should you have any questions, please contact your SSI Account Manager at (310)595-2000.

cc: Burgess Chambers & Associates

VULCAN
VALUE
PARTNERS

THREE PROTECTIVE CENTER

2801 HWY 280 SOUTH STE 300

BIRMINGHAM, AL 35223

INVOICE

ACCOUNT:
VVP5455 - CITY OF PENSACOLA GENERAL PENSION & RETIREMENT PLAN - LARGE

CUSTODIAN: REGIONS TRUST

CUSTODIAN ACCOUNT #: 3050000495

INVOICE #: 38994

INVOICE PERIOD: 10/1/2023 - 12/31/2023

INVOICE DATE: 1/4/2024

PORTFOLIO VALUE

Portfolio Value			**$5,973,170**
Values comprising the average period total:	10/31/2023	$5,640,144	
	11/30/2023	$5,919,189	
	12/31/2023	$6,360,177	
Amount Due, PAYABLE UPON RECEIPT			**$11,946.34**

FEE CALCULATION

RATE APPLIED	ASSETS UNDER MANAGEMENT		AMOUNT BASE ON RATE APPLIED	% OF RATE PERIOD	AMOUNT DUE (INCLUDING ADJUSTMENT)
0.8000 %	On the first:	5,973,170	47,785.36		11,946.34
	Total Fee		**47,785.36**	**0.2500**	**11,946.34**

PAYMENT DETAIL

PLEASE SEND PAYMENT VIA ACH OR WIRE TO:

BANK: PINNACLE BANK, 150 3RD AVENUE SOUTH, NASHVILLE, TN 37201

ABA: 064008637

NAME: VULCAN VALUE PARTNERS, LLC

ACCT #: 800108721655

2801 HWY 280 SOUTH, SUITE 300 BIRMINGHAM AL 35223

BURGESS CHAMBERS & ASSOCIATES, INC.
S.E.C. REGISTERED
315 E. Robinson Street, Suite 690
Orlando, Florida 32801

Invoice

Date	Invoice #
12/8/2023	23-613

Bill To
City of Pensacola General Pension Michelle Madril PO Box 12910 Pensacola, FL 32521

Description	Amount
Fourth Quarter 2023 Investment & Performance Monitoring and Advisory Fee per Contract	12,500.00

Total	$12,500.00
Payments/Credits	$0.00
Balance Due	$12,500.00

Phone #	Fax #
4076440111	(407) 644-0694

E-mail
dlong@burgesschambers.com

Cavanaugh Macdonald
CONSULTING, LLC
The experience and dedication you deserve

Invoice

Date	Invoice #
11/30/2023	32333

Bill To
Ms. Amy Lovoy Finance Director City of Pensacola P.O. Box 12910 Pensacola, FL 32521-0061

Department:

City of Pensacola, FL

Billing Period: November 2023

Services Rendered	Amount
Progress Toward Completion of September 30, 2023 Actuarial Valuation	3,544.00

Total $3,544.00

Payment due upon receipt.
Thank you for your business!

Please include your invoice number on your check.

TAX ID #: 61-1489078

3550 Busbee Pkwy, Suite 250, Kennesaw, GA 30144
Phone (678) 388-1700 Fax (678) 388-1730
www.CavMacConsulting.com

LEUCHTMAN LAW

921 North Palafox Street
Pensacola, FL 32501
850-316-8179
fax: 850-898-3377
leuchtmanlaw.com

Gary B. Leuchtman
Board Certified in Wills, Trusts & Estates

Pensacola General Pension & Retirement Fund
Attention: Amy Lovoy
Post Office Box 12910
Pensacola, FL
32521 USA

Date:	Jan 1, 2024
File #:	1001-001
Atty:	GBL
Inv #:	6002

RE: Pensacola General Pension & Retirement Fund - Trust Administration

FOR PROFESSIONAL SERVICES RENDERED:

DATE	ATTY/ ASST	DESCRIPTION	HOURS	RATE	AMOUNT
10-06-23	GBL	Telephone call with Larry Cole; review RG Report	0.60	$325.00	$195.00
10-13-23	GBL	Review file; instructions to legal assistant; telephone call with Ron Cohen	0.30	$325.00	$97.50
10-18-23	GBL	Receive and review email from Larry Cole; prepare email to Larry; telephone call with Larry	0.40	$325.00	$130.00
10-23-23	GBL	Review Polen Quarterly Report	0.30	$325.00	$97.50
10-24-23	GBL	Review Vulcan Quarterly Report; review Cohen & Steers quarterly report	0.50	$325.00	$162.50
10-25-23	GBL	Review TSW Quarterly Report; review Advent Quarterly Report	0.50	$325.00	$162.50
10-27-23	GBL	Receive and review email from DMS	0.20	$325.00	$65.00
10-30-23	GBL	Receive and review email from Michelle	0.20	$325.00	$65.00
10-31-23	LMP	Review file; receive and review correspondence from IRS regarding Form 8802	0.30	$225.00	$67.50
11-02-23	GBL	Telephone call with Michelle; work on comprehensive statement	0.50	$325.00	$162.50
	GBL	Receive and review email from Michelle; prepare email to Michelle	0.30	$325.00	$97.50
11-06-23	GBL	Review Meeting Package; review Nuveen package	1.00	$325.00	$325.00
	LMP	Review documents in preparation for Quarterly Meeting	1.00	$225.00	$225.00

11-08-23	GBL	Preparation for Meeting; travel to and from City Hall; attend quarterly meeting; work on file	3.20	$325.00	$1,040.00
	LMP	Travel to and from City Hall; attend Quarterly Pension Meeting	2.20	$225.00	$495.00
11-09-23	GBL	Begin review of Nuveen documents	1.50	$325.00	$487.50
	GBL	Work on documents	0.80	$325.00	$260.00
11-10-23	LMP	Review documents (Churchill Private Placement Memo)	1.50	$225.00	$337.50
11-11-23	LMP	Review file; review documents (Churchill Partnership Agreement)	1.00	$225.00	$225.00
11-13-23	GBL	Peruse Nuveen Documents	1.00	$325.00	$325.00
	LMP	Review documents (Churchill Subscription Booklet)	0.50	$225.00	$112.50
11-14-23	GBL	Work on Nuveen Documents; telephone call with Nuveen; receive and review email from Michelle; instructions to legal assistant; receive and review email from Nuveen (2); review RG Reports	1.50	$325.00	$487.50
	LMP	Meeting with client (Churchill)	0.40	$225.00	$90.00
11-17-23	GBL	Receive and review email from Michelle; prepare email to Michelle	0.30	$325.00	$97.50
11-20-23	GBL	Prepare email to Nuveen/Churchill; receive and review email from Churchill; telephone call with Michelle; receive and review email from Michelle	0.50	$325.00	$162.50
11-28-23	GBL	Work on Churchill documents; receive and review email from Churchill; receive and review email from Larry Cole (3); receive and review email from Michelle (3)	1.40	$325.00	$455.00
	LMP	Review file; review and revise documents (Side Letter); review changes to side letter made by Gary Leuchtman; prepare email to Erin with Side Letter	1.20	$225.00	$270.00
11-29-23	GBL	Receive and review email from Churchill; prepare email to Churchill; instructions to legal assistant; receive and review email from DMS	1.00	$325.00	$325.00
	LMP	Review file; prepare Churchill Subscription Agreement	1.00	$225.00	$225.00
12-01-23	GBL	Review RG Reports; receive and review email from Alex; review and revise minutes; prepare email to Alex; work on subscription documents	1.40	$325.00	$455.00

12-04-23	GBL	Receive and review email from Churchill; review and revise side letter; prepare email to Churchill; Receive and review email from Larry Cole (2); review IPS updates	1.00	$325.00	$325.00
	LMP	Review file; prepare email to Michelle; review and revise documents (Churchill Subscription Agreement)	0.50	$225.00	$112.50
12-05-23	GBL	Receive and review email from Michelle; prepare email to Michelle; telephone call with Michelle	0.40	$325.00	$130.00
12-06-23	GBL	Work on Churchill documents; telephone call with Michelle	0.60	$325.00	$195.00
12-08-23	GBL	Receive and review email from Churchill (2); prepare email to Churchill; instructions to legal assistant; work on Churchill documents	0.50	$325.00	$162.50
12-12-23	GBL	Receive and review email from Churchill; prepare email to Churchill; work on side letter; review meeting package; finalize documents	1.50	$325.00	$487.50
	LMP	Review file; telephone call with Michelle; review and revise documents (Churchill Subscription Agreement); prepare email to Lisa; review documents in preparation for Trustee Meeting	1.50	$225.00	$337.50
12-13-23	GBL	Receive and review email from Churchill attorneys; prepare email to Churchill attorneys; review and approve side letter; attend Board meeting; telephone call with Alex	2.90	$325.00	$942.50
	LMP	Review file; prepare documents for meeting; travel to and from City Hall; attend Meeting; prepare email to Nuveen (x2); telephone call with Lisa George; organize and scan documents with Nuveen	3.00	$225.00	$675.00
12-14-23	GBL	Receive and review email from Churchill; prepare email to Churchill; instructions to legal assistant	0.40	$325.00	$130.00
12-21-23	LMP	Review and revise documents (Subscription Agreement); prepare documents for Nuveen (Subscription Agreement and requested attachments); prepare email to Amy and Michelle; telephone call with Lisa George with Nuveen; prepare email to Nuveen (x2)	2.00	$225.00	$450.00
12-27-23	GBL	Receive and review email from Churchill (3); instructions to legal assistant; prepare email to Churchill; review outstanding issues	0.60	$325.00	$195.00

	LMP	Review file; prepare W-9; prepare email to Amy and Michelle; prepare email to Nuveen (2); receive and review email from Nuveen (3)	1.50	$225.00	$337.50
12-28-23	GBL	Review and approve statement; instructions to legal assistant; receive and review email from Churchill	0.50	$325.00	$162.50
	LMP	Review file; prepare email to Nuveen (x4); review and revise documents (Subscription Agreement)	1.20	$225.00	$270.00
12-29-23	GBL	Receive and review email from Churchill	0.20	$325.00	$65.00
	LMP	Review file; review documents (Past Meeting Minutes); telephone call with Mick; prepare email to Erin with Churchill (x2); prepare email to Laura; telephone call with Ann Hansmann; prepare email to Zach with Churchill (x3); prepare email to Mick	3.00	$225.00	$675.00
01-01-24	JEL	Review file; prepare and review statement for services rendered and costs incurred; prepare correspondence to Amy Lovoy	0.30	$135.00	$40.50
Fees Since Last Billing			**48.10**		**$13,395.50**

Total Fees and Expenses Since Last Billing	**$13,395.50**
Previous Balance	$6,665.50
Less Payments Received Since Last Billing	$6,665.50

Leuchtman Law

Inv. #: 6002

TOTAL BALANCE DUE **$13,395.50**

This statement reflects our fees for services rendered and costs incurred to date in this matter. In addition, you will note this statement shows your retainer balance which is currently held in our trust account. Our firm policy, as reflected in our engagement letter, requires a retainer balance at all times.

Our statement is due and payable upon receipt. If not paid within thirty (30) days interest will be charged as provided in our engagement letter.

Thanking you in advance for your prompt payment of this statement.

Payment can be made in one of three ways:
1. At leuchtmanlaw.com (hover over "Make a Payment" and then select "Invoice Payment" in the dropdown menu);
2. Use the QR code at the right (open your smartphone camera and focus on the QR code, then follow the link); or
3. Mail a check to our office (Leuchtman Law, 921 N Palafox St, Pensacola, FL 32501).

Leuchtman Law

Inv. #: 6002

TRUST STATEMENT

	Disbursements	Receipts
Total Trust	$0.00	$0.00
Trust Balance		**$0.00**

FEB 08 2024

Award Masters Inc.

2211 N. Pace Blvd.
Pensacola, FL 32505
Main: 850-438-2124
Fax: N/A

Invoice

Account #: 17100
Invoice #: 340206
Date Billed: 1/24/2024
Date Due: 3/2/2024
Payment Terms: Net Due in 30 Days
Ordered By: Michelle Madril
PO Number: MICK NOVOTA
Order Number: 240159

CITY OF PENSACOLA

Attn: Attn: Accounts Payable
P.O. BOX 12910
PENSACOLA, FL 32521

Quantity	Description	Unit Price	Ext Price	Tax
1	9x12" Rosewood Piano Finish Gavel Plaque 9 x 12" Rosewood Gavel Plaque, 3x8"? Black with gold border plate Lasered, square corners, 2 holes/screws Ref#233631 for the crest/logo	$139.50	$139.50	
1	SETUP CHARGE	$15.00	$15.00	

Thanks! We truly appreciate your business!

Sub-Total:	$154.50
Shipping Charge:	$0.00
Sales Tax:	$0.00
Invoice Total:	$154.50
Payments Applied:	$0.00
Balance Due:	$154.50

515000.9999.600026

NOTICE OF PENSION

Name: Georgia L. Sunday
Pension Fund: General
Address: ____________________

Effective Date: December 14, 2023
Type: Widow (X)
Widower ( )
Child ( )
Date placed on agenda: 2/14/2024
Date approved by board: __________

PERSONAL DATA

Survivor's Social Security Number :	
Survivor's Date of Birth :	
Survivor's Current Age :	83
Date of Marriage, if applicable :	06/08/1959
Soc Sec Number Deceased Spouse :	
Name & Department Deceased Spouse :	Jimmie Sunday (001041020)
Deceased Date of Death :	12/13/2023
Dependents under 18 Years of age :	

FINANCIAL DATA

	Percent		Retiree's Monthly Pension	
Pension Funds	80%	of	$ 1,459.42	= $1,167.54
City Funds	______	of	$________	= $________
Full Monthly Pension				= $ 1,167.54

Monthly Pension: 1,167.54
Annual Pension: 14,010.48
Semi-Monthly Pension: 583.77

A/C# 515000.9999.600002 583.77

A/C# 9102-001 Salary Group: genpen

Michelle Ma

Certified By Plan Administrator
or Designated Representative

Amy Lozoy

Certified By Payroll Representative

NOTICE OF PENSION

Name: Sally R. Gonzalez
Pension Fund: General
Address: ______________________
____

Effective Date: November 11, 2023
Type: Widow (X)
Widower ( )
Child ( )
Date placed on agenda: 2/14/2024
Date approved by board: __________

PERSONAL DATA

Survivor's Social Security Number	:	
Survivor's Date of Birth	:	
Survivor's Current Age	:	71
Date of Marriage, if applicable	:	9/24/2019
Soc Sec Number Deceased Spouse	:	
Name & Department Deceased Spouse	:	Johnnie J. Topliff (001005000)
Deceased Date of Death	:	11/10/2023
Dependents under 18 Years of age	:	

FINANCIAL DATA

	Percent		Retiree's Monthly Pension		
Pension Funds	80%	of	$ 1,392.82	=	$1,114.26
City Funds	_____	of	$________	=	$________
Full Monthly Pension				=	$ 1,114.26

Monthly Pension: 1,114.26

Annual Pension: 13,371.12

Semi-Monthly Pension: 557.13

A/C# 515000.9999.600002 557.13

A/C# 9102-001 Salary Group: genpen

Michelle Mao

Certified By Plan Administrator
or Designated Representative

Amy Lozano

Certified By Payroll Representative

City of Pensacola

General Pension Board - Actuarial Services Quote

Aon Response

February 23, 2024

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Cover Letter

February 23, 2024

Alexandra Duffy
Assistant to Finance Director, Financial Services
adaily@cityofpensacola.com

Dear Alex,

Thank you for allowing Aon the opportunity to submit our quote to deliver level one actuarial audit services for Pensacola's General Pension plan. Aon views actuarial audits as increasingly used tools that not only validate prior results, but also provide an opportunity to receive additional consulting that can result in better future reporting and management of the plan. We believe Aon is the best partner for City's General Pension Board because:

- Aon is the largest employer of actuaries in the world and an industry leader in providing actuarial advice and consulting. We have been doing this type of work for over 60 years for thousands of pension plans. With this level of firm depth, you can be assured your Aon actuarial team has the expertise and support required to complete your actuarial audit and provide you the highest quality work product. Aon actuaries have broad resources available from firm experts to ensure all work meets actuarial best practices. At Aon, we strive not only to do good work, but to make that good work valuable to our clients. We intend to complete your audit with suggested recommendations and process improvements in mind that will help our plan make better strategic decisions.
- We have staffed this project with an expert and dedicated team. Your team is structured so that you will get the best work product and consulting that Aon has to offer. Aon sees the importance and prevalence of actuarial audits growing in the public sector, so we are involving our best public sector experts to help grow our reputation in this area. The team has both significant experience and communication skills that have provided a large variety of client projects and afforded them the opportunity to speak all over the country. To this end, the team has already reviewed the valuation report thoroughly and identified items that we believe could be helpful for future valuations.
- Our pricing reflects a significant value to the plan relative to the valuation fees that were shared. Though we are coding our valuation system to fully replicate your valuation one time, we are offering a fee very comparable to what your ongoing actuary is being paid.
- Our timeline emphasizes efficient and on-time delivery of services. Your team will meet all deadlines and strive to exceed your expectations at every step of the way. At Aon, we have excellent internal resources for project managers to ensure that services are provided well within any requested timeframe.

Please let us know if we can assist in any way as you work through your review of this proposal.

Sincerely,

Eric Atwater

Eric J. Atwater, FSA, EA, MAAA, EA
Partner

Jeff Jinks
Vice President

Minimum Qualifications

The firm must be a professional actuarial services firm whose primary line of business includes providing actuarial valuation, experience investigations and analysis, actuarial audits, and pension consulting services to public pension plans in the State of Florida.

Confirmed and agreed. Aon is a global health & wealth consulting and risk management firm and as such, does provide actuarial valuation, experience investigations and analysis, actuarial audits, and pension consulting services to public pension plans in the State of Florida.

The Primary Actuary performing the work must be a Fellow of the Society of Actuaries and an Enrolled Actuary. Any Supporting Actuary must be either a Fellow of the Society of Actuaries, an Enrolled Actuary or have five years of actuarial pension consulting experience.

Confirmed and agreed. Actuarial qualifications are outlined in the Audit team section on page 8.

The Primary Actuary performing the services under the Contract must have a minimum of five (5) years of experience as an actuary providing pension consulting services experience analysis, valuation assignments and actuarial audit assignments for similarly situated retirement plans.

Confirmed and agreed. Actuarial qualifications are outlined in the Audit team section on page 8.

The firm must have all necessary permits and licenses to provide these services in the State of Florida.

Confirmed and agreed. Florida Sunbiz certification on following page.

The firm must provide its own work facilities, equipment, supplies and support staff to perform the required services.

Confirmed and agreed.

All actuaries performing the work must meet the professional qualification standards of the American Academy of Actuaries.

Confirmed and agreed.

Department of State / Division of Corporations / Search Records / Detail By Document Number /

Previous On List   Next On List   Return to List

Events   **No Name History**

Detail by FEI/EIN Number

Foreign Profit Corporation
AON BENEFITS & INSURANCE SERVICES, INC.

Cross Reference Name

AON CONSULTING, INC.

Filing Information

Document Number	F06000003266
FEI/EIN Number	22-2232264
Date Filed	05/04/2006
State	NJ
Status	ACTIVE
Last Event	CORPORATE MERGER
Event Date Filed	05/20/2008
Event Effective Date	NONE

Principal Address

200 E RANDOLPH STREET
CHICAGO, IL 60601

Background and Qualifications

Aon plc (NYSE: AON) exists to shape decisions for the better — to protect and enrich the lives of people around the world. Our colleagues provide our clients in over 120 countries and sovereignties with advice and solutions that give them the clarity and confidence to make better decisions to protect and grow their business.

Our client-focused approach has brought consistently strong year-over-year growth and stability to our firm. Some highlights of our recent financial performance include:

50,000	120+	$13.4B	$57.7B	AON
colleagues around the world	countries and sovereignties with Aon clients	2023 annual revenue	market capitalization (as of January 2024)	NYSE symbol

History

Aon is a Gaelic word meaning "oneness." We chose the name Aon in 1987, and it perfectly captures the essence of our history with roots that go back more than 100 years. Building strength through oneness has been a singular focus for Aon since the modern-day organization was launched with the merger of Ryan Insurance Group and Combined International Corporation in 1982.

Aon's rapid expansion and success in the global marketplace over the last 40+ years is a testament to hard work, organic growth, and investment that is unprecedented in the industry. The power of Aon United is the culmination of a decade-long integration of our capabilities to the deliver the best of our global firm to local clients. From Hudig-Langeveldt, Benfield Group, and Hewitt Associates, to the acquisitions of cut-e, Stroz Friedberg, and The Townsend Group, each has been a building block allowing Aon to better address the needs of our clients.

Actuarial Experience

Aon has been providing actuarial services since 1934. Retirement plan and actuarial consulting has been and remains one of Aon's core businesses. We have significant experience with both public and private pension plans at all stages of the pension lifecycle (including a closed plan like Pensacola's General Plan).

With more than 450 public sector clients across our various lines of business, we understand the unique challenges faced by public sector entities. In particular, we work with our public sector actuarial clients to provide more than an accurate and on-time reporting, such that they view us as trusted advisor and retirement expert who will help them better achieve their goals regarding retirement benefit delivery and plan management.

Aon can provide Florida public sector references upon request.

Work Plan for City Deliverables

The following work plan reflects the steps we believe are necessary for a successful audit. In general, we believe this entire process will take 8 – 16 weeks. This range of time is reflective of our flexibility in meeting your needs as well as recognition that both you and your current actuary will be involved in the process. However, our expertise and experience will allow us to do all of the heavy lifting in a way that is respectful of everyone's time.

Discovery and Initial Set-up

- Request data and any additional information needed
- Kick-off call
- Receive data and requested information
- Program assumptions, methods, and provisions

Analysis

- Review Data
- Run and compare liabilities
- Review appropriateness of assumptions and methods
- Replicate report calculations
- Review report for accuracy, compliance, and completeness
- Reach out with any questions/clarifications
- Summarize and reconcile results

Findings Development

- Draft results report
- Prepare and deliver presentation to the Board
- Deliver final results/recommendations report

Audit Team for the City of Pensacola

Eric Atwater, FSA, EA, MAAA

Eric is a partner and practice leader for our National Public Sector Actuarial practice located in Aon's Atlanta, Georgia, office. In this role, he is responsible for implementation and adherence to quality assurance procedures as well as any other items that may impact public sector pension and OPEB plans. He also serves as lead consulting actuary and relationship manager to public entities. Prior to joining Aon in 2015, Eric spent nine years as consulting actuary focused exclusively on public and quasi-public entities' retirement and postretirement benefit programs. Since joining Aon, he has grown the practice to include about 35 new actuarial clients.

Eric is recognized as an expert in pension reform and consulting to public plans with distressed funding situations. He has lead benefit (health, pension, and/or OPEB) reform for public entities all over the country. He is also a regular speaker at public pension industry conferences (including and similar to FPPTA) and has been quoted in pension-related articles in The Wall Street Journal, Washington Post, and several local newspapers.

Nick Meggos, EA, FCA

Nick is a partner within our National Public Sector Actuarial practice and is located in Aon's St. Louis, Missouri, office. He is working with Eric to further develop and expand Aon's public sector actuarial practice. Nick rejoined Aon in 2023 after spending 10+ years at another actuarial firm as a Principal Consulting Actuary with a focus on public pension plans serving as the lead consultant for over 40 public sector actuarial clients. He first began working in the industry in 1999 at Aon (then Hewitt Associates) after spending five years with the Federal Reserve doing economic research.

Nick's expertise includes public pension plan funding strategy, reporting, administration, and plan design. He is passionate about balancing plan sustainability and retirement readiness for public sector employees. He prides himself on clear communication of actuarial topics and considerations to better position clients to confidently manage their plans. He particularly enjoys speaking at trustee education conferences and has done so in Illinois, Missouri, Michigan and Texas.

Fee for Service Quote

Specific Deliverables

An audit report containing a minimum of the following:

- *An opinion on the plan's actuarial valuation completeness and accuracy.*
- *An opinion on the if plan's actuarial valuation reports accurately portray the actuarial status the fund.*
- *An opinion on if the plan's actuarial valuation complies with actuarial standards of practice, generally accepted actuarial principles, generally accepted accounting principles and Florida statutes and board policies.*
- *Comparison of results of the replication the plan's actuarial valuation.*
- *Any errors or deviations of any errors or deviations found in the replications which have a material effect on the valuation results.*
- *Effect of any errors or deviations of any errors or deviations found in the replications, including on actuarial accrued liabilities, actuarial values of assets, funded statuses, actuarially determined contributions, and recommended employer contributions.*
- *Any recommendations for improving future valuations and reports, even if not financially material.*
- *A presentation to the General Pension Board regarding the findings.*

Based on the Scope and Specific Deliverables shared in the RFQ, Aon is proposing an all-inclusive fee of **$24,000.**

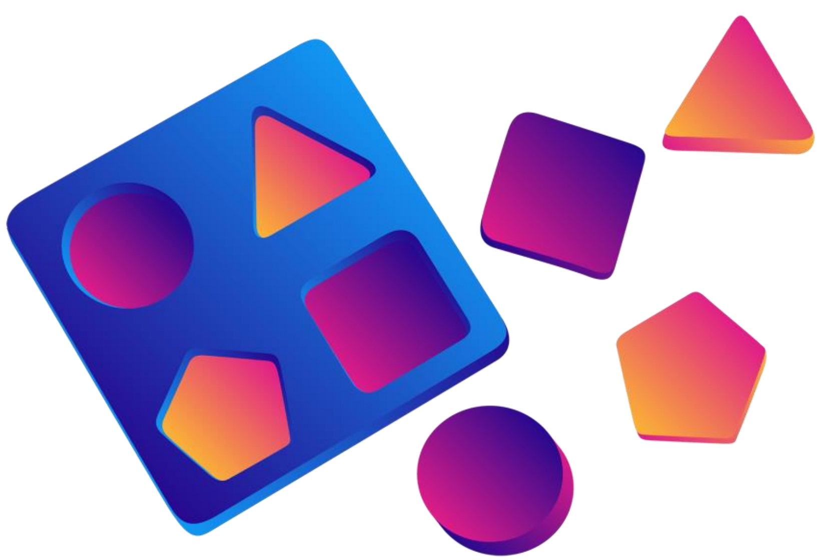
Buck’s Response to the City of Pensacola General Pension Plan’s RFQ

Actuarial Review Services

February 23, 2024

Contact

Primary Contact	Kevin Spanier, ASA, EA, MAAA, FCA Principal, Retirement Buck, A Gallagher Company 100 Galleria Parkway, SE Suite 1060 Atlanta, GA 30339 770.916.4184 kevin.spanier@buck.com
Secondary Contact	Tonia Vetter Principal, Southeast Market Leader Buck 100 Galleria Parkway, SE Suite 1060 Atlanta, GA 30339 773 520 0056 Tonia.Vetter@buck.com



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Executive Summary

Proud of our past. Fit for your Future.

At Buck, we take great pride in our history. Our more than 107-year heritage of excellence dates back to 1916, when Buck's founder, George B. Buck, established the actuarial basis of the New York State and City retirement systems. Since then, Buck has grown into a diversified firm that provides consulting services to both public and private entities, covering the entire employee benefit and human resource management fields, and is now considered one of the world's leading human resource and benefits consulting firms.

Our commitment to the public sector.

We are proud of the fact that Buck was initially founded to serve the needs of the public sector, applying sound actuarial principles to retirement programs as a way to help keep the promises to employees and members.

Over the years, the challenges facing public sector clients have become pronounced, requiring them to re-evaluate both the programs they offer their employees and how they engage with providers, including firms offering actuarial services. Buck brings our public sector clients a “best-of-both-worlds” approach:

- Deep experience supporting public sector retirement programs, delivering the specific services our public sector clients need while considering their unique characteristics, ranging from sources of funding to the composition of their members, to their governance models; and
- Fresh perspective and creative ideas, based on our experience serving a vast array of organizations and plan types.

The result is an innovative approach to public plan design, risk management, and member engagement.

We understand public sector trustees, officials, and stakeholders face unique challenges, including budget constraints, fiscal demands, changing needs and priorities, and more. This requires a specialized approach, and our team is dedicated to helping the City of Pensacola maintain the right balance – maintaining fiscally sound policies that deliver on the retirement, health, and welfare commitments made to employees, members, retirees, and family members.

We're **committed** to the public sector; it's evident in the investment we've made in this business and in the industry at large and in the employees we continue to attract to our firm – including many who are just starting their actuarial careers. In the U.S., we employ over 50 Fellows of the Society of Actuaries, over 60 Associates of the Society of Actuaries, and over 100 Enrolled Actuaries, and have been serving government entities since our founding in 1916 – longer than any other benefits and retirement/actuarial consulting firm.

We are reaffirming our commitment to the public sector with every intention of leading the way for another 100 years. Buck maintains a public sector retirement specialty practice who actively participate in industry associations as shown below, we're active in the Conference of Consulting Actuaries Public Plans Community, and we hire strategic seasoned public sector professionals as well as young, recent college graduates to train in the public sector. Examples of active involvement in industry associations:

About Buck:

107+ years

Serving the public sector

40+ states

Support for public sector entities across the U.S.

22+ years

Average public sector client tenure

- National Council on Teacher Retirement (NCTR)
- National Association of State Retirement Administrators (NASRA)
- National Conference on Public Employee Retirement Systems (NCPERS)
- Buck's actuaries lead presentations on various topics from fiduciary training and compliance, importance appropriate assumptions, GASB, and other important topics affecting Boards and their pension plans.

Qualifications and Experience.

At the center of what makes Buck unique is our appreciation of the work and the impact our clients have on people. We embrace this and make it our own. It is one of the main reasons we have long-standing client relationships and are trusted by some of the largest public sector entities in the country. Several examples include:

				
City of New York George B. Buck's first client in 1916 that led to the creation of his namesake company of today. A trusted relationship that has lasted over 100 years.	**Pennsylvania Public School Employees' Retirement System (PSERS)** Actuary since 1919 performing all actuarial consulting services including: pricing legislative changes and collective bargaining agreements.	**State of North Carolina** After 75 years of partnership, a required RFP process led to moving to a lower cost provider. Four years later they re-engaged Buck. A major reason for the renewal of our partnership has been cited as "dedication to precision, factual accuracy, and the highest professional standards."	**State of West Virginia** Long-standing client, Buck provides actuarial services to the State's multiple plans, including legislative updates, experience studies of actuarial assumptions, cost projections, and much more.	**California Public Employees' Retirement System (CalPERS)** In partnership, we were retained to modernize the System's in-house actuarial software while also completing full-replication audits for all plans.

Providing comprehensive retirement and actuarial consulting services is at the heart of what we do – this includes funding valuations, financial statement reporting, experience studies, plan design analysis, actuarial reviews and audits, and multi-scenario projections.

We intend to bring our highly qualified team of experts in the public sector to the City of Pensacola. Buck's proposed team is uniquely organized to provide services to the Board by a combination of strong public sector expertise, extensive experience with actuarial audits, many credentialed pension actuaries, knowledgeable analysts and unmatched executive and strategic support.

People serving people.

Your Buck team members will be led by some of our most experienced and talented professionals on our public sector pension actuarial team. That's our commitment to you. The team we've assembled is comprised of actuarial professionals including Fellows and Associates of the Society of Actuaries. Each team member is selected based on their experience working with similar clients and their individual client load, ensuring you'll always have a white-glove experience. Together, they'll deliver on our promises to the City of Pensacola, committees, administrative staff, Board and others, while articulating complex actuarial concepts in ways that are relevant and understandable to each stakeholder group. The following table shows our proposed team of professionals:

Your Buck Actuarial Review Team

				
David Kershner FSA, EA, MAAA, FCA Primary Actuary	**Kevin Spanier** ASA, FCA, EA, MAAA Support Actuary	**Jonathan Dobbs** ASA, EA, MAAA Project Manager	**Kelly Adams** FSA, EA, MAAA, FCA Independent Peer Reviewer	**Tonya Manning** FSA, EA, MAAA Executive Sponsor

Buck is the right choice for your actuarial audit needs.

Buck provides the highest quality work as assured by our best-in-class independent peer review process. We have the expertise and experience needed as indicated by our current actuarial audit services to CalPERS, our past history of audit services and our annual actuarial services clients. CalPERS is the largest system in the US and has complicated benefits and huge datasets. The work performed for this client clearly indicates Buck is fully capable of handling large complex actuarial audits and datasets. We have performed audit services for CalPERS since 2015 and are proud to say we have recently been selected to continue providing audit services to CalPERS.

The members of the client team selected to perform the work are of the upmost importance. When deciding on the perfect client team for City of Pensacola, we considered several key factors:

- Appropriate experience in relation to the scope of work
- Credentials in the profession as well as knowledge of current and past industry practices, laws and regulations
- Capacity for performing the work at the highest quality and being readily available and able to meet necessary deadlines

Professional standards.

Our professional standards and credentials are second to none. Buck has many actuaries who volunteer in actuarial professional organizations.

- Our Wealth practice Chief Actuary, Tonya Manning, has served as President of both the Society of Actuaries (SOA) and International Actuarial Association (IAA) and won the Conference of Consulting Actuaries Most Valuable Volunteer Award.
- One of our wealth actuaries, David Scharf, is serving as the President for the Conference of Consulting Actuaries.
- We have two employees who served on the Society of Actuaries Retirement Plan Experience Committee (RPEC) (one as Chair) and both on the Public Plans Subcommittee when the Society conducted its first study of public plan mortality and published the Pub-2010 tables.
- Your Supporting Actuary, Kevin Spanier, serves as a member of the public plans planning committee for the Conference of Consulting Actuaries annual conference.

In addition, Buck applies a unique paradigm of allowing Buck actuaries the opportunity to specialize in technical skills or to cultivate both technical and consulting skills together. This allows our client teams to have more credentialed and qualified actuaries at all service levels serving our clients than our competitors while maintaining competitive pricing.

Conclusion

When compared to other firms that provide actuarial services to the public sector, we often have more credentials, more quality control, more sharing of knowledge and other public sector client experience amongst our larger bench of public sector actuaries, more service offerings, and many added advantages.

We hope as you read through our proposal you will agree we have assembled a top-notch team who will use due diligence to perform a thorough audit and recognize the value in the audit is either a clean report of the incumbent actuarial firm's work or suggestion of improvement or error corrections, if applicable. Our actuaries will not just look for a minor issue "just to have something to report and therefore show the value of the audit." We believe our job is to uncover any issues if they exist, offer enhancement suggestions or give the Board the confidence that everything is as it should be.

Buck also strives to provide proactive consulting. Therefore, our pledge to you is that while we perform the actuarial audit we will also share any consultative ideas we may uncover that may be valuable to the fund. This is a step beyond just making sure everything is reasonable and we believe this proactive consulting alongside an actuarial audit creates a partnership that other firms struggle to provide.

We trust that this proposal demonstrates our capabilities and look forward to discussing it with you in greater detail.

Thank you for your consideration of Buck and the opportunity to present our RFP response. We are confident that we will be able to meet the immediate service needs and objectives of the City of Pensacola.

City of Pensacola + Buck: *Stronger together*

Now is the time for a fresh approach with Buck's full audit of the City of Pensacola General Pension Plan. Backed by deep industry experience, specialized Missouri State, County and Local expertise, empowering actuarial technology, and our very best team of Public Sector consultants, we are committed and prepared to deliver exceptional services. We look forward to taking the next steps with you.

Response to RFP

1. Proposed Team

The specific team that will be working on your audit will be as follows:

David Kershner, FSA, EA, MAAA, FCA – David is a Principal with 30 years of actuarial consulting experience and will serve as the Lead Consulting Actuary. He specializes in advising clients on funding policy, including calculations of actuarially determined employer contributions, determination of withdrawal liabilities for public sector retirement systems, analysis of legislative cost proposals to determine financial and other impacts, oversight of experience reviews for large public sector retirement systems, and performing actuarial audits of public sector retirement systems, including technical review of actuarial calculations and presentation of findings. He is a leadership team member of Buck's Public Sector Retirement practice.

Kevin Spanier, ASA, EA, MAAA, FCA – Kevin is a Principal with over 18 years of actuarial consulting experience and will serve as the Supporting Actuary for the Actuarial Audit. He specializes in advising public sector clients on funding policy including calculations of actuarially determined employer contributions. Additionally, he is a frequent speaker at several local and national public sector conferences (including FPPTA) and is an expert in Florida statutes.

Jonathan Dobbs, ASA, EA, MAAA – Jonathan is a Director in our Global Valuation Center where he works on a broad range of retirement plans in the public and private sector. His responsibilities include, but are not limited to, managing all aspects of retirement plan valuations, performing experience studies, analyzing plan design alternatives, and projecting funding and accounting costs under multiple scenarios. He will serve as the Project Manager for the audit helping connect David and Kevin to the analyst teams. He will check the work and assist the analyst teams in producing results and monitor progress and deadlines to ensure the audit is completed in a timely manner.

Kelly Adams, FSA, EA, MAAA, FCA – Kelly has 25 years of actuarial consulting experience, including actuarial audits of public sector plans like PSRS/PEERS, and will serve as the independent peer reviewer. This is unique to Buck compared to other consulting firms, and Kelly and her team will serve as an independent audit of our own work before it gets sent to the client, including ASOPs and compliance with related governing laws. Kelly is active in the National Association of State Retirement Administrators (NASRA), National Conference on Public Employee Retirement Systems (NCPERS) and Conference of Consulting Actuaries (CCA). Kelly has served Florida public sector clients for over 12 years and is an expert in Florida statutes.

Tonya Manning, FSA, EA, MAAA – Tonya has more than 30 years of actuarial consulting experience and is the Leader and Chief Actuary of the Wealth practice. She is very active in the actuarial profession and has served as President of both the Society of Actuaries and the International Association of Actuaries. She will serve as the Executive Sponsor for the audit. In this role, she will be available as a direct line to upper management at Buck and ensure high quality client services are being provided.

For bios containing more detail about each employee of the proposed audit team, please see Attachment A – Buck Biographical Profiles. Additionally, we can confirm that your proposed team meets all of your minimum qualification requirements.

We have more than 200 actuaries, many with public sector plan experience, including Florida, to assist the team with the data and replication process. We will also be using actuarial analysts from our national Public Sector Retirement practice to complete the required services. We assign team members based on workload and experience to make sure all timing goals are met. Additionally, 100% of the team supporting the audit will be performed exclusively within the geographical boundaries of the United States.

2. Work Plan

Buck has a long-standing commitment to serving the needs of our public sector clients. We have been serving government entities since our founding in 1916 – longer than any other benefits and retirement/actuarial consulting firm. We currently provide actuarial and consulting services to over 100 public sector retirement systems. As such, we offer significant public sector experience providing actuarial and benefits consulting services for state and local governments with a broad range of sizes and complexity.

Buck's experience and ability to provide best-in-practice actuarial audits in a timely manner relies on several important aspects. They are:

- Selecting the best team for the job that has the capacity to take on the additional scope of work and the project management skills to keep it on track.

- Understanding the scope of work required and apply prior similar experience to understand how long items specified in the scope of work should take.

- Cooperation with the client and the actuarial firm being audited.

- Having back-ups and a strong bench to pull from if additional resources are needed.

We have recently performed multiple actuarial audits including CalPERS and Colorado PERA, and are currently working on two more statewide and one county actuarial audit.

As the actuarial auditor for the City of Pensacola General Pension Plan, Buck will provide:

- Determination of whether the actuarial methods, considerations and analyses used by the current actuary in preparing the most recent actuarial valuation is reasonable and consistent with generally accepted actuarial standards and practices as promulgated by the Actuarial Standards Board and are appropriate for the plan's structures and funding objectives. This determination will include:

  - A full replication of the most recent actuarial valuation based on the same census data used by the current actuary.

  - An opinion on the completeness and accuracy of the actuarial valuation.

  - An opinion on if the actuarial report accurately portrays the actuarial status of the fund.

  - An opinion on whether the plan's actuarial valuation report complies with actuarial standards of practice, generally accepted actuarial principles, generally accepted accounting principles and Florida statutes and board policies.

  - Comparison of results of our replication to the plan's actuarial valuation.

  - A summary of any errors or deviations found and the replications which have a material effect on the valuation results (including on actuarial accrued liabilities, actuarial values of assets, funded statuses, actuarially determined contributions and recommended employer contributions).

- A review of the report that will provide recommendations for improving future valuations and reports. This review would also include any recommendations that we may have that would improve the funded status of the plan and help with the overall success of the funding method.

- A presentation to the General Pension Board regarding the findings of our audit. This presentation would go in-depth with our review and would help the board understand not only our findings but help the Board understand your current funding policies and how changes may be made to better align with your ultimate funding goals. In order to ensure that we understand your objectives, we will meet with you early in the process to discuss concerns and ultimate goals to make sure we are keeping them in mind as we go through the audit process.

Additionally, we have included a work plan that includes our proposed approach that may be implemented for the City of Pensacola General Pension Plan actuarial audit, ensuring services are completed in a timely manner.

Proposed Work Plan

The following work plan includes a general description of the steps in the actuarial audit process, including what Buck will do and why we perform each step of the process. In the kickoff meeting, Buck will tailor its approach and specific timing to suit your needs.

Step 1: Meeting to discuss project elements and information needed	

What Buck will do:	Confirm the project steps and timetable
	Discuss history of the plan
	Discuss any particular concerns
	Discuss the format of the final report and board presentation
	Request needed information (through secure file transfer):
	• Actuarial valuation data
	  – Data provided to system actuary
	  – Data used by system actuary
	• Access to actuarial valuation reports, if not available online
	• Confirmation of applicable statutes for each plan
	• Sampling of benefit calculations for each plan covering different types of calculations (e.g., termination, retirement, death) and covering any alternate plan provisions; typically, one of each type of calculation and each benefit formula is requested. This may be unique to Buck as others may not request this; however, in our experience, issues found in actuarial valuation coding are often uncovered due to provisions of the actuarial system not matching the administration of actual benefit calculations.
	• Financial statements
	Discuss availability for test case details from the system actuary in the event we cannot match within the target tolerance. Often actuaries will not provide full test lives as they believe they are proprietary information. We need to understand how reconciliation will be accomplished.

Why does Buck do this?	Our experience shows a meeting at the beginning allows us to thoroughly understand your objectives. We may uncover particular issues or items of concern from the City of Pensacola that we should focus on in addition to our regular audit techniques. As for the data requests, we've learned that our clients can save a lot of time with data collection if we explain exactly what is needed and why. When requested information is difficult to obtain, if our clients understand exactly why such information is requested, then we can make a decision

Step 1: Meeting to discuss project elements and information needed	
	together as to whether the data is absolutely necessary, or whether an approximation could be made using more easily obtainable data.

Step 2: Review of statutes	
What Buck will do:	This is an independent review of the plan provisions and statutes pertaining to each plan. We will verify that the statutes and the benefits being valued are consistent. The sample benefit calculations will be compared to system member test cases allowing us to test that the plan provisions were properly implemented into the actuarial valuation's liability calculations.
Why does Buck do this?	We do not just duplicate the numbers. Buck takes a step back to see the big picture so that we can review whether or not the actuarial valuations are consistent with statutory requirements and plan administration.

Step 3: Collection of member and valuation data	
What Buck will do:	While staff and the system actuary are collecting the data requested, Buck will begin review of the actuarial assumptions and the most recent experience study. We will also work with the system actuary to coordinate test cases if they are willing to provide them. Test cases are detailed calculation results for a sampling of the members included in the valuation.
Why does Buck do this?	Data collection is a critical component of the review. The main data needed is the final individual census data used by the system actuary as input to the valuations. The data supplied to the system actuary is also needed in order to review the original data preparation procedures. We have been involved in prior review situations where the actuarial calculations based on the data were accurate, but a significant number of participants were "lost" by the actuary in the data preparation step.

Step 4: Member data review	
What Buck will do:	As discussed above, Buck will verify the system actuary's data collection procedures. We will test several samples from the data supplied by staff to ensure it was appropriately classified for input to the actuarial valuations. We will also review the asset data provided to the system actuary to test proper inclusion in the valuations.
Why does Buck do this?	An actuarial valuation is only as good as the data used. An actuary who does not confirm the incoming data may give a clean audit report, despite "garbage in-garbage out" problems.

Step 5: Analysis of actuarial assumptions	
What Buck will do:	We will review the system actuary's experience study for each plan and the assumption selection process. We will review each assumption independently based on the data provided in the experience study. We will assess the impact of credibility on the assumption setting process. We will also review the assumptions as a whole for reasonableness and internal consistency and review the reports to check that assumptions were properly disclosed.
Why does Buck do this?	Actuarial standards define the assumption setting process for both demographic and economic assumptions. The experience study should document the findings of the study and the proposed assumptions resulting from the study. In addition, setting demographic assumptions that are not internally consistent with benefit eligibility requirements can add a hidden risk of significant liability swings in future valuations.

Step 6: Evaluation of actuarial cost method and asset valuation method	
What Buck will do:	We will analyze the funding method and actuarial asset valuation method and determine their reasonability. Based on the City of Pensacola’s objectives and Board policies, we will consider whether other methods may be more appropriate or effective.
Why does Buck do this?	Our experience shows that accurate valuation of assets and liabilities is only half of the equation. Actuarial cost methods, asset valuation methods and funding policies should be selected that match the policy objectives of the retirement system. We will review these methods against your objectives and actuarial best practices and provide specific guidance or recommendations where appropriate.

Step 7: Calculation of individual member results	
What Buck will do:	This is a review of the liability calculated by the system actuary. We will calculate the liability of participants and compare the results with the individual results provided by the system actuary. Where discrepancies appear, we will need to obtain additional information from the system actuary to determine precisely what the differences are. We will discuss the differences with the system actuary on an as-needed basis. Cooperation between actuaries will be vital in this circumstance.
Why does Buck do this?	This is the actuarial "detective work" where we quantify and qualify the differences. Our experience shows the following examples of common problems detected during this review: • Improper application of retirement rates in valuing early retirement subsidies or late retirement benefits • Failure to value contribution refunds • Variety of issues around deferred termination benefits • Precise application of actuarial cost method • Temporary feature of a disability benefit • Improper handling of ancillary benefits (like death benefits) especially after a primary decrement • Service purchase subsidies

Step 8: Full replication of the most recent actuarial valuation	
What Buck will do:	Buck will perform a full replication of the most recent actuarial valuation for the plan. We will independently and comprehensively calculate each key valuation result and check against the system actuary’s results as stated in the valuation report. We will check the math behind each key calculation to be sure the results in the report are stated accurately. We will reconcile any significant discrepancies between our results and those of the system actuary.
Why does Buck do this?	Our experience shows that input errors may occur between the system-calculated results and the input into the valuation report. While our next step is focused on the big picture, this step is focused on the finer details of the results. In actuarial work, small input errors can result in large discrepancies in final results.

Step 9: Comprehensive analysis and peer review	
What Buck will do:	After the full replication of the valuation is complete, we will take a broader, and again comprehensive look at the results. We will review the determination and appropriateness of the actuarially determined contribution rates. We will review the funded status of the Plan and whether the plan is on track to meeting the stated financing objectives. Finally, we will thoroughly review and peer review the actuarial report and for completeness, comprehensibility, and accuracy.
Why does Buck do this?	The valuation results are reliable only if: • The plan provisions coded are accurate • The assumptions used are valid • The methods used are appropriate • The report is readable and complete Our experience shows an actuarial audit is more than simply a check of the liability calculations. It must look at the big picture. Actuaries like to look at trees. The retirement system sees the forest. The actuarial review must consider both.

Step 10: Completion of draft report	
What Buck will do:	We will send a draft report to the City of Pensacola and will be available to discuss our findings and go over the report in detail.
Why does Buck do this?	Our public plan clients' staff don't like to surprise their boards. We find the staff can often add insight to our findings.

Step 11: Review of draft report by City of Pensacola and Current Actuary	
What Buck will do:	Once the City of Pensacola staff have reviewed the draft report, we will review any comments and make any requested updates. The draft may then be sent to system actuary for review, if desired.
Why does Buck do this?	After receiving feedback, we will revisit any aspect of our work, as needed, and begin drafting a final report and presentation.

Step 12: Final report issued	
What Buck will do:	As directed by City of Pensacola staff, we will finalize the actuarial audit report and presentation. The presentation will be delivered in a timely manner so trustees may review it prior to the board meeting if they wish.
Why does Buck do this?	Buck's experience shows that some Board members like to review material prior to the meeting so they can ask detailed questions at the meeting.

Step 13: Board of Trustees presentation	
What Buck will do:	We will attend a Board of Trustees meeting to review the findings.
Why does Buck do this?	Buck prepares a Board presentation separately from the report because the report and presentation serve two different purposes. A key purpose of the report is comprehensiveness. By this point, we will have done a lot of work, and will want to make sure everything is documented. The key purpose of the presentation is comprehensibility. Your board members and legislators need to understand the major findings of the review and be comfortable with them.

3. Cost

We propose a fixed fee of $27,500 to complete the full scope of the requested services. This proposed fee includes all miscellaneous tasks, emails, phone calls, travel expenses, and presentations to City of Pensacola Staff and the City of Pensacola General Pension Plan Board.

4. Additional Information

Sharing in your Mission – delivering to members

We are aligned with and share your Mission: “To create opportunities and avenues to enhance the quality of life for all citizens through innovation and cooperation in harmony with our core values.” System and financial stability are critical to your success.

Engaging an independent actuarial firm to conduct an audit of your annual actuarial valuation and actuarial valuation report is a valuable tool in following your mission. Ensuring the fund is being funded properly provides both security and sustainability.

We understand you need an experienced actuarial audit partner, one who can:

- Navigate the structural complexities of your plans.
- Confirm appropriate methods and assumptions are being used.
- Be current with and fully grasp actuarial best practices to ensure they are being followed.
- Understand challenges that arise in administering and operating a retirement system so areas of potential concerns can be addressed to ensure proper handling.
- Advise on funding strategies to align with your policies and current actuarial standards. At Buck, we not only audit the policies but provide any consultative advice that may come to light during our audit. A value many auditing actuaries do not offer.

Buck has an advantage when providing actuarial services to the public sector due to our size and structure. We can respond to the needs of the public sector in a nimble and flexible way, yet we have large-firm resources and bench strength, that can be scaled to meet needs and budget. Our competitors are generally either:

- Smaller companies that only offer one or two services and can struggle with meeting timing needs for their clients due to limited resources, or

- Large firms that have set procedures to be applied to all clients regardless of the client's needs or consultants that have limited public sector experience working on public sector clients.

Our commitment and focus on the public sector ensure we are not only currently qualified but will remain so for another 100 years or more. We remain committed to the public sector, providing actuarial and benefits consulting services for state, county and municipal governments, and quasi-governmental organizations.

Professional expertise

Providing comprehensive retirement and actuarial consulting services is at the heart of what we do — this includes funding valuations, financial statement reporting, experience studies, plan design analysis, actuarial reviews and audits, and multi-scenario projections.

Our actuaries and consultants prefer to work hands-on with our clients, and our cross-practice teams include credentialed specialists who understand the regulatory requirements and generally accepted operating practices of the public sector.

In addition to the individuals listed above, Buck's Wealth Practice Leader and Chief Actuary, **Tonya Manning**, FSA EA MAAA, FCA is always available to support the City of Pensacola and our team in ensuring client satisfaction and imparting valuable knowledge.

This core team will be supported by **our deep bench of subject matter experts**, including:

- Our Public Sector Retirement (PSR) practice, which brings a specialized focus to the needs and challenges facing public pension plan sponsors.

- Our centralized, credentialled, independent actuarial peer review team is a model for the industry. Our peer review team reviews all results and Statements of Actuarial Opinion, ensuring that all client deliverables meet our high standards and are communicated in an appropriate manner.

Beyond the basics – strong subject matter expertise

Within our firm are public sector consulting experts — individuals who are dedicated to working with government and public organizations to deliver health, wealth, communications, and compliance solutions. Our Wealth practice established a Public Sector Retirement specialty practice specifically designed for ensuring the highest quality public sector retirement practitioners are available to our clients.

Our client-facing public sector retirement actuaries formally meet on a monthly basis to stay connected and share ideas that may help a variety of our public sector retirement clients and collaborate informally on an ongoing basis. You'll work with a team who has deep knowledge of specific industry sectors, and who take the time to learn your unique situation in order to solve the complex organizational challenges facing public sector organizations.

One of the areas we're especially proud of is our centralized peer review team. The combination of our experienced professionals and centralized review team is what allows us to ensure accuracy and consistency in the work we do for all our clients.

About Buck

An Overview of Our Offerings

Consulting

Compliance
- Compliance reviews
- Fiduciary governance
- HIPAA operational review
- HR policies; handbooks

International
- Analytics and reporting
- Benefits strategy and management
- Expat support
- Investment governance

Health
- Core health strategy
- Financial and actuarial
- Pharmacy consulting
- Global health
- Health intelligence
- Claims audits
- Dependent eligibility audits
- Life, disability, absence
- Vendor governance
- Voluntary benefits

Wealth
- Actuarial
- Audits
- Retirement plan strategy
- Defined benefit administration
- Stock plan administration
- Defined contribution plan management
- Delegated investment management
- Investment advisory
- Pension risk management
- Pension risk transfer
- Wealth analytics
- Specialized Administrative Services and Audits

Career
- DOL, FLSA, state wage and hour compliance
- Executive compensation
- Job analysis, descriptions, evaluation, leveling
- Pay-for-performance
- Performance management
- Recruiting and onboarding
- Sales compensation, effectiveness
- Workforce analytics

Engagement
- Branding and design
- Employee value proposition
- Change management
- Total rewards, well-being portal, apps
- Health and wellness communications
- Retirement and financial wellbeing communications
- Compliance communications

Technology

bEngaged™
Simplify the complex through a human-centered experience.

bEnabled™
Choose what works for efficient plan administration.

bEquipped™
Know what you need to know through analytics.

Attachments

Attachment A – Buck Biographical Profiles

Attachment A

Buck Biographical Profiles

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David J. Kershner, FSA, EA, MAAA, FCA

Principal, Retirement

David Kershner is a Principal and Consulting Actuary with Buck. He works exclusively with public sector clients, helping them manage the ongoing financial risks associated with their retirement plans.

Experience

- 30+ years of experience focusing on the design, funding and financing of qualified and non-qualified pension and retiree welfare plans.
- Long-term multi-scenario forecasts of costs and contributions.
- Experience studies to evaluate the appropriateness of actuarial assumptions.
- GASB 67/68 and GASB 74/75 reporting.
- Advising clients of the cost impact of potential plan changes.

Clients

- City of San Diego, CA
- CalPERS
- AC Transit District, CA
- Clayton County, GA
- City of El Paso, TX
- North Miami Beach Police & Fire, FL
- Pueblo County, CO
- State of Alaska

Education and Achievements

- Fellow of the Society of Actuaries
- Enrolled Actuary
- Member of the American Academy of Actuaries
- Fellow of the Conference of Consulting Actuaries
- Bachelor of Arts in Mathematics from York University in Toronto, Canada

To contact me:

david.kershner@buck.com

Kevin Spanier, ASA, EA, FCA, MAAA

Principal, Atlanta Wealth Practice Leader

Kevin serves as Principal and is the Atlanta Wealth Practice Leader of Buck. Kevin has 18+ years of actuarial consulting experience helping both corporate and public plan clients in the areas of plan design, administration, plan document interpretation, processing complex benefit calculations, contribution strategy, financial reporting and disclosure requirements. Kevin has been a guest speaker at leading educational seminars at the Georgia Association of Public Pension Trustees and Florida Public Pension Trustees Association.

Experience

Kevin has more than 18 years of experience and has been with Buck for 9 years. Kevin's experience includes providing the following items:

- Consulting large corporations with their defined benefit plans. This includes providing information in support of financial reporting, consulting on contribution strategy and completing government filing requirements
- Project management and support of large administration teams, including review of complex benefit calculations and interpretation of plan documents
- Complex actuarial forecasts including accounting and funding projections
- Supporting HR functions, specifically in the calculation of retiree and vested terminated benefit calculations (including confirming the appropriate application of plan provisions)
- Consulting with employers on pension and postretirement medical plan design changes
- Determination of benefit obligations, cost and disclosure information under relevant FASB and GASB standards
- Completing Florida reporting information required under Section 112.664 and confirmation of the use of state premium tax revenue
- Studying pension plan experience and making appropriate assumption and method recommendations
- Advising plan sponsors on employee benefit compliance issues

Clients

Kevin serves as the lead or co-lead actuary providing annual actuarial valuations and periodic experience studies for the following clients:

- American Bureau of Shipping
- Buffalo & Fort Erie Public Bridge Authority
- Chicago Transit Authority
- Clayton County, GA
- East Ridge, TN
- Educational Employees' Supplementary Retirement System of Fairfax County
- Havre de Grace, MD
- Nashville Davidson Transit Organization, Inc.
- Macomb County, MI
- Makino
- Massachusetts Bay Transportation Authority
- North Miami Beach, FL
- Walker County, GA

Education and Achievements

- Bachelor of Business Administration in Actuarial Science from Georgia State University
- Bachelor of Arts in Economics from the University of Georgia
- Associate of the Society of Actuaries, Enrolled Actuary, Member of the American Academy of Actuaries, Fellow of the Conference of Consulting Actuaries
- Affiliate member of the Florida Public Pension Trustees Association and the Georgia Association of Public Pension Trustees

Fun Fact

In his free time Kevin, an Eagle Scout, can be found leading his son's Boy Scout troop on many exciting camping and fishing adventures around the Southeast.

To contact me

kevin.spanier@buck.com

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Jonathan Dobbs, ASA, EA, MAAA

Director, Retirement Consulting
Role: Pension Project Manager

Jonathan Dobbs is a Director in the Retirement Practice at Buck. He is a member of Buck's Global Valuation Center where he works on a broad range of retirement plans in the public and private sector. His responsibilities include, but are not limited to, managing all aspects of retirement plan valuations, performing experience studies, analyzing plan design alternatives, and projecting funding and accounting costs under multiple scenarios.

Experience

- Jon joined Buck in 2005 after serving for 15 years with two other consulting firms.
- Jon's expertise includes the actuarial analysis of design, funding, and compliance issues affecting a broad range of employee benefit plans.
- Jon currently provides annual servicing to approximately 30 Buck clients. A significant number of these are in the public sector.

Clients

- North Carolina Retirement Systems Division
- CalPERS
- City of San Diego
- Alameda-Contra Costa Transit District
- Middletown, RI
- North Miami Beach, FL
- San Joaquin Regional Transit District
- Branch County, MI
- Peace Bridge
- Taunton, MA Retirement Board
- Woburn, MA Retirement Board

Education and Achievements

- M.A. in Mathematics from Indiana University
- Associate of the Society of Actuaries
- Member of the American Academy of Actuaries
- Enrolled Actuary

To contact me

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Kelly L. Adams, FSA, EA, MAAA, FCA

Principal, Retirement Reviewing Actuary,
Public Sector Retirement Specialty Practice Leader

Kelly Adams is a Principal, Reviewing Actuary and leader of the Public Sector Retirement (PSR) specialty practice with Buck. She works on the Central Review Team as the national public sector reviewer. In this capacity Kelly provides independent reviews of Buck's public sector retirement reports and communications for clients across the nation ensuring work completed by Buck actuaries is of high quality, complies with Buck's standards, Actuarial Standards of Practice (ASOP), any applicable laws and Governmental Accounting Standards. Her role allows her to see and understand a vast degree of differences and similarities among public sector retirement programs across the U.S. The information she gathers, which includes differences in system demographics and sponsorship, is provided to the consultants across Buck's public sector retirement practice who in turn bring this expertise and insights to their clients. She leads monthly calls with Buck's public sector actuarial consultants to share ideas and discuss current industry trends.

Experience

- 20+ years of actuarial consulting experience for defined benefit and other postemployment benefit plans.
- Joined Buck as reviewing actuary in 2018 from a national firm specializing predominantly in public sector actuarial consulting.
- Consulted clients in areas such as funding, accounting, experience studies, DROP benefits, plan design changes, plan benchmarking, and many other aspects related to retirement benefits.
- Served on prior firm's Governmental Accounting Standards Board (GASB) committee as well as the Other Postemployment Benefits (OPEB) committee.
- Assisted client's auditors in understanding GASB 43 / 45 when first implemented and then more recently GASB 67 / 68 and GASB 74 / 75.
- Extensive experience consulting Florida clients under Florida Statute Chapters 112, 175 and 185.
- Has served clients in 25 different States
- Actuarial audit services for Statewide / large municipal clients.
- Member of Buck's Office of the Chief Actuary as a public sector retirement Subject Matter Expert

Clients - As reviewing actuary - Buck's public sector retirement clients

Research and Publications – Authored paper on Variable Benefits specifically for one of Buck's largest public sector clients

Education and Achievements

- Fellow of the Society of Actuaries
- Enrolled Actuary
- Member of the American Academy of Actuaries
- Fellow of the Conference of Consulting Actuaries
- B.S. Mathematical Sciences – Actuarial Science from University of North Carolina at Chapel Hill

To contact me: kelly.adams@buck.com

Tonya Manning, FSA, FCA, EA, MAAA

Practice Leader and Chief Actuary, Wealth

As Buck's US Wealth Practice Leader and Chief Actuary, Tonya Manning oversees the practice's talent, operations and strategic direction, and provides guidance regarding emerging trends, technical issues, professional standards, and policies and procedures. Tonya directly supports Buck's key clients and provides visibility for Buck in both the market and the profession. She is the executive sponsor for Buck's Employee Resource Group, Women Empowered at Buck.

Tonya is a lecturer for Columbia University's Master's Program in Actuarial Science. In addition, she is a member of the U.S. Advisory Council on Employee Welfare and Pension Benefit Plans (more commonly known as the ERISA Advisory Council), the Fiduciary Committee for Wespath Benefits and Investments, and the Actuarial Advisory Committee for the Railroad Retirement Board.

Experience

- Before joining Buck, Tonya served for almost five years with the US Department of Treasury as a policy actuary. She was responsible for reviewing ruling requests and participating in regulation projects for the Internal Revenue Service's Employee Plans and Rulings & Agreements division; assisting practitioners and IRS personnel with technical questions; and representing the IRS at events sponsored by the IRS or professional organizations.
- Tonya previously was with another major benefit consulting firm for almost 22 years, in a variety of leadership roles. She spent her last five years there as chief actuary. In that capacity she was responsible for overseeing the practice's quality and intellectual capital. She also served as a member the US Retirement Practice Leadership Council, represented the US on the Global Retirement Council and served as chair of the Global Retirement Innovation Council.

Recent Clients

Tonya plays an oversight role with respect to all of Buck's Wealth practice clients and directly supports several key clients, including Alaska Retirement Management Board, American Bureau of Shipping, Amica Mutual Insurance, CalPERS, L3Harris, Merck and Co., Inc., North Carolina Retirement Systems Division, and the United Nations Joint Board Pension Plan.

Actuarial Credentials

- Fellow of the Society of Actuaries
- Fellow of the Conference of Consulting Actuaries
- Member of the American Academy of Actuaries
- Member of the National Academy of Social Insurance
- Enrolled to perform actuarial services under ERISA by the Joint Board for the Enrollment of Actuaries
- B.S. in mathematics from the University of North Carolina at Chapel Hill

Support for the Actuarial Profession

- Society of Actuaries: previously president of the Society of Actuaries, member of the Board of Directors, and chair of Pension Section Council. Currently a member of the Postretirement Needs and Risks Committee. 2022 recipient of Distinguished Volunteer Service Award; 2016 recipient of the Outstanding Volunteer Award and 2015 recipient of the Presidential Award
- International Actuarial Association: past-president and past-chair of the Executive Committee, Strategic Planning Committee and Nominations Committee; current member of Diversity & Inclusion Task Force and the Board for Pension Benefits and Social Security Section; SOA Council representative for 2013 & 2017-2018; previously vice-chair of Scientific Committee
- American Academy of Actuaries: Interested Party and past member of Pension Practice Council and Pension Committee; previously served as co-chair of Joint Lifetime Income Committee, chair of Retirement Communications Task Force, and Special Director for the Board
- Conference of Consulting Actuaries: leader of Women in Consulting Community steering committee; co-chair of Professionalism Committee; member of Communications Committee; member of Program Committee for the Enrolled Actuaries Conference; recipient of 2008 Most Valuable Volunteer Award
- Actuarial Standards Board: previously a member of Pension Committee and ASOP 21 Task Force
- The Actuarial Foundation: Trustee Emeritus
- International Association of Black Actuaries: member; prior SOA representative for Corporate Advisory Council
- Named as winner by Employee Benefit Adviser in its 2019 Top Women in Benefit Advising awards
- Author of the Enrolled Actuaries Report: "Changing Funding: Method or Madness?"
- Author of "Defined Benefit Employers' Retirement Pension Schemes in the United States," prepared for the Task Force on Employers' Retirement Schemes sponsored by the International Monetary Fund and the US Bureau of Economic Analysis

To contact me

tonya.manning@buck.com
https://www.linkedin.com/in/tonyamanning

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

February 16, 2024

VIA Email

Alexandra Daily
Assistant to Finance Director
Financial Services
City of Pensacola
E: adaily@cityofpensacola.com

Re: Proposal to Provide Actuarial Auditing Services

Dear Alex,

We are pleased to provide this proposal for actuarial auditing services to the City of Pensacola General Pension Board ("Board").

Actuarial Audits

Actuarial audits help plan trustees perform their due diligence and help assure that the information provided by the retained actuary is reasonable and accurate. The Government Finance Officers Association ("GFOA") recommends that actuarial audits be done at least every five years unless there is a change in the actuary (https://www.gfoa.org/materials/actuarial-audits). Actuarial audits are helpful for several reasons:

1. Enhance the credibility of the actuarial valuation process by providing independent assurance that it was performed in accordance with actuarial standards of practice;
2. Assure public trust in how the pension plan is being governed;
3. Help plan fiduciaries to assess whether the pension plan is meeting its funding objectives;
4. Lead to the remediation of errors that might otherwise go undiscovered; and
5. Provide recommendations for improving the actuarial valuation process, including how information is presented in the actuarial valuation report and in other communications.

Scope of Work and Fees

In an actuarial audit, Foster & Foster will fully replicate the original actuarial valuation, based on the same census data, assumptions, and actuarial methods used by the Plan's actuary. In addition, we will examine the actuary's methods and assumptions for reasonableness and internal consistency. Here are the key steps in the audit, which is typically completed within 3-6 weeks:

1. Collect raw census data and most recent valuation report from the plan administrator
2. Collect valuation ready census data and assumptions not fully described in the report from actuary.
3. Compare raw census data and valuation ready census data for consistency
4. Load census data into valuation program
5. Program valuation system for Plan's benefits and actuarial assumptions/method
6. Run initial valuation liabilities and compare to valuation report
7. Identify any areas of deviation outside of actuarial norms and troubleshoot
8. Consults with Plan's actuary on deviations (if necessary)
9. Replicate contribution amount, funded status, and key results from the valuation report

10. Draft initial report for review/comment by the Board and Plan's actuary
11. Present final report to the Board for approval

A draft report will be provided to the Board and the Plan's actuary for comment. Once we incorporate the comments of the Board and the Plan's actuary into our report, we will present the results of our findings to the Board at a meeting of your convenience. The fee to perform the actuarial audit is $20,000.

About Foster & Foster

Foster & Foster has been providing actuarial consulting services to public retirement programs for over 44 years and completes nearly 2,000 actuarial valuations each year for our clients, including over 350 in the State of Florida. Our firm is currently the pension actuary for the City's Police Officers and Firefighters plans and are very familiar with the City's data format and requirements.

We welcome the opportunity to meet in person to discuss this proposal with you. If you have any questions regarding this proposal, our firm, or the services we will provide, please do not hesitate to contact us.

Sincerely,

Bradley R. Heinrichs, FSA, EA, MAAA
Chief Executive Officer
(239) 433-5500
Brad.Heinrichs@foster-foster.com

Joseph L. Griffin, ASA, EA, MAAA
Senior Consulting Actuary
(239) 600-6920
Joe.Griffin@foster-foster.com

OUR FIRM

Foster & Foster, Inc. was founded in Gainesville, FL in June 1979 by Ward and Eileen Foster. In that first year, the firm had one client and revenues of $1,500. Today we have nearly 2,000 clients nationwide with revenues of over $27 million. Brad Heinrichs has been the President/CEO of Foster & Foster, Inc. since 2005 after purchasing the company from the Fosters. Since that time, the staff has increased through growth and acquisition from five employees to one hundred thirteen.

Our footprint stretches from coast to coast, with offices in Cape Coral, FL; Allentown, PA; Suwanee, GA; Naperville, IL; Coppell, TX; San Mateo, CA; Royal Oak, MI; Wales, WI; and our corporate headquarters in Fort Myers, FL. Additionally, we have numerous satellite offices across the country.

Foster & Foster is currently providing ongoing support to nearly 2,000 public sector clients and provides GASB 74/75 services to over 1,000 different entities. We work almost exclusively with public retirement and other post-employment benefit (OPEB) plans and consider ourselves to be experts in all phases of the design and administration of these programs. We currently serve:

- Over 1,000 public pension plans from across the country, covering both local and state-wide systems with as few as five and as many as 180,000 members.
- Multi-employer (Taft Hartley) plans with funds ranging in size from 500 to 30,000 union members.
- Corporate plans covering up to 10,000 participants.

Our retirement consulting team consists of more than 60 staff members, including 33 credentialed actuaries, twelve of whom are Fellows in the Society of Actuaries (the highest actuarial designation). Foster & Foster offers clients some of the most experienced and skilled consultants in the industry.

Perhaps the most exciting facets about our retirement team is its growth. While other firms are shrinking in size, we have added staff. Toward the end of 2016, Foster & Foster was managing around 300 clients, while today we are approaching 2,000 clients. Our firm has added over 70 consultants during this time, increasing our current total to 113 consultants, of which 33 are credentialed actuaries.

Consulting Philosophy

At Foster & Foster, we keep our philosophies simple: ***“Treat every one of our clients as if they are our only client.”*** This is our sole focus and, given our remarkable growth over the last 19 years, it is working. More objectively, the results of this philosophy can be seen in the two following statistics:

- Under our current ownership (since 2005), we have not had an actuary leave voluntarily to go work for another firm.
- Under our current ownership (since 2005), we have not been terminated by any client due to the quality or performance of our work.

This is the stability that you can expect from Foster & Foster.

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OUR EXPERIENCE

Extensive Actuarial Audit Experience

We have extensive experience performing actuarial audits that are consistent with the scope being requested. Below is a summary of the highlights of our experience in this area:

Over the years, we have completed full-scope actuarial audit for a number of public plans, including the City of Dallas (3 plans), St. Louis County (MO), the State Retirement System of Illinois (3 plans), the City of Aurora (CO), and, most recently, the City of Corpus Christi (TX).

We also have audit experience through our work with the auditing firm CliftonLarsonAllen, LLP (CLA). As part of this relationship, we audit the GASB 67/68 valuations for their clients. These audits include a review of the calculations of the total pension liability, pension expense, sensitivities of the discount rate and trend rates and all of the other information required by GASB. We also ensure the economic and demographic assumptions used in the calculations are reasonable. While our reviews are often a confirmation of the work performed by the system actuary, there are times where potential errors are raised, like the error we found last year that led to a $1.2 billion adjustment to one client's results. The public pension plan clients that we have audited within the last five years are included below:

- Arizona State Retirement System
- Arlington County Employees' Retirement System
- City of Aurora (CO) General Employees' Retirement Plan
- City of Baltimore Employees Retirement System
- Baltimore City Fire & Police Retirement System
- Baltimore County Employees' Retirement System
- Public Employees' Retirement Association of Colorado (PERA)
- District of Columbia Retirement Board Teachers' Retirement Plan
- District of Columbia Police Officers' & Firefighters' Retirement Plan
- City of El Paso Employees' Retirement Trust
- General Assembly Retirement Plan of Illinois
- Judges Retirement System of Illinois
- Kansas Public Employees Retirement System
- Montgomery County Employees Retirement System
- Public Employees' Retirement System of the State of Nevada
- Public Employees Retirement Association of New Mexico
- North Dakota Public Employees Retirement System
- North Dakota Teachers' Fund for Retirement
- Ohio Public Employees Retirement System
- Philadelphia Municipal Retirement System
- Seattle City Employees' Retirement System
- South Carolina Retirement System
- State Employees' Retirement System of Illinois
- Washington State Department of Retirement Systems

Furthermore, an actuarial audit includes a compliance review to ensure that all work and work products are in line with legal and professional requirements, as is done with each of the aforementioned projects.

Experience Replicating Actuarial Results

Perhaps the most exciting facet about our firm is our growth. While many other firms are shrinking in size, we have expanded our firm to meet our clients' needs. Over the past 10 years, we have added over 70 employees, added six offices, and six satellite offices.

As our firm and client base grows, so does our experience in transitioning actuarial services, which requires a full replication and review of prior actuarial results. Recent transitions have included Arizona Public Safety Personnel Retirement System, the Ohio State Highway Patrol Retirement System, City of Tampa (General Employees and Police & Fire), and the Peace Officers' Annuity and Benefit Fund of Georgia. We have developed highly efficient processes to perform these reviews. This gives us an advantage in performing Level One audits which also require a full replication of prior results.

Extensive Experience with and Devotion to Public Sector Retirement Systems

Our firm has been providing actuarial consulting services to retirement programs for 44 years and is nearly 100% devoted to the public sector. We complete more than 1,000 actuarial valuations per year. In the past five years, we have transitioned over 500 plans to our systems and delivered over 50 experience study reports. This experience has exposed us to a multitude of different client situations and challenges, but ultimately has equipped us with a broad array of ideas and solutions.

Unlike many of our competitors, the actuaries we hire are fully devoted to serving public sector retirement systems and have extensive experience with public sector retirement systems. Each of the core team members assigned to service the Systems have over 20 years of public sector specific retirement system experience.

EXPERIENCE AND DEDICATION OF OUR CONSULTANTS

Our retirement consulting team consists of over 60 team members, including 33 credentialed actuaries, 12 of whom are Fellows in the Society of Actuaries (the highest actuarial designation).

At Foster & Foster, we keep our philosophies simple: *"**Treat every one of our clients as if they are our only client.**"* This is our sole focus and, given our remarkable growth over the last 15+ years, it is working. More objectively, the results of this philosophy can be seen in the two following statistics:

- Under our current ownership (since 2005), we have not been terminated by any client due to the quality or performance of our work.

This is the stability that you can expect from Foster & Foster.

OUR DIFFERENTIATORS

Your decision to consider a new retirement consultant is a difficult one. Ultimately, your choice will come down to understanding and appreciating our strengths. As such, we take this opportunity to give you our thoughts on what differentiates us from our competitors. Simply put, we are confident that we will be able to provide exceptional, timely service at a more competitive price.

- **A Strong Commitment to Timely Delivery –** Our approach is to develop a detailed timeline for delivering results with your timing needs in mind. The timeline will include key steps throughout the process, clearly identifying who is responsible for each step along the way. Since the Board meets quarterly, it is critical to deliver results timely to avoid a 3-month delay or a special meeting. ***We will commit to delivering results in your specified timeframe to avoid any delay in valuation results.***

- **Familiarity with the City of Pensacola –** As the City's actuary for the police officer and firefighter plans, we are uniquely familiar with the City's data, requirement, and processes. ***This will give you comfort that selecting us as your auditing actuary will be a smooth and effortless process for the City.***

- **Valuation Process and Quality Review –** Our approach is to make the valuation process as easy as possible on your staff so that they can focus on serving the members of the plan. One of the more time-consuming activities is answering questions regarding the annual data submission. To minimize the amount of time spent on this activity, we suggest a periodic data update (e.g., monthly or quarterly) so that the data is being updated throughout the year. ***This process eliminates the lengthy time commitment to respond to data questions and allows the valuation to be processed quickly and efficiently***. Our valuation process follows strict internal policies and controls to ensure our work product is of the highest quality. We require a team of actuaries to review and sign off on any work we generate. We also have an independent actuary with more than 40 years of experience whose entire job is to review our work product before it is delivered to our clients.

- **Competitive Pricing –** Our entire consulting team is actively involved with addressing clients' needs. As a result, we can keep low overhead and offer highly competitive fees. ***Since we process nearly 2,000 valuations each year, we have a standardized, cost efficient approach to processing valuations, which translates to lower fees for our clients.***

We offer the Board a strong and growing team that can serve you in proactive consultative manner. A firm that provides the expertise that you expect at a fair cost, allowing you to manage your retirement programs without excessive expenses. This is exactly what Foster & Foster can bring to you. We are excited to be your partner into the future!

INSURANCE SPECIFICATIONS

Below please find the insurance coverages Foster & Foster maintains and details on each.

- **Risks Covered:** Professional Liability (Errors & Omissions)
  Name of Insurance Carrier: Indian Harbor Insurance Company
  Levels and Limits: The limit of our liability is on a per-claim basis ($5,000,000), subject to an annual aggregate ($5,000,000). Foster & Foster does not limit its professional liability to its clients in any capacity.

- **Risks covered:** Comprehensive General Liability
  Name of Insurance Carrier: Evanston Insurance Company
  Levels and Limits: The limit of our liability is $1,000,000 for each occurrence with a $2,000,000 general aggregate.

- **Risks covered:** Automobile Liability
  Name of Insurance Carrier: Travelers Insurance Company
  Levels and Limits: The limit of our liability is $1,000,000

- **Risks covered:** Umbrella Liability
  Name of Insurance Carrier: Evanston Insurance Company
  Levels and Limits: The limit of our liability is $5,000,000 for each occurrence.

- **Risks covered:** Workers Compensation and Employers' Liability
  Name of Insurance Carrier: Travelers Insurance Company
  Levels and Limits: The limit of our liability is $1,000,000.

- **Risks covered:** Cyber Liability
  Name of Insurance Carrier: Travelers Insurance Company
  Levels and Limits: The limit of our liability is $2,000,000 for each occurrence

ACORD

FOSTE-2 OP ID: JV

CERTIFICATE OF LIABILITY INSURANCE

DATE (MM/DD/YYYY) 01/04/2024

THIS CERTIFICATE IS ISSUED AS A MATTER OF INFORMATION ONLY AND CONFERS NO RIGHTS UPON THE CERTIFICATE HOLDER. THIS CERTIFICATE DOES NOT AFFIRMATIVELY OR NEGATIVELY AMEND, EXTEND OR ALTER THE COVERAGE AFFORDED BY THE POLICIES BELOW. THIS CERTIFICATE OF INSURANCE DOES NOT CONSTITUTE A CONTRACT BETWEEN THE ISSUING INSURER(S), AUTHORIZED REPRESENTATIVE OR PRODUCER, AND THE CERTIFICATE HOLDER.

IMPORTANT: If the certificate holder is an ADDITIONAL INSURED, the policy(ies) must have ADDITIONAL INSURED provisions or be endorsed. If SUBROGATION IS WAIVED, subject to the terms and conditions of the policy, certain policies may require an endorsement. A statement on this certificate does not confer rights to the certificate holder in lieu of such endorsement(s).

PRODUCER 239-437-5555 Atkinson & Assoc. Insurance 1537 Brantley Rd, Bldg C Fort Myers, FL 33907 Paul G. Atkinson A009536	CONTACT NAME: Paul G Atkinson PHONE (A/C, No, Ext): 239-437-5555 FAX (A/C, No): 239-689-3826 E-MAIL ADDRESS: patkinson@atkinsoninsurance.com		
	INSURER(S) AFFORDING COVERAGE		NAIC #
	INSURER A: Travelers Indemnity Company		25666
INSURED Foster and Foster Consulting Actuaries, Inc. dba Foster & Foster, Inc. 13420 Parker Commons Blvd #104 Fort Myers, FL 33912	INSURER B: of America		
	INSURER C: Indian Harbor Insurance Co		36940
	INSURER D: Travelers Excess & SL Co		29696
	INSURER E: Evanston Insurance Company		35378
	INSURER F: Hartford Fire Insurance		

COVERAGES **CERTIFICATE NUMBER:** **REVISION NUMBER:**

THIS IS TO CERTIFY THAT THE POLICIES OF INSURANCE LISTED BELOW HAVE BEEN ISSUED TO THE INSURED NAMED ABOVE FOR THE POLICY PERIOD INDICATED. NOTWITHSTANDING ANY REQUIREMENT, TERM OR CONDITION OF ANY CONTRACT OR OTHER DOCUMENT WITH RESPECT TO WHICH THIS CERTIFICATE MAY BE ISSUED OR MAY PERTAIN, THE INSURANCE AFFORDED BY THE POLICIES DESCRIBED HEREIN IS SUBJECT TO ALL THE TERMS, EXCLUSIONS AND CONDITIONS OF SUCH POLICIES. LIMITS SHOWN MAY HAVE BEEN REDUCED BY PAID CLAIMS.

INSR LTR	TYPE OF INSURANCE	ADDL INSD	SUBR WVD	POLICY NUMBER	POLICY EFF (MM/DD/YYYY)	POLICY EXP (MM/DD/YYYY)	LIMITS	
E	X COMMERCIAL GENERAL LIABILITY						EACH OCCURRENCE	$ 1,000,000
	CLAIMS-MADE X OCCUR			3AA663648	04/17/2023	04/17/2024	DAMAGE TO RENTED PREMISES (Ea occurrence)	$ 100,000
D	X CYBER LIABILITY			CYB10790987800	01/01/2024	01/01/2025	MED EXP (Any one person)	$ 5,000
							PERSONAL & ADV INJURY	$ Excluded
	GEN'L AGGREGATE LIMIT APPLIES PER:						GENERAL AGGREGATE	$ 2,000,000
	POLICY PRO-JECT LOC						PRODUCTS - COMP/OP AGG	$ Excluded
	X OTHER: CYBER RET $10,000						CYB-EA CL	$ 3,000,000
A	AUTOMOBILE LIABILITY						COMBINED SINGLE LIMIT (Ea accident)	$ 1,000,000
	X ANY AUTO			BA-9T746362-24-42-G	01/01/2024	01/01/2025	BODILY INJURY (Per person)	$
	OWNED AUTOS ONLY SCHEDULED AUTOS						BODILY INJURY (Per accident)	$
	X HIRED AUTOS ONLY X NON-OWNED AUTOS ONLY						PROPERTY DAMAGE (Per accident)	$
								$
E	UMBRELLA LIAB X OCCUR						EACH OCCURRENCE	$ 5,000,000
	X EXCESS LIAB CLAIMS-MADE			EZXS3113511	04/17/2023	04/17/2024	AGGREGATE	$ 5,000,000
	DED RETENTION $							$
A	WORKERS COMPENSATION AND EMPLOYERS' LIABILITY Y/N						X PER STATUTE OTH-ER	
	ANY PROPRIETOR/PARTNER/EXECUTIVE OFFICER/MEMBER EXCLUDED? (Mandatory in NH) X	N/A		UB-8J390688-24-42-E	01/01/2024	01/01/2025	E.L. EACH ACCIDENT	$ 1,000,000
				NO DEDUCTIBLE			E.L. DISEASE - EA EMPLOYEE	$ 1,000,000
	If yes, describe under DESCRIPTION OF OPERATIONS below						E.L. DISEASE - POLICY LIMIT	$ 1,000,000
C	PROF LIAB E&O			MPP 9037522 05 $250K DED	01/01/2024	01/01/2025	PL-EA CLM	5,000,000
F	BOND $500,000			21BDDJA6409	04/17/2023	04/17/2024	PL-AGGREG	5,000,000

DESCRIPTION OF OPERATIONS / LOCATIONS / VEHICLES (ACORD 101, Additional Remarks Schedule, may be attached if more space is required)

CERTIFICATE HOLDER	CANCELLATION
INFORMATION ONLY**	SHOULD ANY OF THE ABOVE DESCRIBED POLICIES BE CANCELLED BEFORE THE EXPIRATION DATE THEREOF, NOTICE WILL BE DELIVERED IN ACCORDANCE WITH THE POLICY PROVISIONS.
	AUTHORIZED REPRESENTATIVE Paul G Atkinson

ACORD 25 (2016/03)

FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

Malichi Waterman, FCA, MAAA, EA
2727 Paces Ferry Road, SE
Buildiing 1, Suite 1400
Atlanta, GA 30339-4503
mwaterman@segalco.com

February 23, 2024

The City of Pensacola and
The Board of Trustees
Pensacola General Pension and Retirement Fund
Pensacola, FL 32502

Re: Proposal Letter for a Level One Actuarial Audit for the City of Pensacola General Pension and Retirement Fund

Dear Trustees:

As requested, we are writing to describe the approach, timeline and fees to perform a level one actuarial audit of the City of Pensacola General Pension and Retirement Fund (the Fund) for the Fiscal Year ended September 30, 2022. A level one audit will result in an assessment of the actuarial assumptions and methods, as well as the current actuary's actuarial valuation report and GASB 67/68 disclosure. Additionally, Segal meets the minimum requirements listed in the RFP.

As defined by the Government Finance Officers Association (GFOA), "*In a level one, or full-scope, actuarial audit, the reviewing actuary fully replicates the original actuarial valuation, based on the same census data, assumptions, and actuarial methods used by the plan's consulting actuary. In addition, the reviewing actuary examines the consulting actuary's methods and assumptions for reasonableness and internal consistency".*

Our analysis will include the following components:

- Analysis of the valuation data used in the prior actuary's valuation
- Programming the plan's assumptions and benefit provisions
- Replication of the current actuary's most recent valuation within reasonable standards
- Comparison of the plan provisions described in the actuarial valuation reports to governing law and employee handbooks for consistency
- Review of the actuarial assumptions to determine the reasonableness of assumptions and compliance with the Actuarial Standards of Practice
- Review of the actuarial funding policy to assess whether it is reasonable and appropriate
- Review of the actuarial valuation reports and provide recommendations for improvement, if applicable

Our team

Following is our proposed Client Relationship Manager and Supporting Actuary, along with the Primary Actuary, for this project. Professional biographies are attached to this proposal as *Appendix A*. The primary and supporting actuaries are located in Segal's Atlanta office. Additional actuarial staff will be assigned upon Segal's selection for this engagement and their information will be provided to the City prior to contract completion.

Malichi Waterman, MAAA, FCA, EA Vice President and Consulting Actuary, has 25 years of actuarial consulting experience and is primarily focused on public sector pension plans. Malichi is the client relationship manager and enrolled actuary with the City of Vero Beach General Employee Retirement Plan and is familiar with State of Florida pension laws and filing requirements. Malichi is also the lead for San Antonio Fire and Police, Dekalb County (GA), Fulton County (GA), and Fulton-Dekalb Hospital Authority (GA), among other plans. He is also the co-lead for the Georgia Municipal Employee Benefit System, with approximately 280 separate pension plans. Malichi will serve as client relationship manager and supporting actuary for the City.

Ben Kirkland, FSA, MAAA, FCA, EA Consulting Actuary, has over 20 years of actuarial consulting experience. Ben works on plans for the City of Atlanta, City of Birmingham, and Fulton County, among others. Ben will serve as primary actuary for the City.

Jeff Williams, ASA, MAAA, FCA, EA Vice President and Consulting Actuary in Segal's Atlanta, GA office, has more than 26 years of actuarial consulting experience and is a consulting actuary for the City of Jacksonville Retirement System (4 plans), City of Orlando Police Officers' Pension Fund, City of Birmingham, and Dallas Fire and Police Pension Fund, among others. Jeff will serve as a pension resource and supporting actuary for the City.

Experience with large public pension plans

Segal has helped public sector retirement systems and employers with their retirement plans through multiple economic cycles and market volatility. We are known for providing consulting expertise and advice to retirement plans that reflect the special needs and priorities of public entities and their employees. Our public sector retirement practice provides a full range of services, including actuarial valuations, plan design and plan governance. One of our areas of specialization is auditing actuarial work. With a range of actuarial audits performed for entities such as the Teachers' Retirement System of Oklahoma, Kentucky Retirement Systems, Missouri Local Government Employees Retirement System, Retirement Systems of Alabama, and Firefighters' Retirement System of Louisiana, we have the experience and expertise to help you reach your goals.

Segal's pension team of actuaries and consultants functions as a center of excellence for public sector consulting, including the performance of actuarial audits and pension valuations. This team specializes in state, local governments and other public sector systems, and has extensive experience valuing the liabilities for retirement benefits, as well as helping clients manage the magnitude of the liability.

We provide benefit consulting services to approximately 500 public sector entities representative of 36 states, plus the District of Columbia, the U.S. Virgin Islands, the U.S. Government and Canada. Retirement actuarial consulting services are provided to over 100 public sector funds including state, local, transportation and both primary and secondary education venues.

We add value from our extensive experience, and we have a proven track record of helping states and other public sector entities, coupled with our innovative ideas and technology, such as our live modeling software, to prepare for the future.

Actuarial audit experience with large public employees' retirement systems

Known in the industry for our high caliber of work and stringent quality control procedures, Segal is often selected to perform actuarial audit and review work. The Firm's actuaries conduct an average of four to five actuarial audits per year. We adhere to a process for performing audits that is widely recognized by retirement systems as superior and has led to our success. In many cases we were selected to perform actuarial audits multiple times by the same organization.

Segal is well versed in providing consulting services to large public pension plans including annual valuations, experience studies, and audits. In addition to these basic services, we also provide consulting around funding policy, legislative proposals, and benefit adequacy. Following are recent examples of our experience:

- **Teachers' Retirement System of Oklahoma (TRS)**: TRS provides pension benefits to close to 200,000 active and inactive employees of any public school in Oklahoma, including public colleges and universities. This audit was a full replication of both the Retained Actuary's most recent actuarial valuation and experience study. This included analysis of five different tiers of benefits.
- **Arizona State Retirement System (ASRS)**: ASRS provides pension and retiree health benefits to state and nearly all local government employees. Our team recently performed a comprehensive review of the System's actuarial valuation and experience study. This review resulted in some moderate changes to select assumptions and methodology and provided assurance to the Board and staff that the plans are on solid footing.
- **Retirement Systems of Alabama (RSA)**: RSA provides pension and retiree health benefits to state and nearly all local government employees. Our team recently completed an audit to verify that actuarial assumptions adopted by the Boards were implemented as intended.
- **Firefighters Retirement System of Louisiana (FRS)**: FRS provides benefits to over 8,000 members. Our team completed a full replication audit of the current actuary's pension actuarial valuation as part of a larger overall project that included costing of potential plan changes and an operational review of the System.

We will be pleased to expand upon any issue at the level of detail you require and are available to meet with you to discuss our proposed approach. We are excited about the opportunity to draw upon our prior experience and to serve as your independent reviewing actuary.

Experience performing actuarial audits for public plans

Our public sector actuarial experience includes many non-valuation assignments as well. These projects generally include limited and full scope actuarial audits, plan design and funding analyses, expert witness, board of education assignments, among other services. The following table shows a list of our public sector retirement clients where we have provided actuarial audit services.

Representative List of Actuarial Audit Experience for Public Plans

Client	Year(s)	Assignment	Asset Size
Alaska Retirement Management Board (ARMB)	2012	Full scope audit	$17.5 billion
Arizona Public Safety Personnel Retirement System	2023	Limited scope audit	$17.8 billion
Arizona State Retirement System	2019	Full scope audit	$40 billion
California State Teachers' Retirement System	2011, 2016	Full scope audit	$140 billion
City of Phoenix Employee Retirement System	2022	Full scope audit	$3.2 billion
City of Grand Rapids General Retirement System	2022	Full scope audit	$450 million
City of San Jose Federated City Employees' Retirement System	2017, 2021	Full scope audit	$2.5 billion
City of San Jose Police and Fire Department Plan	2017, 2021	Full scope audit	$4.2 billion
Houston Municipal Employees Pension System	2014	Full scope audit	$2.2 billion
Kentucky Teachers' Retirement System	2015	Full scope audit	$16 billion
Los Angeles County Employees Retirement Association	2011, 2014, 2017	Full scope audits, other projects	$49.3 billion
Merced County Employees' Retirement Association	2017, 2020, 2023	Full scope audit	$686 million
Oklahoma Teachers Retirement System	2023	Full scope audit	$20 billion
San Diego City Employees' Retirement System—City of San Diego	2017 (contract end 12/31/18)	Full scope audit	$6.4 billion
San Diego City Employees' Retirement System—San Diego City Regional Airport Authority	2017 (contract end 12/31/18)	Full scope audit	$148 million
San Diego City Employees' Retirement System—San Diego City Unified Port District	2017 (contract end 12/31/18)	Full scope audit	$375 million
San Mateo County Employees' Retirement Association	2017 (contract end 12/31/17)	Full scope audit	$4.4 billion

Client	Year(s)	Assignment	Asset Size
Stanislaus County Employees' Retirement Association	2013	Full scope audit	$1.5 billion
Tennessee Consolidated Retirement System	2020	Full-scope audit	$52 billion
Teacher Retirement System of Texas	2014	Full scope audit	$117 billion
City of Austin Employees' Retirement System	2014	Limited scope audit	$2.1 billion
Denver Public Schools Retirement System	2015	Limited scope audit	$3.1 billion
Illinois Municipal Retirement Fund	2011	Limited scope audit	$22 billion
Kentucky Retirement Systems	2015, 2020	Limited scope audit	$12 billion
Michigan State Employees' Retirement System	2017	Limited scope audit	$63 billion
Missouri Local Government Employees Retirement System	2009, 2019	Limited scope audit	$4 billion
New Mexico Educational Retirement Board	2014	Limited scope audit	$10 billion
New Mexico Public Employees Retirement Association	2016	Limited scope audit	$14 billion
Retirement Systems of Alabama	2011, 2016, 2018, 2021, 2023	Limited scope audit	$31 billion
South Carolina Public Employee Benefit Authority	2017	Limited scope audit	$28 billion
Texas County & District Retirement System	2012	Limited scope audit	$20 billion
Illinois State Universities Retirement System	2012, 2017	Actuarial audits	$12 billion
New Hampshire Retirement System	2019	Actuarial audit	$8.8 billion
Wisconsin Retirement System	2011, 2015-2017, 2019, 2021	Actuarial audits	$80 billion

Our approach, task outline and timing

If selected to perform this study, Segal will prepare a request of the items necessary to complete the audit.

Steps	Pensacola Involvement	Cav Mac Involvement	Timing
1. Initial conference call with Fund staff	Yes	No	Upon award (assumption of March 2024)
If selected to perform this study, Segal will meet with Fund staff, either virtually using Teams/Zoom or via conference call. The purpose of this meeting will be to review the project timeline and process, materials needed and any other information necessary for the completion of the audit.			

Steps	Pensacola Involvement	Cav Mac Involvement	Timing
2. Data/document gathering and initial analysis	Yes	Yes	March/April 2024
Once we have the necessary census information, detailed actuarial assumptions and relevant documents, our analysts will commence the initial analysis of the data and reconciliation process. As part of this step, sample participants for whom detailed calculations will be checked are selected and relevant information will be requested from the current actuary.			
3. Review of census data	No	No	April 2024
Segal will compare the census data provided by the Fund to the census data used by Cav Mac for the actuarial valuations. We will compare distributions of the data as well as the edits that the current actuarial firm makes to the census data.			
4. Analysis of current actuarial methods and procedures	No	Minimal	April/May 2024
Each actuary involved in this case will review the actuarial reports and applicable experience study and independently note their findings and comments with respect to assumptions, methodology, report content, etc. The actuarial team will review and evaluate the actuarial cost method and actuarial asset valuation method used and comment on whether other methods would be more appropriate for the Fund. We will discuss all our observations in an internal meeting and outline those points that will be included in our written report. An assessment will be made as to the reasonableness of the methods and procedures and the consistency with generally accepted actuarial standards of practice. Any deviations will be discussed with the Fund before inclusion in our draft report.			
5. Analysis of actuarial assumptions and experience study	No	No	April/May 2024
As part of the audit, Segal will review the most recent experience study performed by the current actuarial firm. Statistical information contained in the experience study report will be used to analyze the reasonableness of the assumption setting process (and the reasonableness of the assumptions themselves). Demographic and economic assumptions will be reviewed, including, but not limited to, mortality, retirement, turnover, incidence and type of disability, levels of pay adjustment and rates of investment return. Any recommended adjustments or suggestions for improvement will include a detailed rationale.			
6. Replication valuation results	No	No	May/June 2024
After the detailed calculation information is received from the current actuarial firm, our analysts will begin the sample test life review and replication of valuation results. The analysts will program our valuation software and calculate the liabilities, normal cost, unfunded actuarial accrued liability, contribution rates, and amortization period for the plans. If Segal's calculation of the contribution rate and liabilities compared to those calculated by the current actuarial firm fall outside our tolerance level, we will reconcile the reasons for the differences. We will perform this task by analyzing the source of the liabilities (e.g., retirement, disability, etc.) compared to the current actuarial firm's calculations. We will also analyze additional test lives, if necessary. The analysts will document their steps and findings as they work, which aids in the peer review process and begins to lay the framework of the content for our written actuarial review report. These notes are retained in the project file as part of the work papers for this engagement. The reviewing actuary will review the analysts' work.			
7. Draft, final reports and presentation of results	Yes	Yes	June/July 2024
Draft reports for each system will be compiled based on the findings from the steps above and will include Segal's overall opinion as to the reasonableness of Cav Mac's conclusions and a detailed account of any			

Steps	Pensacola Involvement	Cav Mac Involvement	Timing
items noted as exceptions. The report will be in a language clearly understood by a lay reader. Terms essential to an understanding of retirement system funding and actuarial valuation will be defined. A separate appendix will be included in the report that provides detailed and technical information for Cav Mac to be able to review and provide a formal response to Segal's findings and analysis prior to the final report being provided to the Fund. This preliminary report will be presented to Fund staff. Based on the comments and feedback received, we will adjust and finalize our reports accordingly for presentation to the Board.			

A draft report of findings for discussion will be compiled based on the findings from the steps above and will include Segal's overall opinion as to the reasonableness of the Current Actuary's assumptions, methods and valuation reports and a detailed account of any items noted as exceptions. The Retained Actuary should be provided with this report and will be given the opportunity to review the report and provide comments regarding its content.

A sample level one actuarial audit report is attached to this proposal as *Appendix B*.

Fees

We propose the following fee for performing the level one actuarial audit of **$45,000**. The fee for an audit is often greater than a single year's valuation, or retainer, fee as the auditing actuary has to program the plan of benefits and replicate the current actuary's results.

Segal is fully aware of the sensitivity of budget allocations for public sector employers. Our pricing approach is focused on achieving the client's objectives in the most cost-effective manner consistent with quality, accuracy, and timeliness. If our proposed fees are inconsistent with your understanding of the engagement, we request the opportunity to explain our pricing assumptions or to modify the scope of services to best fit your objectives for this important assignment.

The fee above is based on receipt of clean data from where a reasonable amount of standard data scrubbing would be required to reconcile the census and prepare for the use in the validation and sample life review processes.

Insurance

We can confirm that we meet the insurance requirements listed in your RFP. Proof of insurance will be provided if Segal is chosen for this engagement.

The Segal Group (d/b/a Segal) maintains the following insurance on a firmwide basis covering each of its operating subsidiaries:

Insurance Type	Amount	Type
Professional Liability (Errors & Omissions)	$20,000,000*	Claims Made

General Liability	$2,000,000	Occurrence
Automobile	$1,000,000	Occurrence
Workers' Compensation	Statutory Amount	Occurrence
Employer's Liability	$1,000,000 / $1,000,000 / $1,000,000	Occurrence
Crime / EPL Liability	$5,000,000	Occurrence
Cyber Liability	$25,000,000**	Claims Made
Excess Liability (excludes Professional Liability)	$25,000,000	Occurrence

*__Professional Liability Insurance__: in two layers $12.5M by Greenwich Insurance (AXA XL) followed by $7.5M by Columbia Casualty Company (CNA)

**__Cyber Liability Insurance__: Aggregate Limit $25,000,000, Primary Limit $5,000,000 (AWAC), First Excess Layer $5,000,000 (Zurich), Second Excess Layer $5,000,000 (CNA), Third Excess Layer $5,000,000 (Indian Harbor), Fourth Excess Layer $5,000,000 (Allianz)

We welcome an opportunity for dialogue

We understand that you are looking for a consulting team that has deep expertise in the subject matter, and we are confident that Segal can deliver on this expectation. We will be pleased to expand upon any issue at the level of detail you require and welcome the opportunity to meet with you to discuss our proposed approach. We are excited about the opportunity to draw upon our prior experience and to serve as an independent auditing actuary for the CIty's plan.

Sincerely,

Malichi Waterman

Malichi Waterman, ASA, MAAA, EA
Vice President and Consulting Actuary

Agreed to on behalf of the City of Pensacola General Pension and Retirement Fund on this ____ day of ______________, 2024 by:

Signature	Signature
Malichi Waterman	
Printed Name: Malichi Waterman	Printed Name:

Appendices

A. Professional biographies

B. Sample level one actuarial audit report

A. Professional biographies

Malichi Waterman, FCA, MAAA, EA

Vice President, Consulting Actuary, Atlanta

Project Role: Client Relationship Manager, Supporting Actuary

Expertise

Mr. Waterman is a Vice President and Actuary in Segal's Atlanta office. He works on all phases of actuarial valuations and administrative issues for a variety of public, multiemployer and corporate clients. He has experience working on accounting reporting items as well as expense and contribution projections, including asset-liability modeling. He also has experience with GASB 67 and GASB 68 reporting, State of Florida FS 112.664 filings, and calculations associated with State of Florida Chapter 175 and 185 contributions.

Professional background

Before joining Segal, Mr. Waterman worked for seven years for a retirement consulting firm specializing in corporate retirement plans.

Education/professional designations

Mr. Waterman holds a Bachelor of Business Administration, specializing in Actuarial Science from Georgia State University. He is a Fellow of the Conference of Consulting Actuaries, a Member of the American Academy of Actuaries and an Enrolled Actuary.

Publications/speeches

Mr. Waterman regularly makes presentations to retirement boards and city councils, has presented at Segal's Technical Actuarial Meetings and co-led a session at the 2018 Conference of Consulting Actuaries annual meeting. He is "on staff" with the International Foundation of Employee Benefit Plans and is one of two Segal actuaries who teaches their "Certificate of Achievement in Public Plan Policy (CAPPP) – Pension Part II" session. He has also conducted training sessions for various groups, including the South Florida Government Finance Officers and City Clerks Association and the Andrew Young School of Public Policy at Georgia State University.

Malichi Waterman, FCA, MAAA, EA
mwaterman@segalco.com
678.306.3125
segalco.com

Ben Kirkland, FSA, FCA, MAAA, EA

Consulting Actuary, Atlanta

Project Role: Primary Actuary

Expertise

Ben is a Consulting Actuary in Segal's Atlanta office. He has over 20 years of experience in actuarial consulting to pension plans, handling such issues as plan design, funding strategy, and risk analysis and mitigation. Ben now works on all phases of actuarial valuations and administrative issues for a variety of public sector and multiemployer clients.

Professional background

Prior to joining Segal, Ben consulted primarily with corporate plan sponsors on pension and postretirement benefit strategy and compliance, from annual valuations to contribution projections and plan terminations.

Education/professional designations

Ben received a BS with honors in Mathematical Decision Sciences from the University of North Carolina at Chapel Hill. He is a Fellow of the Society of Actuaries, a Fellow of the Conference of Consulting Actuaries, a Member of the American Academy of Actuaries and an Enrolled Actuary.

Publications/speeches

Ben was recognized with the Outstanding Session Award for the "Ethics for the Retirement Actuary" session that he co-led at the 2018 Society of Actuaries Annual Meeting in Nashville, TN.

Ben Kirkland, FSA, FCA, MAAA, EA
bkirkland@segalco.com
678.306.3132
segalco.com

Jeffrey S. Williams, ASA, MAAA, FCA, EA

Vice President, Consulting Actuary, Atlanta

Project Role: Supporting Actuary/Resource

Expertise

Jeff is a Vice President and Consulting Actuary in Segal's Atlanta office with over 26 years of retirement consulting experience. His expertise includes actuarial valuations, experience studies, funding strategies, cost studies, deterministic projections and plan redesign.

Jeff works on all phases of actuarial valuations and consulting issues for a variety of public sector and multiemployer clients. He is involved in client relationship management as well as technical work and has worked closely with the Internal Revenue Service (IRS) and Pension Benefit Guaranty Corporation (PBGC) in finding solutions that meet client needs.

Professional background

Before joining Segal in 2003, Jeff spent almost six years at a retirement consulting firm specializing in corporate retirement plans. Prior to that, he worked in the pension administration department of a Fortune 100 company.

Education/professional designations

Jeff holds a BS in Business Administration from Auburn University and attended the Masters of Actuarial Science program at Georgia State University in preparation for actuarial exams. He is an Associate in the Society of Actuaries, a Member of the American Academy of Actuaries, a Fellow of the Conference of Consulting Actuaries and an Enrolled Actuary.

Publications/speeches

Jeff regularly makes presentations to retirement boards and plan sponsors. Jeff currently serves on the Society of Actuaries Retirement Council as well as the Council's Aging & Retirement committee. He is "on staff" with the International Foundation of Employee Benefit Plans and is one of two Segal actuaries who teaches their "Certificate of Achievement in Public Plan Policy (CAPPP) – Pension Part II" session. He has presented at NCPERS and Segal's Technical Actuarial Meetings and moderated a forum at the Conference of Consulting Actuaries Annual Meeting, and conducted training sessions at the Andrew Young School of Public Policy at Georgia State University.

Jeffrey S. Williams, ASA, MAAA, FCA, EA
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B. Sample level one actuarial audit report

A sample level one actuarial audit report begins on the following page.

ABC State Employees Retirement System

Level One Actuarial Audit

Legacy Plan and Hybrid Plan

December, 2023

Actuary, FSA, FCA. MAAA, EA / Actuary, FSA, FCA, MAAA, EA

Segal

101 N. Wacker Drive
Suite 500
Chicago, IL 60606
T 312.984.8500
segalco.com

December, 2023

Director
ABC State Employees Retirement System
100 XYZ Street
City, ST 12345

Re: Level One Actuarial Audit of the ABC State Employees Retirement System

Dear Director:

We are pleased to present the results of our full-scope (Level one) audit of the ABC State Employees Retirement System (System). The purpose of this audit is to replicate the results presented in the Actuarial Valuation Reports as of June 30, 2022 prepared by the System's retained actuary, and to determine whether the Plans are being funded on an adequate basis using actuarial assumptions that are reasonable, consistent and meet generally accepted actuarial principles, and, with respect to actuarial matters, whether the Plans are in compliance with State law and the policy of the Board of Trustees.

Segal reviewed the State and Higher Education Employees and K-12 Public School Teacher classifications in both the Legacy defined benefit (DB) plan and the Hybrid (DB/DC) plan. Other employee classifications were not reviewed. Our audit also includes a review of the Experience Study covering the period July 1, 2015 – June 30, 2019 prepared by the retained actuary.

This review was conducted under the supervision of Actuary 1 and Actuary 2. Both are Fellows of the Society of Actuaries, Fellows of the Conference of Consulting Actuaries, members of the American Academy of Actuaries, and Enrolled Actuaries under ERISA. This review was conducted in accordance with the standards of practice prescribed by the Actuarial Standards Board.

The assistance of the System staff and the retained actuary ("the actuary") is gratefully acknowledged.

We appreciate the opportunity to serve as an independent actuarial advisor for the SABC State Employees Retirement System and we are available to answer any questions you may have on this report.

Sincerely,

Actuary, FSA, FCA, MAAA, EA
Senior Vice President and
Consulting Actuary

Actuary, FSA, FCA, MAAA, EA
Vice President and Consulting Actuary

Table of Contents

Level One Actuarial Audit of the ABC State Employees Retirement System

December, 2023

Executive Summary

The State Treasury Department retained Segal to conduct an independent Level one actuarial audit of the June 30, 2022 Actuarial Valuation Reports of the ABC State Retirement System (System) performed by the retained actuary.

The objectives for this engagement included:

- A review of the quality of the Actuarial Valuation reports and Experience Study report;
- A review of the reasonableness and consistency of actuarial methods and assumptions, including the major economic assumptions (earnings, cost-of-living increases and salary);
- Replication of the valuation results to confirm reasonableness and accuracy of contribution rates and accrued liabilities;
- An evaluation of whether the valuation reflects state statutes and Board policies; and
- An evaluation of whether the valuation was performed in accordance with Actuarial Standards of Practice (ASOPs).

The primary objective of an actuarial audit of any valuation is to provide validation that the liabilities and costs of the System are reasonable and calculated as intended. This independent audit includes a full replication of the actuarial valuation results, plus a review of the key components in the valuation process that encompass the derivation of the liabilities and costs for System.

These key components include the benefits valued, the actuarial assumptions and funding method used, and the asset valuation method employed. The valuation report and select valuation output for a number of active, terminated vested, and pay status test lives provided the detail necessary to validate each of these key components. We were not asked to evaluate the demographic data, any gain/loss analysis, or previous year valuations.

We reviewed all information supplied by the System, including sample benefit calculations for recent retirees. We also requested and reviewed additional information from the actuary, including test lives and documentation of procedures beyond those disclosed in the valuation report.

Summary of Findings

This peer review validates the findings of the June 30, 2022 actuarial valuations. Segal was able to match the valuation results and the test life output within an acceptable range. We concluded the valuations were performed in accordance with the Actuarial Standards of Practice (ASOPs) promulgated by the Actuarial Standards Board (ASB).

Actuarial Valuation Reports

We began with a review of the Actuarial Valuation Reports for compliance with applicable standards of practice and governmental required reporting. Overall, it is our opinion that the reports completely and fairly present the results of the actuarial valuations and comply with all applicable actuarial standards. We also offer ideas for improving the quality and understanding of the Actuarial Valuation Reports. The following is a summary of our key recommendations:

1. **We strongly suggest that the actuary include an *Executive Summary* or *Valuation Highlights* section at the front of the valuation report that provides key results.**
2. **We suggest the *2022 Valuation* section, currently located on page C-11, be provided before the ten-page history.**
3. The *2022 Valuation* summary notes that the amortization schedule of each gain/loss tier was adjusted with the 2022 valuation. **We suggest the actuary show the number of years in the prior amortization schedules and the adjusted amortization schedules as well as the impact of the adjustment.**
4. **While the 2022 Actuarial Report prepared by the retained actuary includes a basic Risk Discussion, we suggest the disclosure could be improved by providing financial projections.**
5. The Legacy Plan report shows a negative Unfunded Actuarial Accrued Liability (or surplus) for Teachers. **The report should indicate how this surplus is amortized in determining the contribution rates.**

Experience Study

We also reviewed the Experience Study report for July 1, 2015 through June 30, 2019, the methodologies used to set the assumptions, and the recommendations that the actuary provided. We considered the reasonableness of the proposed actuarial assumptions and methods in the context of our own experience, and those of other state and local pension systems. Details on suggested modifications before the next experience study are in Section 1. We also offer ideas for improving the quality and understanding of the Experience Study report.

On February 29, 2016, the Pension Task Force (PTF) of the Actuarial Standards Board (ASB) released a report summarizing its opinions on various proposals to change pension standards related to public pension plans. The Experience Study was published on February 6, 2021 and we suggest the retained actuary should have considered the PTF Report conclusions in preparing their reports.

Methods and Assumptions

Overall, it is our opinion that the methodologies used to examine the System's assumptions and methods are reasonable and comply with the Actuarial Standards of Practice. The following is a summary of our key conclusions:

1. In our opinion, the Experience Study for July 1, 2015 through June 30, 2019 conforms to the appropriate Standards of Practice as promulgated by the Actuarial Standards Board.

2. The procedures used to analyze the assumptions are reasonable.

3. The recommended economic and demographic assumptions appear to be reasonable in light of the plan experience.

4. The actuarial cost method (individual entry age normal) also meets actuarial standards, and

is the most commonly used method among public sector plans.

5. In our opinion, the asset valuation method, with ten-year smoothing and a 20% corridor around market value, is reasonable and meets actuarial standards. However, we note that the majority of public plans use a shorter smoothing period.

6. The Pension Task Force of the Actuarial Standards Board (ASB) suggests disclosure of a solvency (market-consistent) value of liabilities in the actuarial valuation report. The Actuarial Standards Board has issued an Exposure Draft for ASOP No. 4 that would require this disclosure in valuation reports.

Valuation Results

Our replication of the System's Legacy valuation produced results that are 0.7% higher than the retained actuary for the total Actuarial Present Value of Projected Benefits, 0.7% lower for retirees and beneficiaries, 0.5% higher for inactive and vested deferred members and 2.4% higher for active members.

Our replication of the System's Hybrid valuation produced results that are 1.1% higher than the actuary for the total Actuarial Present Value of Projected Benefits, 0.7% higher for inactive and vested deferred members,1.2% higher for active members, and an exact match for retirees.

Differences less than 5% are generally considered a reasonable match. The results for both Plans are well within that tolerance. Additional detail on the replication of the valuations are in Sections III and IV.

With that said, Segal did find some areas where the valuation could be improved with regard to the accuracy of liability calculations. Our key recommendations are as follows:

1. Return of Excess Contributions – TCA 8-37-212 provides that the excess, if any, of accumulated contributions over the sum of actual retirement allowance payments received be paid as a lump sum to the surviving beneficiary or estate. Our analysis of the test lives indicates that this provision was not valued in the liability, although it is described on page G-2 of the Legacy valuation report. The effect of this coding difference was minimal. **We recommend that the actuary program the return of contributions plan provision.**

2. For current terminated vested participants and for Legacy vested active participants assumed to withdraw from employment before eligibility for retirement and elect a deferred annuity, their programming assumes there is no liability for deaths prior to commencement of the deferred annuity. However, a death benefit would be payable in that situation (an annuity to married participants with 10 or more years of service or lump sum return of contributions in all other cases). The effect of this coding difference was minimal. **We recommend that the actuary program these pre-retirement death benefit provisions.**

3. For retirements from active status, the actuary currently assumes that no participants will elect reduced early retirement benefits. We think this is likely an oversimplification (although we have not analyzed any actual retirement experience). **We recommend use of early retirement decrements be considered and anticipate that implementing a reduced early retirement assumption could increase liabilities for the Legacy Plan.**

4. For retirements from terminated vested status, the actuary currently assumes that participants will commence benefits at Service Retirement eligibility (except Legacy active participants terminating in a future year, who are assumed to retire at their earliest retirement age). A single retirement age for terminated vested participants is unlikely to adequately capture the range of retirement scenarios for such participants. **We recommend that consideration be given to retirement rates based on age/eligibility, similar to the assumption for retirements from active status.**

5. The actuary notes in its summary of plan provisions that all pre-retirement deaths are assumed to be ordinary (i.e. not in the line of duty). We expect that, in most cases, the benefit for a line-of-duty death would be more valuable than the ordinary death benefit, so that implementing any probability of line-of-duty deaths would increase liabilities. However, the magnitude of the change would be dependent on the exact assumption chosen. **We recommend that an explicit assumption be applied to determine ordinary and line-of-duty deaths.**

6. For pre-retirement deaths that occur after reaching retirement eligibility, an annuity is payable to the beneficiary of all participants (not just married participants). The actuary's current methodology assumes that only 80% of participants (those assumed to be married) receive the annuity, while the remaining 20% receive the lump sum death benefit. **We recommend valuing the greater of the two possible death benefits for 100% of deaths occurring after retirement eligibility.**

7. For pre-retirement deaths that occur before reaching retirement eligibility and where the participant is assumed to be married, their coding for the Hybrid Plan does not appear to reflect any early retirement reductions that would apply. **We recommend applying the early retirement reductions, where applicable.**

These items and our recommendations are described in more detail throughout this report.

Section I: Review of June 30, 2022 Actuarial Valuation Reports

The actuary generally provides a comprehensive actuarial valuation report which includes sufficient information for an individual to gain an understanding of the financial picture of the System. In reviewing the reports, we paid particular attention to the Actuarial Standards of Practice (ASOPs) No. 4, 41, and 51. Those ASOPs are briefly summarized below, followed by our comments on the reports.

ASOP No. 4

Actuarial Standard of Practice (ASOP) No. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, is the umbrella standard for actuaries performing pension plan valuations. It provides guidance to the actuary for measuring and disclosing pension plan obligations. Actuaries should assess the plan sponsor's funding policy and disclose rationale for the procedures used. In general, we find the actuary's actuaries have met the standards of ASOP No. 4 and the procedures used to determine required contribution rates are reasonable.

Disclosures required by ASOP No. 4 include the intended purpose of the measurement, a summary of the plan provisions, data, and assumptions, a description of the normal cost method used, the amortization method, funded status using both an actuarial value and market value, and disclaimers about future measurements.

ASOP No. 4 directs actuaries to other actuarial standards for guidance on assumptions and methods. Our audit of the actuary's Experience Study includes commentary on the guidance provided by ASOP No. 27 (Economic Assumptions) and No. 35 (Non-Economic Assumptions) . We generally found the actuary to have met these standards.

ASOP No. 41

ASOP No. 41, *Actuarial Communications*, recognizes that complete disclosure of all supporting information is neither practical nor necessary. Section 3.2 of ASOP 41 states that the actuary should "identify the methods, procedures, assumptions, and data used by the actuary with sufficient clarity that another actuary qualified in the same practice area could make an objective appraisal of the reasonableness of the actuary's work as presented in the actuarial report."

In general, we found the actuary's description of assumptions and methods to be clear and comprehensive. However, we believe the actuary's "Supplement to the System June 30, 2022 Actuarial Valuation" (Legacy Plan) may have overlooked some of the ASOP No. 41 requirements, specifically a summary of methods and assumptions and a statement of professional opinion.

Other suggestions for improved communication in the actuarial report can be found in Section I.

ASOP No. 51

ASOP No. 51, *Assessment and Disclosure of Risk*, is effective for valuations with measurement dates on or after November 1, 2018. The actuary included some basic risk measures and generally met the requirements of this standard. **We recommend providing additional information about the risks of actual future measurements deviating from expected due to experience deviating from the assumptions. We also suggest that the risk measures presented include a discussion of how these measures evaluate risk and any trends that may be developing.**

System Legacy Plans Actuarial Valuation and Report

1. **We strongly suggest that the actuary include an *Executive Summary* or *Valuation Highlights* section at the front of the valuation report that provides key results.** This might include items such as the current and prior year actuarially determined contribution rates, assets and liabilities, funded percentages, and any significant changes since the prior valuation (for example, investment or demographic gains or losses, assumption changes, plan changes, membership changes). It could also include consultative commentary.
2. Section C, Determination of Funding Levels, includes the System's detailed funding history from 1984 through 2021. **We suggest the *2022 Valuation* section, currently located on page C-11, be provided before the ten-page history.** Perhaps the history could be included as an Appendix to the valuation report, so that the reader can readily reach the current valuation results.
3. The *2022 Valuation* summary notes that the amortization schedule of each gain/loss tier was adjusted with the 2022 valuation. **We suggest the actuary show the number of years in the prior amortization schedules and the adjusted amortization schedules as well as the impact of the adjustment.** It would be useful for the user of the report to know whether the amortization periods for individual schedules were extended, shortened, or both.
4. The first paragraph under *Future Expectations* (page C-12) discusses the ten-year period for smoothing investment gains or losses, and also managing volatility by resetting the amortization period for the unfunded accrued liability. This is, in effect, a double-smoothing. **We suggest that the actuary provide the System with projections of expected future contribution requirements that show effect of each smoothing technique by itself, and together, so that it is clear to the reader how much the combined approach is deferring overall experience gains or losses.**
5. The newest Actuarial Standard of Practice (ASOP) No. 51 addresses *Assessment and Disclosure of Risks Associated with Managing Pension Obligations*. **While the 2022 Actuarial Report prepared by the actuary includes a basic Risk Discussion, we suggest the disclosure could be improved by providing financial projections.**

   For example, the investment risk discussion notes that there is a risk that the funded status and required contributions could be "very volatile". The System would benefit by having projections that quantify what “very volatile” means in terms of potential required changes in contributions. Similarly, it may be useful for the System to understand how contribution requirements may differ if the total payroll grows less quickly (or declines) compared to the payroll growth assumption.

ASOP No. 51 also requires that the actuary recommend a more detailed assessment of risks if he or she thinks believes it would provide the System with a better understanding of risks inherent in a plan. We note that the actuary did not suggest any further analysis of risk for the System. A review of any additional risk analyses, if performed, is beyond the scope of our audit.

6. Page C-15 provides a chart showing the Value of Benefits. **We suggest commentary be included to help the System understand the numbers presented.**
7. Page C-16 provides a chart showing the History of Contribution Rates. The actuary should clarify whether these are Total Rates or Employer Rates. **It could also be interesting to compare the contribution rate history to other key metrics such as the funded percentage history or growth in assets over the 30-year time period.**
8. Page C-18 provides a breakdown of liability by status. We note that the liability for “present active members” includes certain individuals in the data with an active status code, but P (“prior”) service status. Such participants are valued as though they are terminated, so they may be more accurately classified in the “former members” group. In either case, **the active and inactive group descriptions in the report could be improved to more easily distinguish where the liability is included**.
9. **We recommend the *Gain and Loss Analysis* include a demonstration of the total gain or loss in the Unfunded Accrued Liability since the prior valuation, and show what portion is related to investment experience.** The *Gain and Loss Analysis* does include a useful breakdown of the causes of change in contribution rates.
10. **We suggest that the increases from prior service purchases and sick leave credits could be addressed by setting an explicit assumption for these variables. We recommend that the actuary explicitly describe the re-amortization of unfunded liability.** (The contribution rates increased as result of this item, which indicates the amortization period was reduced.)
    The “Other” category is a material source of change, particularly for the Teachers where it represents more than 20% of the total change prior to amortization period adjustments. **We recommend that when this “Other” source of change is large, that further investigation into the sources such as retirement and turnover experience be shown.**
11. Page E-2 shows a negative Unfunded Actuarial Accrued Liability (or surplus) for Teachers. **The report should indicate how the surplus is amortized in determining the contribution rates.**
    This page is titled “Schedule of Funding Progress,” but includes only the current year information. The reader is directed to the System Comprehensive Annual Financial Report for information on earlier periods. **Adding a graph with the historical funded ratios would be informative.**

12. The Appendix includes Tables I and II that show a distribution of active members by Age (Table I) and Service (Table II). **Generally, data is shown in a single combined Age and Service table, and that format may be more useful to the reader.**
13. Table VI-2 shows each amortization unfunded liability base and the number of years over which it is amortized in the current year valuation. **We recommend the number of years over which the bases were amortized in the prior year valuation also be shown.**
14. Table VIII summarizes actuarial assumptions and methods. Actuarial standards related to actuarial communications require that assumptions be sufficiently described for another actuary to be able to understand what was used in the calculations. Based on our review of test lives and related discussions with the actuary, **the Post-Retirement Mortality table descriptions on page H-29 should be clarified to indicate that there are three separate mortality improvement scales used to convert the SOA RP-2014 table into the final valuation mortality table.** The base RP-2014 tables are projected back to 2006 using MP2014, forward to 2014 using MP2016 (this produces the base rates from the 2019 experience study), and then from 2014 to 2025 using MP2018. The actuary could opt to refer to the RP-2014 table with MP2014 backed out as RP-2006, which has recently become accepted terminology.
15. We note that the actuary does not assume that future disabled retirees will receive any worker's compensation benefits when determining the maximum disability benefit. **We recommend disclosing this assumption in the Summary of Actuarial Methods and Assumptions in the report.**
16. Our review of test lives indicates that the actual Pre-Retirement Mortality table in use for Legacy participants is the base 2006 rates from the RP2014 Employee Mortality Table (colloquially, the RP2006 Employee Mortality Table) with projection from 2006 to 2034 (15 years beyond valuation date) using the MP2014 projection scale. This differs from the description on page H-29 of the valuation report. We assume that this is the intended table, and **the pre-retirement mortality assumption in the report should be updated to reflect the table being used.**
17. For Legacy participants hired before July 1, 1997, The actuary does not assume that any future disablements will occur in the line-of-duty. **We recommend disclosing this disability assumption in the Summary of Actuarial Methods and Assumptions in the report.**
18. Table IX states there were no changes in assumptions. However, there were updates to the administrative expense assumption and generational mortality improvement scales. **We recommend all assumption changes and their impact on liabilities be disclosed.**

Comments on the Legacy Plan Provision Summary

The System benefit provisions, summarized in Section G of the Legacy Plan's Actuarial Valuation Report, are generally consistent with the TCA Title 8, Chapters 34 – 39. Nonetheless, we observed some areas where the descriptions could be clarified. Note that in areas where the plan provisions differed by group, our review was limited to Group I. The actuary's valuation report page numbers are included for clarity.

Page G-1

1. The Average Final Compensation definition should specify that it is limited to average earnable compensation, and further define “earnable compensation” as specified in TCA 34-101(14) (i.e., bonuses are generally included, and also includes cash value of cafeteria benefits).

2. The Average Final Compensation definition should indicate that compensation in excess of IRC Section 401(a)(17) limits is disregarded.

Pag**e G-2**

3. **The actuarial reductions for optional forms of payment should be described further by indicating the actuarial basis for such adjustments.**

4. The cost of living adjustment (COLA) section should indicate the exact CPI index used (All Items, US City Average) and describe the rounding conventions described in TCA 8-36-701 when the increase in index falls between 0% and 1%.

5. **The current interest rate used to accumulate the employee contribution account balance (5%) should be disclosed.**

Page G-4

6. **The age 60 requirement for Service Retirement requires five years of service for members with Date of Hire after 1991. (TCA, Chapter 36, Part 2, paragraph 201(a)(1)). This should be noted in the report.**

7. The benefit percentages listed should clarify that the formula is a flat 1.75% for members who do not participate in Social Security.

8. **We suggest including a description of the Retirement Benefit for Teachers and General State employees who work beyond age 65, where the benefit is actuarially increased for delayed commencement (TCA 8-36-208(b)).**

Page G-5

9. **The Vested Benefit amount should be clarified to indicate that the 15% reduction for each year of service less than 10 years is only applicable if the benefit commences before service retirement eligibility.**

10. The Minimum Benefit of $96 per year of service is applicable for members with 10 years of service. If the member has less than ten years of service, the Minimum Benefit is $84 per year of service (TCA 8-36-209). This is explained on page G-3, but can be easily missed. We suggest that adding this directly into the Minimum Benefit section would help avoid confusion.

11. The Ordinary Disability benefit amount may be more easily described as 9/10 of the Service Retirement benefit (including projection of service, as applicable). This would also be more consistent with the phrasing in TCA 8-36-501.

Pag**e G-6**

12. **The Maximum Disability Benefit should be clearly described as 75% of AFC when applied to the combined value of the Ordinary Disability benefit and any worker's compensation benefit (TCA 8-36-501(c)(7)).**

13. The Minimum Benefit of $96 per year of service is applicable for members with 10 years of service. If the member has less than ten years of service, the Minimum Benefit is $84 per year of service (TCA 8-36-209). This is explained on page G-3, but can be easily missed. We think that adding this directly into the Minimum Benefit section would help avoid confusion.

14. **The Accidental Disability benefit is also subject to the maximum of 75% of AFC, when considered in combination with any workers compensation benefit (TCA 8-36-502(c)(1)(C).**

15. It **is worth clarifying that the age 55 Inactive Disability Benefit to which the actuarial adjustment is applied would also reflect early retirement adjustments of 4/10 of 1% per month prior to the service retirement date and 15% reductions for each year of service less than 10 years.**

16. **The Ordinary Death Benefit should be clarified to explain that the beneficiary need not be a spouse.** In addition, in the event that the beneficiary is a spouse and the spouse dies before all children reach age 19 (age 22 if full-time student), the benefit continues until all children reach age 19 (age 22 if full-time student), marry, or die (TCA 8-36-109(a)(3).

Page G-7

17. **The eligibility for the Ordinary Death Benefit for those with at least 5 years of service, but not eligible for early or service retirement, could be further clarified to include only participants who are married at the time of death.**

18. The description should clarify that the duration of Accidental Death Benefit payments is dependent on the relationship of the beneficiary to the participant. For surviving spouses, the benefit is payable for life. For surviving children, the benefit is payable until all children reach age 19 (age 22 if full-time student), marry, or die.

19. The assumption that all death benefits are Ordinary Death benefits for valuation purposes would be more appropriate to include in the summary of actuarial assumptions.

20. **The Inactive Death Benefit eligibility description could be further clarified to include only participants who are married at the time of death.**

21. The description should be clarified that the Inactive Death Benefit amount is reduced by 4/10 of 1% for each month the death preceded the Service Retirement date (TCA 8-36-123).

22. **The Inactive Death Benefit section would be more complete by including the lump sum return of the member's account balance in situations where the participant is unmarried at the time of death or has less than 10 years of service.**

System Hybrid Pension Plans Actuarial Valuation and Report

1. **We suggest that the Summary include other key valuation results in addition to the actuarially determined contribution rates.** This might include items such as the current and prior year actuarially determined contribution rates, assets and liabilities, funded percentages, and any significant changes since the prior valuation (for example, investment or demographic gains or losses, assumption changes, plan changes, membership changes). It could also include consultative commentary.
2. **While the 2022 Actuarial Report prepared by the actuary includes a basic Risk Discussion, we suggest the disclosure could be improved by providing financial projections.** For example, the investment risk discussion observes the historical returns highlight substantial volatility from year to year. The System would benefit by having projections that quantify what this means in terms of potential required changes in contributions. Similarly, it may be useful for the System to understand how contribution requirements may differ if the total payroll grows less quickly (or declines) compared to the payroll growth assumption.
3. **We suggest including rationale for the 3.625% addition to the actuarially determined Hybrid Plan contribution rate (presumably this is a timing adjustment).**
4. The assumed rates of retirement for the Hybrid Plan are identical to those used for the Legacy Plan. While there is no credible experience for the Hybrid Plan as of yet, it is unusual that a new plan design would not have any anticipated effect on participant behaviors, such as retirement decisions. We recommend that retirement experience be monitored for the Hybrid and Legacy plans in case different retirement assumptions are warranted.
5. Page 26 states there were no changes in assumptions. However, there were updates to the administrative expense assumption and generational mortality improvement scales. **We recommend that the effect of these assumption changes be disclosed.**

Comments on the Hybrid Plan Provisions Summary

The description of the defined benefit component provisions of the Hybrid Plan in the actuary's reports are generally consistent with the TCA Title 8, Chapters 34-39. Nonetheless, we observed some areas where the descriptions could be clarified. The actuary's valuation report page numbers are included for clarity.

Page 16

1. “Credited Service” used throughout section is more accurately labeled “Creditable Service”. The definition of Creditable Service should include mention of military service, similar to Legacy Plan description.

2. “Average Earnings” used throughout section is more accurately labeled “Average Final Compensation”. The Average Final Compensation definition should specify that it is limited to average “Earnable Compensation”, and further define “Earnable Compensation” as specified in TCA 34-101(14) (i.e. bonuses generally included, and includes cash value of cafeteria benefits).

3. The Average Final Compensation definition should indicate that compensation in excess of IRC 401(a)(17) limits is disregarded.

4. In the Accrued Benefit definition, the $80,000 maximum is indexed annually from July 1, 2015, not July 1, 2017 (TCA 8-35-256(h)). Although "Accrued Benefit" does not appear to be used anywhere in the actual code, we do agree that defining it here makes the summary easier to understand and organize.

5. The Accrued Benefit definition should also indicate the index with which the $80,000 maximum is increased (CPI All Items, US City Average).

Page 17

6. **The Early Retirement Benefit actuarial reduction should indicate the actuarial basis used, and perhaps include sample factors for each integer retirement age from 60 through 64 (for Teachers and General State employees).**

7. The Disability Benefit description is far less detailed than in the Legacy valuation report. We recommend including the eligibility requirements, the projection of service to the Service Retirement Date, and the maximum of 75% of AFC when considered in combination with any worker's compensation benefit.

8. The Death Benefit descriptions are far less detailed than in the Legacy valuation report. We recommend including the eligibility requirements and the amounts payable for the Lump Sum benefit or the Line-of-Duty benefit. There should also be a description of the actuarial reductions applicable to both 100% Joint and Survivor death benefits in the event the death occurs prior to the Service Retirement Date.

9. **For the Refund of Contributions benefit, the current interest rate used to accumulate the employee contribution account balance (5%) should be disclosed.**

10. The optional forms of payment should be disclosed, as well as the actuarial basis used to calculate the actuarial reductions.

Page 18

11. **The Cost of Living Adjustment section should indicate the exact CPI index used (All Items, US City Average) and describe the rounding conventions described in TCA 8-36-701 when the increase in index falls between 0% and 1%.**

Comments on the Experience Study Report

Overall, the methodology that the actuary used to review experience and set proposed assumptions meets professional actuarial standards of practice. Our findings with respect to specific sections of the actuary's Experience Study report are summarized as follows.

Summary of Report

1. State Code Annotated, Section 8-34-503(b) requires an experience study at least once in each six-year period. The Government Finance Officers Association (GFOA) recommends that these studies be performed no less frequently than once every five years. The System has been commissioning experience studies every four (4) years which is more frequent than recommended by the GFOA and more frequent than required since the Code was amended in 1992. Most comparable retirement systems perform five-year studies. **Since the State frequency exceeds the standard, we recommend the Board of Trustees consider whether the additional expense of performing studies over a four-year period is justified.**

2. The Introduction on page 1 begins with a discussion of the experience from 1976. Throughout the report, there is a substantial amount of history from 1976 forward. While this may be interesting, it is not necessarily relevant for any current assumption recommendations. **We suggest deleting this discussion of historical experience study results or moving to an Appendix. We recommend that more detail be added that is specific to the four-year period being studied.**

3. **Discussion of data collection refinements over time could also be moved to an Appendix.** We note that although the Introduction makes note of a more elaborate analysis of information that was not previously available, there is no detail provided as to what information was newly available or how it added to the experience analysis.

4. The primary reason for completion of actuarial experience studies is to ensure that the package of actuarial assumptions closely captures the experience of the Plan, which minimizes gains and losses from year to year, and by extension minimizes significant fluctuations in the actuarially determined contributions. **Segal recommends that a summary of the investment and non-investment gains and losses during the four-year period be included in the experience review, so that the System can see how closely the assumptions are tracking to experience.** There will always be gains and losses from year to year, as the assumptions are never going to be perfect. However, trends of consistent gains or consistent losses over several years can be telling when the actuary is recommending changes for the future.

5. We noted that relatively few assumption changes were made. There were no changes recommended for retirement rates, turnover rates, disability rates, or disability mortality. **While there is mention of the fact that each of the last two four-year study periods were unusual due to the Great Recession and subsequent recovery, impacting behavior patterns of State employees, more detailed analysis would have been useful.**

6. **We recommend that the report summary include the impact of changing to the recommended assumptions, with the effect of economic and demographic changes shown separately.** The previous auditing actuary made a similar recommendation in their audit of the System. The impact of changes will allow the System Board to make better informed decisions on the recommended changes.

7. **We recommend that the actuary disclose total System experience for each member classification. The total experience should then be separated into investment and liability experience gains and losses.**

8. W**e recommend that trends be summarized at a high level. This is helpful to the reader in understanding the magnitude of deviations between actual and assumed experience, and trends that may have emerged over the four years can be recognized.**

Demographic Assumptions

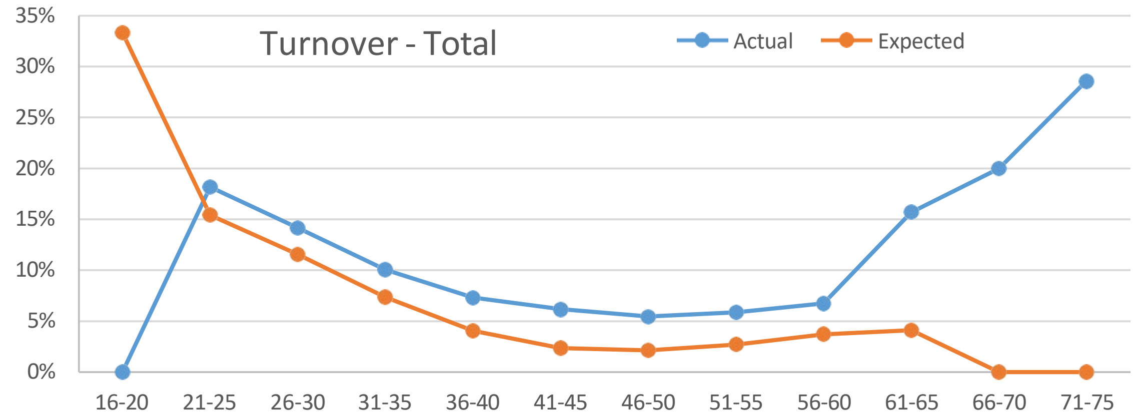
1. Actuarial Standard of Practice No. 35, Selection of *Demographic and Other Noneconomic Assumptions for Measuring Pension Obligations* (ASOP No. 35) provides guidance for setting noneconomic assumptions used in actuarial valuations. The demographic assumptions used to value the System reflect the expected occurrence of various events among participants. The assumptions should reflect specific characteristics of the System and produce reasonable results. A reasonable assumption is one that is expected to model the contingency being measured and not expected to produce significant gains and losses.
   Overall, the methodology that the actuary used to review experience and set proposed assumptions is appropriate and satisfies the relevant standards of practice.

2. **While we recognize stable contributions to be a desirable goal, the American Academy of Actuaries Pension Task Force also recommends consideration of benefit security and generational equity. One method of evaluating these competing objectives would be to introduce risk analyses that consider the impact on each objective when actual experience differs from projected.**

3. **In general, we suggest that the summaries of Actual and Expected experience be shown in graphical form, rather than just data tables.** For example, page 5 shows General State Ultimate Withdrawal experience for males and females, and for all members.
   The total section shows:

Age	Exposure	Actual	Expected	Act/Exp
16-20	3	0	1	0.00
21-25	1,492	271	230	117.62
26-30	8,828	1,249	1,019	122.55
31-35	15,944	1,601	1,169	136.90
36-40	19,482	1,420	789	179.88
41-45	23,633	1,456	554	262.92
46-50	25,999	1,414	553	255.88
51-55	26,717	1,566	724	216.23
56-60	10,408	701	386	181.58
61-65	293	46	12	377.32
66-70	75	15	0	n/a
71-75	14	4	0	n/a
TOTAL	132,888	9,743	5,438	179.17

In our experience, showing the same data in another format can make it easier for readers to understand the experience and appropriateness of any new assumptions that are recommended. In this situation, a graph of the tabular information shows:



While 5-year age groupings may be appropriate in some situations, a review by individual age will generally be helpful. This is especially important for retirement rates, as there are often noticeable patterns of retirement upon reaching certain ages (such as Social Security or Medicare eligibility).

4. There does not appear to be an assumption for sick leave at retirement, even though sick leave is counted in credited service at the time benefits are calculated. Without an assumption, there are likely losses occurring annually when new retirees have more service than anticipated. **We recommend that the actuary consider adding an assumption for sick leave in the future.** Depending on the average level of sick leave accumulated at retirement, we estimate introduction of a sick leave assumption could increase the actuarial liabilities for active participants by approximately 1% - 2%.

5. **We recommend showing the assumed decrement rates as well as counts of exposure and expected counts.** This would be helpful in identifying where rates are the same for different groups. For example, on page 5, it is not obvious whether the Withdrawal assumption is the same or different for Male and Female employees.

6. On page 6 of the report, the actuary discusses the weighting of exposures and decrements by the liability amounts. **We suggest that the charts in the report include both unweighted and weighted results, so that the reader can determine the actual number of exposed lives and the number of assumed and actual deaths, retirements, etc. Titles and headings should clearly indicate when the numbers shown are weighted, or a footnote should be added to reflect this fact.**

7. In January 2019, the Society of Actuaries (SOA) released mortality tables based on the experience of public sector plan participants for the first time. **We recommend consideration of the SOA public sector tables, adjusted to reflect the System's experience, at the time of the next experience review.**

8. We note that the mortality experience for male teachers is eleven percent higher than the standard RP-2014 White Collar Table. The SOA tables recently published show both

male and female teachers have the lowest mortality rates (and the longest life expectancies), even compared to white-collar workers. **Given the unusual experience, the actuary may want to further investigate the System' atypical mortality experience of male teachers.**

9. Even though the number of lives included in the mortality study is not fully credible, the System's experience has showed consistent mortality improvement. **The actuary may want to evaluate the impact of using full generational mortality improvement, rather than limiting mortality improvement to six (6) years for the Legacy Plan.** A previous auditing actuary made a similar recommendation in their audit of the System. We also note that the actuary recommended generational mortality improvement for the Hybrid Plan, and we agree with this recommendation.

10. The discussion of pre-retirement mortality includes a statement that "deaths appear to be understated". We believe it would be helpful to include how the actuary confirmed the finding.

11. The actuary opted to keep the disability mortality assumption, which is a table based on pre-1995 experience. Although there might not be enough deaths to be fully credible, the ratio of actual to expected deaths in this category was quite high. **Segal likely would have recommended a disability mortality table from the same family of RP-2006/ RP-2014 tables that were chosen for non-disabled lives.** We estimate that the impact on the total actuarial accrued liability from a newer disability mortality table would not be material (approximately a 0.1% increase).

13. **We also recommend implementing an assumption for the proportion of pre-retirement deaths that are ordinary versus line-of-duty.** We anticipate that implementing any probability of line-of-duty deaths would increase liabilities. However, the magnitude of the change would be dependent on the exact assumption chosen.

14. The actuary noted that disability rates were inconsistent among all groups. Given the relatively small number of disability retirements, we would not necessarily characterize the results as inconsistent, particularly for male employees. The male disability Actual to Expected ratios range from 51.87% for Political Subdivisions to 54.82% for General State employees; the female disability rates range from 41.39% for Political Subdivisions to 62.07% for General State employees and 69.06% for Teachers.
    We suggest the Experience Study report disclose whether the disability rates are based on System experience, or a standard table such as the Social Security Disability Rates, or some combination thereof.

15. **The turnover discussion states that "ultimate rates are more important than the 'first-year' or 'second-year' tables". Although the ultimate rates are very important, the magnitude of the assumed turnover rates in the first two years of employment is relatively high.** For example, for General State male employees, the assumed turnover rate for an employee hired at age 30 is 23% in the first year and 18.6% in the second year of their careers, compared to a rate of only 9.6% in subsequent years. Turnover rates are critical in the development of normal cost under the entry age actuarial cost method.

However, we acknowledge the impact of the economic factors during much of the 2015-2019 study period and agree that the current assumptions are reasonable.

16. The actuary currently assumes that no participants will elect reduced early retirement benefits. We think this is likely an oversimplification. **We recommend implementing an early retirement assumption**, and note this was also recommended by GRS in their 2010 independent audit of the System**.**

17. **We suggest the actuary clarify if the retirement experience summarized was for employees only, or both employees and vested inactive participants, and recommend participant groups be studied both separately and together.**

18. **The actuarial valuation uses assumptions for the percentage of participants who are married and the age difference between participants and spouses. These assumptions are not discussed in the experience study, and we recommend that they be reviewed as part of the next review.**

Economic Assumptions

1. Actuarial Standard of Practice (ASOP) No. 27, *Selection of Economic Assumptions for Measuring Pension Obligations*, provides guidance in developing economic assumptions used in actuarial valuations. This ASOP was adopted in September 2013 and is applicable for actuarial valuations with measurement dates on or after September 30, 2014.
   A key feature of ASOP 27 is the "building block" approach to setting assumptions. The “building block” approach uses the actuary’s best estimate for the key components of economic assumptions: inflation, the risk-free rate of return, and the expected return premium (or risk premium) for each asset class. Generally, the actuary begins with a reasonable range for each component, and then selects a specific point within the range based on historical data, System specific data and the expectation concerning the future economic environment. The actuary did not specify if they used the building block approach, but a specific illustration of the methodology used would be helpful.

2. The System actuary used the 2020 Social Security (OASDI) Annual Report to review the System’s inflation assumption. The 2.50% assumption is consistent with the average annual intermediate inflation rate of 2.6% used by the Social Security Administration Office of the Chief Actuary. The NASRA Issue Brief reports the average inflation assumption to be 2.8%. We believe the recommendation to decrease the rate of future inflation from 3.0% to 2.5% is reasonable.

3. The Experience Study reports states that “System investments emphasize bonds and other fixed income securities…” but the System Investment Policy target is only 20% domestic bonds and the target is 0% for inflation indexed bonds and international bonds. The total equity target for domestic stocks, international stocks and emerging market stocks is 49%.

4. The trend among public retirement systems is to lower the investment return assumption, particularly given the outlook for a low inflation environment. The NASRA

Issue Brief reports that more than 70% of plans reduced their assumed rate of return. The average return assumption (weighted by plan size) for public sector retirement systems in the PPD data was 6.97%. The median investment return assumption reported in the NASRA Issue Brief is 7.00%. The net investment return assumptions range from 6.5% to 8.0%, with an average 6.97% average return. The 7.00% assumption used for the June 30, 2022 valuations is in line with national benchmarks.

5. The System actuary used the long-term average expected real returns from the Horizon Survey of Capital Market Assumptions in recommending a decrease in the System's return assumption from 7.25% to 7.00%. **We suggest the analysis could also include benchmarks from the NASRA Public Fund Survey or other similar surveys.**

6. The actuary tested the 7.00% assumption using long-term average returns, standard deviations, and correlations by asset class from the 2017 Horizon report, which showed a 50th percentile return of 7.00%. The 50th percentile is a critical value because there is a 50% probability that the actual annualized return exceed 7.00% and a 50% probability that the actual annualized return falls below 7.00%. **Investment risk can be evaluated by projecting key funding metrics as the rate of return varies. For example, the funded percentage or required employer contributions by using a 5.70% rate of return (the 25th percentile) or a 8.49% rate of return (the 75th percentile). We suggest this is a helpful alternative approach to viewing the range of results that may occur.**

7. The salary experience for System was reviewed separately for Teachers and General employees but a single set of salary increases are used for both groups. **We recommend separate salary increases for Teachers and General employees be considered based on the actual experience.**

8. Economic assumptions have a significant effect on the development of System liabilities. Changes to these assumptions can substantially alter the results determined by the actuary. The goal is to have a consistent set of economic assumptions that appropriately reflect expected future economic trends, including inflation, investment returns and salary scale. The actuary recommended a 0.5% reduction in future inflation with a 0.25% reduction in the rate of return and salary scale assumptions. **We suggest a discussion of the various components of the rate of return and salary scale be included in the next experience study to explain the rationale for this inconsistencies.**

Other Groups

We suggest the discussion of Group II and Group III classifications include a summary of the participants included in those groups (as is done in the Summary of the report).

Section II: Review of Actuarial Methods

Actuarial Methods

In October of 2014, the Conference of Consulting Actuaries Public Plans Community (CCA PPC) prepared a White Paper on Public Pension Funding Policy that supports a level cost allocation method as the basis for public plan funding policies. More recently, the Pension Task Force commissioned by the Actuarial Standards Board also made suggestions for public plan standards of practice. In particular, the PTF suggested that a reasonable actuarially determined contribution meets the following requirements:

ASOP Nos. 4, *Measuring Pension Obligations and Determining Pension Plan Costs or Contributions*, 27 and 35 are met

Each member's normal cost should be based on the benefit structure applicable to that member

The amortization payments should be greater than the nominal interest on the unfunded liability or pay off the unfunded liability in a reasonable period of time.

Fundamentally, the contribution requirement has two components:

Normal cost – the allocation to the coming year of pension costs for active employees in that year.

Amortization of the unfunded actuarial accrued liability (UAAL) – the coming year's payment toward pension costs allocated to prior years for which assets are not yet on hand.

The methods used for System are in line with the CCA PPC White Paper and PTF suggestions.

Actuarial Cost Method

The funding method employed is the traditional entry age normal (EAN) actuarial cost method and is the method used by the majority of the retirement systems in the Public Funds Survey. The traditional entry age normal (EAN) actuarial cost method determines the normal cost for an individual by calculating the level percent of pay that, if contributed each year over that person's career, would accumulate with interest to the amount projected to be needed to pay that person's pension benefits.

We find the current method to be reasonable. In addition, it is the same cost method required to determine liabilities under GASB accounting standards and therefore provides consistency among the various liability measures used in the valuation. We concur with the recommendation to maintain the method.

Asset Valuation Method

An essential part of the public sector budgeting process is that material budget items, including pension contributions, should have a level cost pattern from year to year to the extent possible. An asset valuation method should establish a reasonable methodology for recognizing investment gains and losses and should limit the potential volatility that may result in increased contributions due to investment results.

The actuary's guide for determining the reasonableness of an asset smoothing method is ASOP No. 44, *Selection and Use of Asset Valuation Methods for Pension Valuations*. Two key principles arise from ASOP No. 44. First, an acceptable asset smoothing approach must create asset values that fall within a reasonable range around market value, and second, that gains and losses are recognized in a reasonable period of time. In lieu of satisfying both of these principles, a smoothing method could satisfy the requirements if, in the actuary's professional judgment, the range around market value is sufficiently narrow or the differences are recognized in a sufficiently short period.

Both the Legacy Plan and Hybrid Plan use an actuarial value of assets that recognizes a portion of the difference between the market value of assets and the expected market value of assets, based on the assumed valuation rate of return. The amount recognized each year is 10% of the difference. The actuarial value of assets is limited to a 20% corridor around market value, and the method treats gains and losses the same. This method has no systematic bias that would consistently produce an actuarial value of assets that is greater than or less than market value. In addition, the ten-year smoothing period is a reasonable time over which to recognize the market results. We agree the method is reasonable, but note that most public plans smooth the assets over fewer than ten years.

Amortization Methods

The System Legacy and Hybrid Plans both use a layered amortization method, with each new base amortized over a closed period not to exceed 20 years. Amortization payments are calculated as a level dollar amounts.

This approach will amortize the existing unfunded liability over a scheduled period. This method also has the result that every dollar of the current unfunded liability will be retired by a specified date, assuming the valuation and payroll growth assumptions are accurate.

The actuary current creates one new amortization layer with each annual valuation. We recommend the actuary establish separate bases for experience gains or losses, assumption changes and plan changes rather than a combined base. The total amortization payment will be the same but the disclosure of sources of changes in liability is valuable information for the Board's plan management.

Comments on the Funding Policy

The funding policy description for the Legacy Plan on page C-1 (5th paragraph) outlines the methodology used to calculate the Actuarially Determined Contribution requirement. We recommend the description be expanded to disclose that the state (TCA 8- 37-4) requires that the ADC be contributed each year.

The Hybrid Plan's funding policy is described on page 2 of the Hybrid Plan valuation report under the Analysis of Cost Controls and Unfunded Liability Controls. The employer's contribution is 4% of payroll, regardless of the ADC calculated in the annual actuarial valuation. If the ADC is less than 4% of payroll, the excess is contributed to a stabilization reserve account. If the ADC exceeds 4% of payroll, the shortfall will be covered by funds from the stabilization reserve, a reduction or suspension of the retiree COLA, movement of DC plan contributions, an additional 1% employee contribution, and reduction or suspension of future service accruals. We recommend including a table that summarizes the ADC, employer contribution, and the reserve account contribution or shortfall for each plan or fiscal year.

Section III: Review of Test Lives

Test Life Output

We requested specific test lives in order to compare the benefit amounts projected in the valuation against our understanding of the System benefits summarized in the valuation report and to assist in the matching of the overall results. A review of test lives generally permits the auditing actuary to understand the retained actuary's valuation programming on a benefit-by-benefit basis.

We were provided with results for 13 test lives, including six active members, two terminated vested members, and five retirees and beneficiaries. The key characteristics of these test lives, as well as a comparison of the Actuarial Present Value of Projected Benefits between the actuary and Segal are outlined below. We were ultimately able to replicate all test life results within a reasonable tolerance, as shown in the charts below.

Active Test Lives

Plan	Description	Actuary PVB	Segal PVB	Percent Difference
Legacy	• State employee, later entrant	$647,735	$644,525	-0.5%
	• State employee, earlier entrant	326,022	324,187	-0.6%
	• Teacher, later entrant	182,862	181,947	-0.5%
	• Teacher, earlier entrant	313,399	313,337	0.0%
Hybrid	• State employee, later entrant	18,600	18,453	-0.8%
	• State employee, earlier entrant	55,536	55,586	0.1%
Total Active Test Life Suite:		$1,544,154	$1,538,035	-0.4%

We also note that Segal's Normal Cost for the active test life suite matched the actuary within 2% and the Actuarial Accrued Liability matched them within 0.1%.

Terminated Vested Test Lives

Plan	Description	Actuary	Segal	Percent Difference
Legacy	• State employee, no account balance	$32,276	$32,584	1.0%
Hybrid	• Teacher, account balance exceeds annuity value	12,281	12,251	-0.2%
Total Terminated Vested Test Life Suite:		$44,557	$44,835	0.6%

Pay Status Test Lives

Plan	Description	Actuary	Segal	Percent Difference

Legacy	• State, disabled retiree, Member Only Option	$254,799	$254,800	0.0%
	• State, nondisabled retiree, SS Leveling Option	113,539	113,576	0.0%
	• State, surviving beneficiary	61,928	61,928	0.0%
	• Teacher, nondisabled retiree, J&S Option 1	259,641	259,641	0.0%
Hybrid	• Teacher, nondisabled retiree, Member Only Option	37,813	37,813	0.0%
Total Pay Status Test Life Suite:		$727,720	$727,758	0.0%

Section IV: Parallel Valuation Results

Liability Replication

In replicating the results of the System valuations as of July 1, 2022, we found that, overall, the actuary has a sound valuation process. We matched the valuation results and the test life output within an acceptable range. A comparison of the valuation results is displayed on the following page. Differences less than 5% are generally considered a reasonable match. The results are well within that tolerance.

Please note that Segal's results throughout this section do not include the effect of the programming recommendations presented later in this section. The results shown represent the closest match of the actuary's results based on our reading of their valuation report, the test life information provided, and their responses to our follow-up questions.

As described earlier, our parallel valuation was limited to the State and Higher Education Employees and K-12 Public School Teacher classifications of both the Legacy and Hybrid Plans. Therefore, the actuary's results presented here do match exactly to any numbers shown in the System valuation reports as of July 1, 2022. The results for the specific subgroupings were provided to Segal by the actuary.

Legacy DB Plan

	Actuary	Segal	Percent Difference
Active Members			
• Actuarial Present Value of Projected Benefits	$18,352,919,400	$18,795,513,406	2.4%
• Total Normal Cost	481,899,930	491,983,442	2.1%
• Normal Cost (Net of Employee Contributions)	323,293,396	333,122,425	3.0%
• Actuarial Accrued Liability (AAL)	13,950,614,787	14,308,481,130	2.6%
Inactive and Vested Deferred Members	$1,675,097,636	$1,683,800,928	0.5%
Retirees and Beneficiaries	$23,082,525,539	$22,914,715,285	-0.7%
Total			
• Actuarial Present Value of Projected Benefits	$43,110,542,575	$43,394,029,619	0.7%
• Actuarial Accrued Liability (AAL)	38,708,237,962	38,906,997,343	0.5%

Hybrid DB/DC Plan

	Actuary	Segal	Percent Difference
Active Members			
• Actuarial Present Value of Projected Benefits	$1,924,383,699	$1,946,622,653	1.2%
• Total Normal Cost	129,018,984	126,227,938	-2.2%
• Normal Cost (Net of Employee Contributions)	33,473,599	30,067,958	-10.2%
• Actuarial Accrued Liability (AAL)	375,915,569	428,793,452	14.1%

Inactive and Vested Deferred Members	$45,040,554	$45,349,096	0.7%
Retirees and Beneficiaries	$656,271	$656,250	-0.0%
Total			
• Actuarial Present Value of Projected Benefits	$1,970,080,524	$1,992,627,999	1.1%
• Actuarial Accrued Liability (AAL)	421,612,394	474,798,798	12.6%

Actuarial firms each have their own software programs for calculating normal costs and liabilities. Even with the same actuarial assumptions and cost method, it is unlikely that any two firms will perform calculations in exactly the same way. For example, even though the actuary and Segal both assumed mid-year decrements, the application of that methodology was different between the two firms. Ultimately, we were able to approximate the actuary's mid-year methodology. Pointing out software differences should not be construed as an indication that one firm or the other is "correct." We do so only to provide complete disclosure.

In particular, differences between firms in the determination of the Normal Cost and Actuarial Accrued Liability are very common. As can be seen in the chart above, the replication of the Total Actuarial Present Value of Projected Benefits was within 0.7% (Legacy) and 1.1% (Hybrid). However, our methodology yields a 10.2% lower Normal Cost in the Hybrid Plan, causing Segal's Actuarial Accrued Liability to be 12.6% higher. There are two Hybrid Plan characteristics that led to minor differences in Segal and the actuary's methodology to result in more significant differences in results:

- The final Normal Cost shown in each year's valuation is the *Employer* Normal Cost, calculated as the "Total" Normal Cost expected to be sufficient to fund the plan of benefits, minus the expected employee contributions for the year. The Total Normal Cost is the key metric produced by the valuation program, and where the differences in results occur. In the case of the Hybrid Plan, the expected employee contributions cover a very significant portion of the Total Normal Cost (approximately 75%) under both Segal and the actuary's calculations, meaning that any difference in Total Normal Cost between firms will magnified in the final *Employer* Normal Cost. Our results show a close match in Total Normal Cost for the Hybrid Plan (2.2%), which is then magnified in final *Employer* Normal Cost (10.2%). **We are comfortable with the difference in Hybrid Plan Normal Cost and do not believe it indicates that the actuary's results were incorrect, nor that there were any material differences between the actuary and Segal calculations.**
- Since the Hybrid Plan was implemented for employees hired on or after July 1, 2014, the majority of the expected future benefits have not yet been "accrued" by participants. In other words, the Actuarial Accrued Liability is small percentage of the Actuarial Present Value of Benefits (approximately 20%). Again, this means that small differences in methodology in the allocation of benefits between Actuarial Accrued Liability and Normal Cost is magnified in the final Actuarial Accrued Liability. Our results show the Hybrid Plan Actuarial Accrued Liability is 12.6% higher than the actuary's results, despite the close match in the Actuarial Present Value of Benefits of 1.2%. **We are comfortable with the difference in Hybrid Plan Actuarial Accrued Liability and do not believe it indicates that the actuaryy's results were incorrect, nor that there were any material differences between the actuary and Segal calculations.**

The results for State Employees and Teacher classification for each plan are shown below:

Legacy DB Plan

State Employees/Higher Education Employees

	Actuary	Segal	Percent Difference
Active Members			
• Actuarial Present Value of Projected Benefits	6,203,858,941	6,505,983,442	4.9%
• Total Normal Cost	157,340,385	163,296,126	3.8%
• Normal Cost (Net of Employee Contributions)	157,340,385	163,296,126	3.8%
• Actuarial Accrued Liability (AAL)	4,919,101,422	5,145,798,600	4.6%
Inactive and Vested Deferred Members	1,021,743,228	1,040,238,982	1.8%
Retirees and Beneficiaries	9,232,953,381	9,163,211,750	-0.8%
Total			
• Actuarial Present Value of Projected Benefits	16,458,555,550	16,709,434,174	1.5%
• Actuarial Accrued Liability (AAL)	15,173,798,031	15,349,249,332	1.2%

Hybrid DB/DC Plan

State Employees/Higher Education Employees

	Actuary	Segal	Percent Difference
Active Members			
• Actuarial Present Value of Projected Benefits	781,437,812	785,316,022	0.5%
• Total Normal Cost	57,146,172	55,821,806	-2.3%
• Normal Cost (Net of Employee Contributions)	13,784,937	11,978,773	-13.1%
• Actuarial Accrued Liability (AAL)	155,056,472	174,946,459	12.8%
Inactive and Vested Deferred Members	21,474,273	21,694,499	1.0%
Retirees and Beneficiaries	363,827	363,806	-0.0%
Total			
• Actuarial Present Value of Projected Benefits	803,275,912	807,374,327	0.5%
• Actuarial Accrued Liability (AAL)	176,894,572	197,004,764	11.4%

Legacy DB Plan

K-12 Public School Teachers

	Actuary	Segal	Percent Difference
Active Members			
• Actuarial Present Value of Projected Benefits	12,149,060,459	12,289,529,964	1.2%
• Total Normal Cost	324,559,545	328,687,316	1.3%
• Normal Cost (Net of Employee Contributions)	165,953,011	169,826,299	2.3%
• Actuarial Accrued Liability (AAL)	9,031,513,365	9,162,682,530	1.5%
Inactive and Vested Deferred Members	653,354,408	643,561,946	-1.5%
Retirees and Beneficiaries	13,849,572,158	13,751,503,535	-0.7%
Total			
• Actuarial Present Value of Projected Benefits	26,651,987,025	26,684,595,445	0.1%
• Actuarial Accrued Liability (AAL)	23,534,439,931	23,557,748,011	0.1%

Hybrid DB/DC Plan

K-12 Public School Teachers

	Actuary	Segal	Percent Difference
Active Members			
• Actuarial Present Value of Projected Benefits	1,142,945,887	1,161,306,631	1.6%
• Total Normal Cost	71,872,812	70,406,132	-2.0%
• Normal Cost (Net of Employee Contributions)	19,688,662	18,089,185	-8.1%
• Actuarial Accrued Liability (AAL)	220,859,097	253,846,993	14.9%
Inactive and Vested Deferred Members	23,566,281	23,654,597	0.4%
Retirees and Beneficiaries	292,444	292,444	0.0%
Total			
• Actuarial Present Value of Projected Benefits	1,166,804,612	1,185,253,672	1.6%
• Actuarial Accrued Liability (AAL)	244,717,822	277,794,034	13.5%

Contribution Rates

We were able to replicate the methodology used to determine the amortization payments on the unfunded actuarial accrued liability, and consequently, the total and employer contribution rates, as a percentage of payroll.

Recommendations

As mentioned previously, the results presented throughout this section represent the closest match of the actuary's results based on our reading of their valuation report, the test life information provided, and their responses to our follow-up questions. Given that we were able to replicate their results closely, we are confident that we understand the actuary's programming methodology. With that in mind, we offer the following suggestions to improve the accuracy of the results:

1. Return of Excess Contributions – TCA 8-37-212 provides that the excess, if any, of accumulated contributions over the sum of actual retirement allowance payments received be paid as a lump sum to the surviving beneficiary or estate. Our analysis of the test lives indicates that this provision was not valued in the liability, although it is described on page G-2 of the Legacy valuation report. **We recommend that the actuary program the return of contributions plan provision.**

   We estimate that implementing this change would increase the Actuarial Accrued Liability by approximately $157 million, or 0.40%, across all groups studied.

2. For current terminated vested participants and for Legacy vested active participants assumed to withdraw from employment before eligibility for retirement and elect a deferred annuity, the actuary's programming assumes there is no liability for deaths prior to commencement of the deferred annuity. However, a death benefit would be payable in that situation (an annuity to married participants with 10 or more years of service or lump sum return of contributions in all other cases). **We recommend that the actuary program these pre-retirement death benefit provisions.**
   We estimate that implementing this change would increase the Actuarial Accrued Liability by approximately $7 million, or 0.02%, across all groups studied.

3. For retirements from active status, the actuary currently assumes that no participants will elect reduced early retirement benefits. We think this is likely an oversimplification (although we have not analyzed any actual retirement experience). **We recommend use of early retirement decrements and anticipate that implementing a reduced early retirement assumption would increase liabilities for the Legacy Plan.** However, the magnitude of the change would be dependent on the exact assumptions chosen. We expect this change would have less of an impact on the Hybrid Plan due to fact that early retirement reductions are calculated based on actuarially equivalent factors in that plan.

4. For future vested terminations from active status in the Legacy Plan, the actuary assumes that terminated vested participants will retire at the first retirement eligibility. This differs from the stated assumption and the assumption used for current Legacy terminated vested participants (as well as the assumption used for the Hybrid Plan), which is that the participant will retire at the first service retirement eligibility. **Unless there is reason to believe that current and future terminated vested participants will behave differently, we recommend applying the same assumption in both scenarios.**

5. Furthermore, a single retirement age for terminated vested participants is unlikely to adequately capture the range of retirement scenarios for such participants. **Our preference is to set a table of rates based on age/eligibility, similar to the assumption for retirements from active status.** We expect that implementing this change would decrease

the liability for those currently assumed to retire at early retirement eligibility. For those currently assumed to retire at service retirement eligibility, the result would likely be an increase in liability (but could still be a decrease if the assumed rates extend beyond the service retirement date). The magnitude of any change would be dependent on the exact rates chosen.

6. For future vested terminations from active status in the Legacy Plan, the actuary does not compare the present value of the deferred annuity with an immediate return of contributions. This differs from the methodology used for current terminated vested participants, where the greater present value is taken. **We recommend implementing the same comparison of return of contributions or deferred annuities for future terminations.**
   We estimate that implementing this change would increase the Actuarial Present Value of Benefits by approximately $14 million, or 0.03%, across all groups studied.

7. For future retirements from active status, the programming of the first-year cost of living adjustment (COLA) appears to be inconsistent between the Legacy and Hybrid Plans. For the Legacy Plan, there is no COLA given as of the July 1st following the year of retirement. We believe this is correct because retirements are assumed to occur in the middle of the year and no COLAs are given until the July 1st following completion of 12 full months of retirement. However, for the Hybrid Plan, there appears to be approximately a half year of COLA given as of the July 1st following the year of retirement. **We recommend adjusting the Hybrid Plan coding to match the Legacy Plan coding.**
   We estimate that implementing this change would decrease the Actuarial Accrued Liability by approximately $4.4 million, or 0.92%, for the Hybrid Plan.

8. The actuary notes in its summary of plan provisions that all pre-retirement deaths are assumed to be ordinary (i.e. not in the line of duty). We expect that, in most cases, the benefit for a line-of-duty death would be more valuable than the ordinary death benefit so that implementing any probability of line-of-duty deaths would increase liabilities. However, the magnitude of the change would be dependent on the exact assumption chosen.

9. For pre-retirement deaths that occur after reaching retirement eligibility, an annuity is payable to the beneficiary of all participants (not just married participants). The actuary's current methodology assumes that only 80% of participants (those assumed to be married) receive the annuity, while the remaining 20% receive the lump sum death benefit. **We recommend valuing the greater of the two possible death benefits for 100% of deaths occurring after retirement eligibility.**
   We estimate that implementing this change would increase the Actuarial Accrued Liability by approximately $28 million, or 0.07%, across all groups studied.

10. For pre-retirement deaths that occur before reaching retirement eligibility and where the participant is assumed to be married, the actuary's coding for the Hybrid Plan does not appear to reflect any early retirement reductions that would apply. **We recommend applying the early retirement reductions, where applicable.**
    We estimate that implementing this change would decrease the Actuarial Accrued Liability by approximately $4.6 million, or 0.97%, for the Hybrid Plan.

11. We note that the actuary does not assume that future disabled retirees will receive any worker's compensation benefits when determining the maximum disability benefit payable from the Plan. In the absence of any information to the contrary, we agree that this seems to be a reasonable assumption.

12. We note that, for Legacy participants hired before July 1, 1997, the actuary does not assume that any future disablements will occur in the line-of-duty. Given that the ordinary and line-of-duty disability benefits are identical for those hired on or after July 1, 1997, we agree that this is a reasonable simplification due to its immateriality.

Section V: Conclusions

To reiterate our comments in the Executive Summary, the actuary appears to have reasonably valued the expected liability, based on their stated assumptions and methods, of both the Legacy Plan and the Hybrid Plan for the State Employees and the K-12 Teachers classifications. They have applied the funding methodology appropriately to develop contribution recommendations for the Legacy Plan and Hybrid Plan, and the valuation reports conform to accepted actuarial principles and practices.

In this audit, we have noted areas that we believe will refine the liability calculations and improve the usefulness and clarity of the System's annual actuarial valuation reports. We are available to discuss any aspect of our review with the State Treasury Department, the System Board of Trustees, System Staff, or the System's actuary.

Segal is independent of the retained actuary, and we are not aware of any conflict of interest that would impair the objectivity of our actuarial audit of their work.