Adams County Retirement Plan

ACTUARIAL VALUATION REPORT

as of January 1, 2024

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June 1, 2024

Ms. Debbie Haines, CEBS
Executive Director
Adams County
4430 South Adams County Parkway, Suite C3406
Brighton, CO 80601-8202

Re: Actuarial Valuation of the Adams County Retirement Plan as of January 1, 2024

Dear Debbie:

We are pleased to present our Report on the actuarial valuation of the Adams County Retirement Plan as of January 1, 2024.

This Report presents the results of the January 1, 2024 actuarial valuation of the Adams County Retirement Plan. The Report describes the current actuarial condition of the Adams County Retirement Plan, determines the Actuarially Determined Contribution (ADC), and analyzes changes in the determined rate.

We certify that the information included herein and contained in our January 1, 2024 Actuarial Valuation Report is accurate and fairly presents the actuarial position of the Adams County Retirement Plan as of the valuation date.

All of our work conforms with generally accepted actuarial principles and practices, and to the Actuarial Standards of Practice issued by the Actuarial Standards Board. In our opinion, our calculations also comply with the requirements of, where applicable, the Internal Revenue Code, ERISA, and the Statements of the Governmental Accounting Standards Board.

The valuation was based upon information, furnished by the Plan, concerning Plan benefits, financial transactions, active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not audit the data. This report and these calculations are not intended as legal or accounting advice, and we would recommend review by legal counsel for the compliance of these calculations with all relevant agreements.

The valuation results summarized in this report involve actuarial calculations that require assumptions about future events for the Pension Plan. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following:

- plan experience differing from that anticipated by the economic or demographic assumptions;
- changes in economic or demographic assumptions;
- increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status) and;
- changes in plan provisions or applicable law.

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The 11.50% employer and 9.00% employee contribution are the rates that comply with law. Due to the many factors affecting a retirement system, users of this report should be aware that contributions made at that rate do not necessarily guarantee long-term benefit security.

This report does not include a detailed assessment of the risks of future experience not meeting the actuarial assumptions. Additional assessment of risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the plan's financial condition.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

We believe that the assumptions and methods used in this report are reasonable and appropriate for the purpose for which they have been used. Furthermore, the assumptions and methods used in this valuation follow the guidance in the applicable Actuarial Standards of Practice and are expected to have no significant bias. However, other assumptions and methods could also be reasonable and could result in materially different results. In addition, because it is not possible or practical to consider every possible contingency, we may use summary information, estimates or simplifications of calculations to facilitate the modeling of future events. We may also exclude factors or data that are deemed to be immaterial.

Certification

The undersigned are independent actuaries and consultants. Paul Wood, Thomas Lyle, and Krysti Kiesel are actuaries and meet the Qualification Standards of the American Academy of Actuaries. Both of the undersigned are experienced in performing valuations for large public retirement systems.

Respectfully submitted,
Gabriel, Roeder, Smith & Company

Paul Wood, ASA, FCA, MAAA
Senior Consultant

Krysti Kiesel, ASA, MAAA
Senior Analyst

Thomas Lyle, FSA, FCA, EA, MAAA
Consultant

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SECTION A

EXECUTIVE SUMMARY

Executive Summary

Valuations are prepared annually, as of January 1 of each year, the first day of the fiscal year. The primary purposes of the valuation report are to measure the plan's liabilities, to determine the required contribution rate and to analyze changes in the Adams County Retirement Plan's actuarial position.

In addition, the report provides summaries of the member data, financial data, plan provisions, and actuarial assumptions and methods.

Financing Objectives

The Adams County Retirement Plan is supported by member contributions, employer contributions, and net earnings on the investments of the fund. Contribution rates are set in the plan document, currently at 9.00% for members and 11.50% for employers.

Beginning in 2018, the County began making an additional contribution to the Plan, pursuant to an agreement between the County and the Plan; such contributions shall not be less than $2 million per year and will continue until the Plan reaches a specified funding level on a market and actuarial basis. The contribution is based on a reallocation of at least 0.314 mills of the County's total mill levy.

The combined member and employer contributions are intended to be sufficient to pay the normal cost and to amortize the Unfunded Actuarial Accrued Liability (UAAL) over a period of 20 years from the valuation date. This closed period amortization method was first adopted for use in the January 1, 2020 valuation.

Progress toward Realization of Financing Objectives

The UAAL/(surplus) and the funded ratio (ratio of the actuarial value of assets to the actuarial accrued liability) illustrate the progress toward the realization of certain financing objectives. Based on the actuarial valuation as of January 1, 2024, the Plan has an unfunded liability of $245.46 million and a funded ratio of 60.34%. The funded ratio increased from 58.81% to 60.34% and the Net Employer Actuarially Determined Contribution (ADC) decreased from 9.75% of pay, to 8.65% of pay. The calculated ADC under the Board's funding policy can be considered a "Reasonable Actuarially Determined Contribution" as required by the Actuarial Standards of Practice.

The net employer Actuarially Determined Contribution as a percentage of pay for the year beginning January 1, 2024 is 8.65%. The expected County contribution is 11.50% of pay which creates a contribution surplus of 2.85% of pay. This compares to a surplus in the prior year of 1.25% of pay.

The 2014 amendments to lower future benefit accruals help to decrease the future cost of the plan. Projections indicate an improvement in funded status over time. However, projections are built on assumptions from which experience may vary over time. Ongoing monitoring of the funded levels of the plan is recommended.

Experience During the Year

The plan experienced a liability loss of $1.61 million during fiscal year 2023 before the impact of assumption changes.

The plan experienced an actuarial asset gain of $0.75 million during fiscal year 2023. This gain was due to the actuarial value of assets earning a return greater than the assumed 7.25% return.

The net overall result of the liability loss and the actuarial asset gain was an unfunded liability $0.86 million greater than expected at January 1, 2024.

In addition, there was a gain due to a contribution surplus relative to the ADC of $7.38 million attributable to the additional mill levy contributions as well as the increased County contributions.

Assumptions and methods

There have been several changes in assumptions since the prior valuation including; updates to the mortality, increases to individual salary increases for service under 26 years, decreases in disability rates, and adjustments to retirement and termination rates to more closely match experience. The assumptions have been selected by the Adams County Board of Retirement based upon the actuary's analysis and recommendations from the 2023 Experience Study.

The assumption changes increased the accrued liability by $12.3 million and increased the actuarially determined contributions by 0.39% of pay. The actuarial assumptions are summarized in Section G of our report.

The results of any actuarial valuation are dependent upon the actuarial assumptions used. Actual results can and almost certainly will differ, as actual experience deviates from the assumptions. Even seemingly minor changes in the assumptions can materially change the liabilities, calculated contribution rates and funding periods. The actuarial calculations presented in this Report are intended to provide information for rational decision making.

Benefit Provisions

All of the benefit provisions reflected in this valuation are those which were in effect on January 1, 2024. There have been no changes to the benefit provisions since the prior valuation.

The benefit provisions are summarized in Section D of our Report.

Data

Adams County staff supplied data for retired, active and inactive members as of January 1, 2024. We did not audit this data, but we did apply a number of tests to the data, and we have concluded that the data is reasonable and consistent with the prior year's data. Adams County staff also supplied asset data as of January 1, 2024.

Financial Position

The funded ratio on an actuarial value of assets basis and on a market value of assets basis increased from January 1, 2023 to January 1, 2024.

Exhibit A.1 Funded Status Summary ($ in millions)		
Valuation Date	**January 1, 2024**	**January 1, 2023**
Accrued Liability	$618.94	$586.24
Actuarial Value of Assets (smoothed)	373.48	344.76
Unfunded Accrued Liability	$245.46	$241.48
Funded Ratio (AVA basis)	60.3%	58.8%
Market Value of Assets	$356.78	$322.99
Unfunded Accrued Liability	$262.16	$263.25
Funded Ratio (MVA basis)	57.6%	55.1%
Market Value Rate of Return	9.5%	(11.0%)
Actuarial Value Rate of Return	7.5%	6.8%

The funded status alone is not appropriate for assessing the need for future contributions. The funded status is also not appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations.

Financial Position (continued)

Investment gains decreased the Total Actuarially Determined Contribution (ADC) by roughly 0.03%. The gains due to contributions in excess of the prior year ADC decreased the Total ADC by roughly 0.36% Liability losses increased the Total ADC by roughly 0.32%. Assumption changes increased the Total ADC by approximately 0.39%. Payroll increases more than expected decreased the Total ADC by 1.17%. The Employer Net Actuarially Determined Contribution of 8.65% of pay for Fiscal Year 2024 and 9.75% of pay for Fiscal Year 2023 are based on contributions being made throughout the year, consistent with the funding policy of the Plan.

Exhibit A.2
Contribution Summary
All Numbers Reported Middle of Year, Percent of Pay

Fiscal Year Beginning	January 1, 2024	January 1, 2023
Total Normal Cost	9.19%	9.18%
Amortization of UAL	8.08%	9.16%
Assumed Expenses	0.38%	0.41%
Total Actuarially Determined Contribution	17.65%	18.75%
Estimated Member Contribution	9.00%	9.00%
Net ADC Mid-Year	8.65%	9.75%
Estimated County Contribution	11.50%	11.00%
Contribution Shortfall/(Surplus)	(2.85%)	(1.25%)

Benefit changes were made as of January 1, 2014, which decrease the rate of benefits accrued for all service after January 1, 2014, both for current members and future members. The lower benefit accruals will have the effect of decreasing the normal cost rate over time. The normal cost did not decrease as of Janaury 1, 2024 due to the assumption changes; however, decreases to the normal cost are expected to continue in the future.

Executive Summary

Exhibit A.3 Adams County Retirement Plan Executive Summary		
	January 1, 2024	January 1, 2023
1. **Actuarially Determined Contribution**		
a. Total	$ 38,110,575	$ 34,014,991
b. Net Employer Contribution	18,672,597	17,683,463
c. Net Employer %	8.65%	9.75%
2. **Funded Status**		
a. Actuarial Accrued Liability	$ 618,942,681	$ 586,241,598
b. Actuarial Value of Assets (AVA)	373,480,442	344,756,817
c. Unfunded Liability (AVA-basis)	245,462,239	241,484,781
d. Funded Ratio (AVA-basis)	60.3%	58.8%
e. Market Value of Assets (MVA)	$ 356,779,292	$ 322,994,553
f. Unfunded Liability (MVA-basis)	262,163,389	263,247,045
g. Funded Ratio (MVA-basis)	57.6%	55.1%
3. **Summary of Census Data**		
a. Actives		
i. Counts	2,616	2,339
ii. Total Annual Projected Compensation	$ 215,977,537	$ 181,461,425
iii. Average Projected Compensation	82,560	77,581
iv. Average Age	42.4	42.6
v. Average Service	6.9	7.5
b. Members with Refunds Due Counts	180	158
c. Deferred Vested Member Counts	280	269
d. Retired Member Counts	1,211	1,179
e. Beneficiary Counts	144	138
f. Disabled Retiree Counts	55	56
g. Total Members Included in Valuation	4,486	4,139

SECTION B

VALUATION RESULTS

Actuarial Accrued Liability

Exhibit B.1 Adams County Retirement Plan Actuarial Valuation Results Actuarial Accrued Liability		
	January 1, 2024	**January 1, 2023**
1. **Active Members**		
a. Retirement Benefits	$ 213,013,381	$ 199,248,857
b. Withdrawal Benefits	3,922,226	2,454,666
c. Refund Benefits	(8,696,628)	(7,105,826)
d. Disability Benefits	6,144,440	5,477,730
e. Death Benefits	1,695,683	3,184,051
f. Total	$ 216,079,102	$ 203,259,478
2. **Members with Deferred Benefits**	$ 23,294,193	$ 21,894,370
3. **Members Receiving Benefits**	$ 379,569,386	$ 361,087,750
4. **Total**	$ 618,942,681	$ 586,241,598
5. **Actuarial Value of Assets**	$ 373,480,442	$ 344,756,817
6. **Unfunded Actuarial Accrued Liability**	$ 245,462,239	$ 241,484,781

Normal Cost

Exhibit B.2 Adams County Retirement Plan Actuarial Valuation Results Normal Cost		
	January 1, 2024	**January 1, 2023**
1. **Total Dollar Normal Cost**		
a. Retirement Benefits	$ 12,415,255	$ 10,336,488
b. Withdrawal Benefits	6,517,295	5,446,133
c. Disability Benefits	702,149	536,366
d. Death Benefits	204,200	334,858
e. Total	$ 19,838,899	$ 16,653,845
2. **Normal Cost as a Percentage of Pay**	9.19%	9.18%
3. **Normal Cost as a Percentage of Pay by Tier**		
a. Tier 1	14.00%	13.54%
b. Tier 2	11.45%	11.16%
c. Tier 3	8.25%	8.03%

Present Value of Projected Benefits

Exhibit B.3 Adams County Retirement Plan Actuarial Valuation Results Present Value of Projected Benefits		
	January 1, 2024	**January 1, 2023**
1. **Active Members**		
a. Retirement Benefits	$ 298,161,847	$ 271,647,163
b. Withdrawal Benefits	46,258,334	37,880,493
c. Disability Benefits	11,031,346	9,231,127
d. Death Benefits	3,195,988	5,621,838
e. Total	$ 358,647,515	$ 324,380,621
2. **Members with Deferred Benefits**	$ 23,294,193	$ 21,894,370
3. **Members Receiving Benefits**	$ 379,569,386	$ 361,087,750
4. **Total**	$ 761,511,094	$ 707,362,741

Actuarially Determined Contribution

Exhibit B.4
Adams County Retirement Plan
Development of the Actuarially Determined Contribution

Fiscal Year Beginning	January 1, 2024		January 1, 2023	
	Dollar	Percent of Pay	Dollar	Percent of Pay
1. Total Normal Cost	$ 19,838,899	9.19%	$ 16,653,845	9.18%
2. Amortization of Unfunded Actuarial Accrued Liability Over 20 Years	17,453,676	8.08%	16,611,146	9.16%
3. Assumed Administrative Expenses	818,000	0.38%	750,000	0.41%
4. Actuarially Determined Contribution (ADC)	$ 38,110,575	17.65%	$ 34,014,991	18.75%
5. Estimated Member Contribution	19,437,978	9.00%	16,331,528	9.00%
6. Net ADC Mid-Year	$ 18,672,597	8.65%	$ 17,683,463	9.75%
7. Estimated County Contribution Mid-Year	24,837,417	11.50%	19,960,757	11.00%
8. Contribution Shortfall/(Surplus)	$ (6,164,820)	(2.85%)	$ (2,277,294)	(1.25%)
9. Annual Projected Payroll	$ 215,977,537		$181,461,425	

Plan Experience

Exhibit B.5 Adams County Retirement Plan Plan Experience for Fiscal Year 2023		
Liabilities		
1.	Actuarial Accrued Liability at January 1, 2023	$ 586,241,598
2.	Normal Cost for Fiscal Year 2023	16,653,845
3.	Benefit Payments during Fiscal Year 2023	39,504,239
4.	Interest on Items 1-3 to End of Year	41,674,189
5.	Change in Actuarial Accrued Liability Due to Assumption Changes	12,267,291
6.	Change in Actuarial Accrued Liability Due to Provision Changes	-
7.	Expected Actuarial Accrued Liability at January 1, 2024	617,332,684
8.	Actual Actuarial Accrued Liability at January 1, 2024	618,942,681
9.	Liability Gain/(Loss)	(1,609,997)
Assets		
10.	Actuarial Value of Assets at January 1, 2023	$ 344,756,817
11.	Benefit Payments and Expenses during Fiscal Year 2023	40,280,986
12.	Contributions during Fiscal Year 2023	43,155,317
13.	Interest on Items 10-12 to End of Year	25,099,064
14.	Expected Actuarial Value of Assets at January 1, 2024	372,730,212
15.	Actual Actuarial Value of Assets at January 1, 2024	373,480,442
16.	Asset Gain/(Loss)	750,230
Total		
17.	Total Gain/(Loss)	**$ (859,767)**

Plan Experience By Source

Exhibit B.6 Adams County Retirement Plan Plan Experience for Fiscal Year 2023 Gain/(Loss) by Source		
1. Asset Gain/(Loss)	$	750,230
2. Liability Gain/(Loss)		
a. Salary Gain/(Loss)		(4,896,776)
b. New Members and Rehire Gain/(Loss)		(1,264,991)
c. Withdrawal Gain/(Loss)		(785,922)
d. Disability Gain/(Loss)		61,368
e. Retirement Gain/(Loss)		719,410
f. Active Mortality Gain/(Loss)		5,846
g. Annuitant Mortality Gain/(Loss)		3,862,775
h. LTD to Disability Retirement		(297,409)
i. Other Demographic		985,702
j. Total	$	(1,609,997)
3. Total Gain/(Loss)	$	(859,767)

SECTION C

PLAN ASSETS

Statement of Plan Net Assets

Exhibit C.1
Adams County Retirement Plan
Statement of Plan Net Assets

	December 31, 2023	December 31, 2022
Assets		
Investments, at fair value:		
Cash	$ 1,576,827	$ 1,615,516
Money Market Funds	13,239,377	4,950,183
Public Equity	154,434,156	153,090,215
Private Equity	31,126,078	30,006,151
Floating Rate Debt	41,281,612	46,499,005
Fixed Rate Debt	63,402,369	28,776,104
Low Volatility	-	-
Real Estate Funds	51,466,220	57,930,638
Liquid Real Assets	-	-
Total cash and investments	$ 356,526,639	$ 322,867,812
Receivables:		
Dividends and Interest	263,299	118,959
Other Assets:		
Fiduciary/Directors Liability Insurance	118,281	118,481
Total assets	$ 356,908,219	$ 323,105,252
Liabilities and net assets held in trust for benefits		
Accrued liabilities	128,927	110,699
Total payables	$ 128,927	$ 110,699
Net assets held in trust for pension benefits	$ 356,779,292	$ 322,994,553

Statement of Changes in Plan Net Assets

Exhibit C.2
Adams County Retirement Plan
Statement of Changes in Plan Net Assets

	Year Ended December 31, 2023		Year Ended December 31, 2022	
Additions to Net Assets Attributed to:				
Contributions:				
Employer contributions	$	22,057,644	$	17,196,826
Plan Members contributions		18,047,073		14,740,084
Plan Members for Purchase of service		45,443		35,936
Mill Levy Revenue		3,005,157		2,862,154
Total contributions	$	43,155,317	$	34,835,000
Investment Income:				
Net appreciation in fair value of investments	$	27,373,119	$	(42,681,134)
Interest		1,524,422		645,711
Dividends		3,884,198		3,680,070
Other		423		1,001
Total Investment Income	$	32,782,162	$	(38,354,352)
Less Investment expense		(1,871,754)		(1,821,568)
Net investment income	$	30,910,408	$	(40,175,920)
Total additions	$	74,065,725	$	(5,340,920)
Deductions to Net Assets Attributed to:				
Benefit payments	$	35,432,452	$	34,035,516
Refunds		4,071,787		5,192,324
Administrative expenses		776,747		904,806
Total deductions	$	40,280,986	$	40,132,646
Change in net assets		33,784,739		(45,473,566)
Net assets held in trust for benefits:				
Beginning of year		322,994,553		368,468,119
End of year	$	356,779,292	$	322,994,553

Actuarial Value of Assets

Exhibit C.3
Adams County Retirement Plan
Development of the Actuarial Value of Assets

	Item				Year Ending December 31, 2023
1.	Actuarial value of assets, at beginning of year (prior to corridor)				$ 344,756,817
2.	Market value of assets, at beginning of year				$ 322,994,553
3.	Net new investments				
	a. Contributions received for prior plan year				$ 43,155,317
	b. Benefits paid and administrative expenses				(40,280,986)
	c. Net				$ 2,874,331
4.	Market value of assets, at end of year				$ 356,779,292
5.	Net MVA earnings [(4) - (2) - (3c)]				$ 30,910,408
6.	Assumed investment return rate				7.25%
7.	Expected return [(6)*(2)+(6)*(3c)/2]				$ 23,521,300
8.	Excess return [(5) - (7)]				$ 7,389,108
9.	Deferred amounts for fiscal year ending December 31,				
		Year	Gain/(Loss)	Percent Deferred	Amount Deferred
	a.	2023	$ 7,389,108	80%	$ 5,911,286
	b.	2022	(66,697,819)	60%	(40,018,691)
	c.	2021	36,583,619	40%	14,633,447
	d.	2020	13,864,044	20%	2,772,808
	e.	2019	20,501,015	0%	-
	f.	Total	$ 11,639,967		$ (16,701,150)
10.	80% of Market Value				$ 285,423,434
11.	120% of Market Value				$ 428,135,150
12.	Actuarial value of assets [(Item 4 - Item 9f), but not more than Item 11 or less than Item 10]				$ 373,480,442

Annual Rates of Investment Return

Exhibit C.4 Average Annual Rates of Investment Return				
Fiscal Year Ended December 31,	Actuarial Value		Market Value	
	Annual	Cumulative	Annual	Cumulative
1995	12.1 %	10.7 %	22.9 %	10.1 %
1996	11.6	10.9	12.0	10.4
1997	13.0	11.3	17.0	11.5
1998	12.2	11.4	9.0	11.1
1999	12.0	11.5	4.0	10.2
2000	8.7	11.2	2.6	9.4
2001	6.2	10.7	(1.6)	8.2
2002	(4.5)	9.2	(10.9)	6.3
2003	9.7	9.2	22.4	7.6
2004	4.3	8.8	11.0	7.8
2005	4.4	8.5	6.2	7.7
2006	7.6	8.5	14.2	8.1
2007	11.1	8.6	8.2	8.1
2008	(7.9)	7.6	(26.2)	5.7
2009	11.6	7.8	12.5	6.1
2010	1.9	7.5	9.5	6.3
2011	(0.1)	7.1	(0.5)	5.9
2012	0.4	6.8	12.1	6.2
2013	9.3	6.9	14.1	6.6
2014	8.7	6.9	7.1	6.6
2015	6.4	6.8	(1.7)	6.1
2016	7.2	6.6	8.4	6.0
2017	7.8	6.5	13.4	6.6
2018	4.7	6.5	(3.1)	6.2
2019	5.9	6.4	15.6	6.6
2020	9.1	6.5	12.2	6.8
2021	11.5	7.0	19.0	7.5
2022	6.8	6.7	(11.0)	6.5
2023	7.5	7.0	9.5	6.8

SECTION D

SUMMARY OF BENEFIT PROVISIONS

Summary of Benefit Provisions

Based on the Plan Originally effective July 1, 1968 and amended and restated effective January 1, 2022

Participation

Membership in the Retirement Plan is automatic upon the first day of Covered Employment. You are in Covered Employment when you are (1) an elected or appointed County official or deputy, or staff of such person, (2) an employee of an Employer who is in a regular position regularly scheduled to work or budgeted for at least 30 hours each week, or (3) an employee of the Retirement Board who meets these requirements. Any employee of the Retirement Board who meets these requirements is considered an employee of the County for purposes of the Plan.

You are not eligible to participate in the Retirement Plan if you are (1) an employee in a position regularly scheduled to work or budgeted for less than 30 hours each week, (2) a leased employee, (3) an independent contractor, or (4) in a position that does not meet the criteria in the above paragraph, such as a position designated as temporary, seasonal, provisional, regular part-time scheduled to work less than 30 hours per week, project designated full-time, project designated part-time, or an election judge.

Member Contributions

Effective January 1, 2015, each member contributes 9.00% of compensation on a monthly basis. Interest on contributions is credited at a rate of 3.0% per annum compounded monthly.

Contribution Accumulation means the total of the member Pre-2014 Contribution Accumulation and Post-2013 Contribution Accumulation. The Pre-2014 Contribution Accumulation means the total of the member contributions to the retirement fund prior to January 1, 2014, plus interest. The Post-2013 Contribution Accumulation means the total of the member contributions to the retirement fund on or after January 1, 2014, plus interest. The Contribution Accumulation does not include any amounts paid to purchase previous service credit.

After December 31, 1983 member contributions are picked up and paid by the County as provided in Code Section 414(h).

County Contributions

The County, on a monthly basis, is scheduled to make contributions equal to 11.50% of compensation payroll for dates subsequent to December 31, 2023.

Credited Service

All service completed during the elapsed time from the member's date of employment, excluding any breaks in service, to the member's date of termination on the basis of 1/365th year for each day of employment after January 1, 1965, provided an employee joined the plan on the first date eligible. Service prior to January 1, 1970 will be included (up to five years) provided the employee became a Member on the first date of eligibility.

Service is credited while a member is on long-term disability or is eligible for disability benefits from Social Security, even if the member does not receive disability benefits from Social Security because they are reduced to zero due to other disability benefits received. No credited service will be granted if the member chooses to receive a lump-sum payment from the Employer's LTD plan unless the member qualifies for disability benefits from Social Security (regardless of whether or not the member actually receives Social Security disability benefits).

Service Purchase

Eligible members may purchase additional years of service credit for any full-time, non-vested previous employment with any public or private employer in the United States, subject to certain restrictions.

Classification of Tiers

- *Tier 1* - Members hired prior to January 1, 2005
- *Tier 2* - Members hired on or after January 1, 2005 but before January 1, 2010
- *Tier 3* - Members hired on or after January 1, 2010

Compensation

Compensation is the total regular compensation paid to the member, reflecting the normal regular salary or hourly wage rate, before any payroll deductions for income tax, Social Security, group insurance, or any other purpose, excluding bonuses, extra pay, overtime pay, workers' compensation, single-sum payments received in lieu of accrued vacation and sick leave upon termination of employment or during the course of employment, required contributions by the County under this Plan, or for Social Security, group insurance, retainers' fees under contract, or the like, but including compensation deferred under Sections 125, 403(b), 414(h), or 457 of the Internal Revenue Code.

Final Average Monthly Compensation

- *Tier 1 - Members hired prior to January 1, 2005:*

  Average of the highest 36 consecutive calendar months of compensation during the last 120 months of employment.

- *Tier 2 - Members hired on or after January 1, 2005 but before January 1, 2010:*

  Average of the highest 60 consecutive calendar months of compensation during the last 120 months of employment.

Career Compensation

- *Tier 3 - Members hired on or after January 1, 2010:*

  Pensionable Compensation from date of participation to retirement.

- *Tiers 1 & 2 - Members hired prior to January 1, 2010:*

  Pensionable Compensation from January 1, 2014 to retirement.

Career Monthly Compensation

Career Compensation divided by Credited Service accrued during the period. If hired before January 1, 2010 and become disabled before January 1, 2014, special calculations apply. For members with a qualified military leave of absence, career compensation will include compensation credited at a rate that would have been in effect during the leave.

Accrued Benefit (Monthly)

Effective January 1, 2014, the accrued benefit for Tier 1 and Tier 2 members is composed of "Component A" benefit plus a "Component B" benefit. Component A shall mean the benefit attributable to service credit earned prior to January 1, 2014. Component B shall mean the benefit attributable to service credit earned on or after January 1, 2014.

Tiers 1 & 2 - Members hired prior to January 1, 2010:

- *Component A Benefit:*

  2.5% of Final Average Monthly Compensation multiplied by Credited Service prior to January 1, 2014 including purchased service.

- *Component B Benefit:*

  Greater of 1.75% of Career Compensation divided by 12, or 1.75% of Career Monthly Compensation times Credited Service earned on or after January 1, 2014.

Accrued Benefit (Monthly) (continued)

Tier 3 - Members hired on or after January 1, 2010:

- 1.75% of Career Compensation divided by 12 or 1.75% of Career Monthly Compensation times Credited Service, if greater.

The minimum monthly accrued benefit for all members is $25 per month per year of Credited Service.

Vested Accrued Benefit

Eligibility:

Five years of Credited Service for all Tiers. Tier 3 formerly required ten years of Credited Service.

Benefit:

100% of the Accrued Benefit determined as of the date of termination. The benefit may be reduced if payment commences before the Normal Retirement Date or the Special Early Retirement Date.

Normal Retirement

Eligibility:

Attainment of age 65.

Benefit:

Accrued Benefit up to a maximum of 80% of the member's average monthly compensation during any consecutive 12-month period in which the member receives their highest average monthly compensation.

Regular Early Retirement

Eligibility:

- *Tier 1 - Members hired prior to January 1, 2005:*

  Attainment of age 55 and 5 years of Credited Service.

- *Tiers 2 & 3 - Members hired on or after January 1, 2005:*

  Attainment of age 55 and 10 years of Credited Service.

Benefit:

- *Tier 1 - Members hired prior to January 1, 2005:*

  Vested Accrued Benefit determined as of the Early Retirement Date, reduced by 1/6 of 1% for each of the first 36 months and 1/4 of 1% for each additional month payments commence prior to the Normal Retirement Date.

- *Tiers 2 & 3 - Members hired on or after January 1, 2005:*

  Vested Accrued Benefit determined as of the Early Retirement Date, reduced by 1/3 of 1% for each of the first 36 months and 5/12 of 1% for each additional month payments commence prior to the Normal Retirement Date.

Special Early Retirement

Eligibility:

- *Tier 1 - Members hired prior to January 1, 2005:*

  Attainment of any age and age plus credited service equals 70 or more at termination.

- *Tier 2 - Members hired on or after January 1, 2005 and prior to January 1, 2010:*

  Attainment of age 50 and age plus credited service equals 70 or more at termination.

- *Tier 3 - Members hired on or after January 1, 2010:*

  Attainment of age 55 and age plus credited service equals 80 or more at termination.

Benefit:

Vested Accrued Benefit determined as of the Special Early Retirement Date, unreduced for early payment.

Disability Retirement

Eligibility:

Total and permanent disability. Member qualifies for disability under the County's long-term disability plan or under Title II of the Social Security Act.

Benefit:

Normal Retirement Benefit considering annual rate of compensation at disability and Credited Service that would have accumulated if employment had continued uninterrupted to the later of the Normal Retirement Date, or the date that the County's long-term disability benefits end. The Component A Benefit will be based on Credited Service attributable to the period ending on December 31, 2013 (including any period through December 31, 2013 while the member was disabled), and the Average Monthly Compensation when the member became disabled. The Component B Benefit will be based on Credited Service attributable to the period beginning on January 1, 2014 and ending on retirement or the date payments under the Employer's LTD plan end, whichever is later (including the period on or after January 1, 2014 while the member was disabled), and the Career Monthly Compensation when the member became disabled.

Benefits commence at Normal Retirement Date, or if later, the first day of the month after payments cease under the County's long-term disability insurance contract. If applicable, members may elect to commence benefits under Early Retirement or Special Early Retirement provisions.

Termination Benefit

Eligibility:

Members with less than five years of Credited Service receive a refund of the member's contributions. Members who have completed at least five years of Credited Service are eligible to receive their Vested Accrued Benefit payable at Normal Retirement Date.

Benefit:

Vested Accrued Benefit determined as of the date of termination but not less than the actuarial equivalent value, determined as of the benefit commencement date, of the Accumulated Contributions as of the Normal Retirement Date.

Refund of Accumulated Contributions

Upon termination prior to any type of retirement, in lieu of a monthly pension benefit, the member may elect to receive a refund of a percentage of the Pre-2014 accumulated contributions (excluding service purchase contributions) according to the following schedule, plus 100% of the Post-2013 accumulated contributions:

Completed Years of Service	Percent Vested of Pre-2014 Contributions Accumulated At Termination		
	Hired Prior to 1/1/2005	Hired 2005-2010	Hired on or after January 1, 2010
Less Than 5	100%	100%	100%
5	110%	100%	100%
6	125%	110%	100%
7	140%	120%	100%
8	155%	130%	100%
9	170%	140%	100%
10	185%	150%	100%
11	200%	160%	100%
12	200%	170%	100%
13	200%	180%	100%
14	200%	190%	100%
15 or more	200%	200%	100%

Pre-Retirement Death Benefit

- *Member is single:*

  Beneficiary receives two times member's accumulated contributions at date of death (excluding service purchase contributions).

- *Member is married:*

  Spouse receives two times member's accumulated contributions at date of death (excluding service purchase contributions); or

  A monthly benefit equal to 60% of the member's vested accrued benefit, commencing the first day of the month after the member's death or age 50 (55 for Terminated Vested Members) whichever is later.

Normal Form

- *Tier 1* - 10-year certain and life
- *Tier 2* - 10-year certain and life
- *Tier 3* - Single life annuity

Optional Forms

- 100% joint and survivor annuity
- 50% joint and survivor annuity
- 66-2/3% last survivor annuity
- 100% joint and survivor annuity with pop up
- 50% joint and survivor annuity with pop up
- For members in Tier 1 and Tier 2 only: Single life annuity
- For members in Tier 3 only: 10-year certain and life

Optional Form Conversion Factors

Optional annuity forms are actuarially equivalent based on 7.25% interest and the 1983 Group Annuity Mortality table blended 50% male and 50% female.

Payment Date

Benefits are paid on the first day of the month following eligibility for receipt.

Rehires

Effective January 1, 2017, any employee who terminates employment and is reemployed and was otherwise entitled to the Rule of 70 (with or without a minimum age of 50), and who is reemployed on or after January 1, 2017, shall be eligible for a Special Early Retirement (a) with respect to the portion of such employee's accrued benefit attributable to Credited Service earned prior to the period of reemployment when the sum of his age plus service (including purchase of service) equals 70 or more and he is not employed by any Employer as an employee, and (b) with respect to the portion of such employee's accrued benefit attributable to Credited Service earned after the period of reemployment when the sum of his age plus service (including purchase of service) equals 80 or more and he is not employed by any Employer as an employee, if the Rule of 80 date is not earlier than the date the employee would have been eligible for a Special Early Retirement if the employee had remained in-service since December 31, 2016.

SECTION E

SUMMARY OF PARTICIPANT DATA

Summary of Census Data

Exhibit E.1 Adams County Retirement Plan Summary of Census Data				
	January 1, 2024		January 1, 2023	
1. **Active Members**				
a. Counts				
Tier 1		235		275
Tier 2		197		216
Tier 3		2,184		1,848
Total		2,616		2,339
b. Annual Projected Compensation	$	215,977,537	$	181,461,425
c. Average Annual Compensation	$	82,560	$	77,581
d. Average Age		42.4		42.6
e. Average Service		6.9		7.5
f. Accumulated Member Contributions with Interest	$	113,363,075	$	104,709,521
2. **NonVested Members with Refunds Due**				
a. Counts		180		158
b. Amount of Refunds Due	$	1,616,550	$	1,349,509
3. **Deferred Vested Members***				
a. Counts		280		269
b. Annual Deferred Benefits	$	3,614,284	$	3,469,993
c. Average Benefit	$	12,908	$	12,900
4. **Retired Members**				
a. Counts		1,211		1,179
b. Annual Benefits	$	32,559,271	$	31,293,475
c. Average Benefit	$	26,886	$	26,542
5. **Beneficiaries**				
a. Counts		144		138
b. Annual Benefits	$	2,495,672	$	2,170,296
c. Average Benefit	$	17,331	$	15,727
6. **Disabled Retirees**				
a. Counts		55		56
b. Annual Benefits	$	1,055,005	$	1,085,779
c. Average Benefit	$	19,182	$	19,389
7. Total Members Included in Valuation		4,486		4,139

*Includes 23 deferred disabled members in 2024 and 24 deferred disabled members in 2023.

Summary of Changes in Participant Status

Exhibit E.2
Summary of Changes in Participant Status
During Fiscal Year 2023

	Active Members	With Deferred Benefits[1]	With Refunds Due	Retirees	Disabled Retirees	Beneficiaries	Total
As of January 1, 2023	2,339	269	158	1,179	56	138	4,139
Age retirements	(56)	(8)		64			0
Disability retirements		(1)			1		0
Deferred disability							0
Deaths	(6)	(1)		(34)	(2)	(5)	(48)
Vested terminations	(36)	36					0
Rehires	8	(3)	(5)				0
Cashouts	(118)	(12)	(75)				(205)
Expiration of benefits						(1)	(1)
Terminated nonvested with refunds due	(102)		102				0
New beneficiary or Alternate Payee				1		12	13
New entrants during the year[2]	587						587
Data correction				1			1
Net change	277	11	22	32	(1)	6	347
As of January 1, 2024	2,616	280	180	1,211	55	144	4,486

[1] Includes 23 deferred disabled members at January 1, 2024

[2] Includes 41 members hired and terminated in 2023 with refunds due

Active Member Counts by Age and Service

Exhibit E.3 Active Member Counts by Age and Service as of January 1, 2024								
Age	Service							
	0-4	5-9	10-14	15-19	20-24	25-29	Over 30	Total
Under 20	10	0	0	0	0	0	0	10
20-24	123	1	0	0	0	0	0	124
25-29	259	34	0	0	0	0	0	293
30-34	237	130	8	1	0	0	0	376
35-39	201	133	46	10	1	0	0	391
40-44	162	94	43	55	19	0	0	373
45-49	121	67	41	53	33	3	0	318
50-54	112	52	33	34	35	13	2	281
55-59	84	50	28	29	27	10	7	235
60-64	54	38	13	16	17	10	7	155
65-69	12	14	10	5	6	3	3	53
Over 70	3	2	0	0	0	2	0	7
Total	1,378	615	222	203	138	41	19	2,616

Active Member Average Salary by Age and Service

Exhibit E.4 Active Member Average Salary at Valuation Date by Age and Service[1] as of January 1, 2024								
Age	Service							
	0-4	5-9	10-14	15-19	20-24	25-29	Over 30	Total
Under 20	$45,668							$45,668
20-24	53,244							53,273
25-29	62,271	$73,085						63,526
30-34	66,905	77,660	$89,119					71,199
35-39	70,233	82,155	98,432	$102,413				78,487
40-44	78,714	84,309	94,355	101,226	$107,109			86,693
45-49	74,878	80,185	94,382	112,000	106,527			88,295
50-54	75,719	75,547	92,896	94,015	96,445	$111,691		84,572
55-59	72,286	78,650	99,537	86,067	99,350	88,764	$91,046	82,957
60-64	75,347	79,012	76,488	79,253	82,701	83,960	84,323	78,512
65-69	77,646	76,750	90,146	74,160	71,836			82,344
Over 70								75,641
Total	$68,713	$79,655	$94,217	$98,347	$98,105	$96,552	$97,972	$77,949

[1] Average Salary not shown if group contains less than five members

Exhibit E.5
10-Year Projected Benefit Payments (Closed Group)

Fiscal Year Ended December 31,	Actives	Inactives	Total
2024	$ 2,892,698	$ 36,726,319	$ 39,619,017
2025	5,268,820	36,536,457	41,805,277
2026	7,228,997	36,280,768	43,509,765
2027	8,657,003	36,004,945	44,661,948
2028	10,102,522	35,683,961	45,786,483
2029	12,337,281	35,321,740	47,659,021
2030	14,486,866	34,889,597	49,376,463
2031	16,560,353	34,436,940	50,997,293
2032	18,630,121	33,831,364	52,461,485
2033	20,712,675	33,187,715	53,900,390

Exhibit E.6
History of Refunds

Fiscal Year Ended December 31,	Refund Amount
2006	$ 1,225,048
2007	1,187,708
2008	1,220,911
2009	1,043,307
2010	910,161
2011	1,761,213
2012	1,870,042
2013	2,029,377
2014	3,253,473
2015	3,086,203
2016	2,989,507
2017	2,328,219
2018	3,357,700
2019	2,666,844
2020	2,510,968
2021	4,067,409
2022	5,192,324
2023	4,071,787

SECTION F

HISTORICAL SCHEDULES

Schedule of Funding Progress

Exhibit F.1
Adams County Retirement Plan
Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL (UAAL)	Funded Ratio	Covered Payroll	UAAL as a Percentage of Covered Payroll
(1)	(2)	(3)	(4)=(3)-(2)	(5)=(2)/(3)	(6)	(7)=(4)/(6)
1/1/2013	$ 199,076,191	$ 386,835,357	$ 187,759,166	51.5%	$ 96,443,158	194.7%
1/1/2014	214,140,815	379,802,962	165,662,147	56.4%	102,088,234	162.3%
1/1/2015	227,350,888	398,075,505	170,724,617	57.1%	107,861,819	158.3%
1/1/2016	235,725,998	419,358,970	183,632,972	56.2%	113,995,220	161.1%
1/1/2017	246,434,159	440,035,366	193,601,207	56.0%	120,573,734	160.6%
1/1/2018	259,301,061	484,193,980	224,892,919	53.6%	127,273,779	176.7%
1/1/2019	265,656,097	505,342,712	239,686,615	52.6%	135,696,959	176.6%
1/1/2020	275,805,624	529,979,010	254,173,386	52.0%	149,499,049	170.0%
1/1/2021	297,788,161	551,106,494	253,318,333	54.0%	161,443,374	156.9%
1/1/2022	328,077,911	569,413,773	241,335,862	57.6%	164,502,555	146.7%
1/1/2023	344,756,817	586,241,598	241,484,781	58.8%	181,461,425	133.1%
1/1/2024	373,480,442	618,942,681	245,462,239	60.3%	215,977,537	113.7%

Schedule of Employer Contributions

Exhibit F.2 Adams County Retirement Plan Schedule of Employer Contributions			
Fiscal Year Ended December 31,	Actuarially Determined Contribution	Actual County Contribution *	Percentage Contributed
2006	$ 10,110,243	$ 5,175,320	51.2%
2007	11,320,501	5,740,166	50.7%
2008	11,542,116	6,445,284	55.8%
2009	16,237,097	7,048,276	43.4%
2010	16,856,144	7,153,366	42.4%
2011	17,559,138	7,235,764	41.2%
2012	18,762,499	7,533,395	40.2%
2013	19,659,013	8,289,767	42.2%
2014	15,406,279	8,964,812	58.2%
2015	15,254,244	9,709,230	63.6%
2016	15,858,211	10,316,491	65.1%
2017	16,276,851	10,954,633	67.3%
2018	19,360,970	13,634,301	70.4%
2019	21,014,878	14,698,525	69.9%
2020	18,154,422	17,085,000	94.1%
2021	18,200,211	18,675,492	102.6%
2022	17,525,738	20,058,980	114.5%
2023	17,683,463	25,062,801	141.7%
2024	18,672,597	TBD	TBD

*County Contribution includes $2,012,610 in mill levy revenue for fiscal year 2019, $2,455,845 in mill levy revenue for fiscal year 2020, $2,606,320 in mill levy revenue for fiscal year 2021, and $2,862,154 in mill levy revenue for fiscal year 2022, and $3,005,157 in mill levy revenue for fiscal year 2023.

Supplementary Information

Exhibit F.3 Adams County Retirement Plan Supplementary Information	
Valuation Date	January 1, 2024
Actuarial Cost Method	Entry Age Normal
Amortization Method	Level Percent of Payroll Closed
Remaining Amortization Period	20 Years
Asset Valuation Method	5-Year Smoothed Market
Actuarial Assumptions:	
Investment Rate of Return	7.25%
Projected Salary Increases	Service-based increases from 3.5% to 6.75%
Inflation	2.50%
Cost of Living Adjustments	N/A

SECTION G

ACTUARIAL ASSUMPTIONS AND METHODS

Summary of Actuarial Methods and Assumptions

I. Valuation Date

The valuation date is January 1st of each plan year. This is the date as of which the actuarial present value of future benefits and the actuarial value of assets are determined.

II. Actuarial Cost Method

The actuarial valuation uses the Entry Age Normal actuarial cost method. Under this method, the employer contribution rate is the sum of (i) the employer normal cost rate, and (ii) a rate that will amortize the unfunded actuarial liability.

1. The valuation is prepared on the projected benefit basis. The present value of each participant's expected benefit payable at retirement or termination is determined, based on age, service, sex, compensation, and the interest rate assumed to be earned in the future (7.25%). The calculations take into account the probability of a participant's death or termination of employment prior to becoming eligible for a benefit, as well as the possibility of terminating with a service benefit. Future salary increases are also anticipated. The present value of the expected benefits payable on account of the active participants is added to the present value of the expected future payments to retired participants and beneficiaries to obtain the present value of all expected benefits payable from the Plan on account of the present group of participants and beneficiaries.

2. The employer contributions required to support the benefits of the Plan are determined following a level percent funding approach, and consist of a normal cost contribution and an accrued liability contribution.

3. The normal contribution is determined using the Entry Age Normal cost method. Under this method, a calculation is made to determine the average uniform and constant percentage rate of employer contribution which, if applied to the compensation of each new participant during the entire period of anticipated covered service, would be required in addition to the contributions of the participant to meet the cost of all benefits payable on their behalf.

4. The unfunded accrued liability contributions are determined by subtracting the actuarial value of assets from the actuarial accrued liability and amortizing the result over 20 years from the valuation date as a level percentage of payroll. It is assumed that payments are made throughout the year.

III. Actuarial Value of Assets

The actuarial value of assets is based on recognizing gains and losses over a five-year period where gains and losses are determined by comparing the projected market value of assets (based on the prior year's market value of assets, cash flows during the year and expected investment returns on those amounts) to the current year's market value of assets. The actuarial value of assets must be between 80% and 120% of market value.

IV. Actuarial Assumptions

A. Economic Assumptions

1. Investment return: 7.25% per annum, compounded annually, composed of an assumed 2.50% inflation rate and a 4.75% real rate of return. This rate represents the assumed return, net of all investment expenses.

2. Salary increase rate: Inflation rate of 2.50%, plus productivity component of 1.00%, plus step-rate/ promotional component as shown (adopted November 2023).

Completed Years of Service	Percentage Increase in Salary		
	Merit	Wage Inflation	Total
0	3.25 %	3.50 %	6.75 %
5	2.75	3.50	6.25
10	2.00	3.50	5.50
15	1.00	3.50	4.50
20	1.00	3.50	4.50
25	0.00	3.50	3.50
30	0.00	3.50	3.50
35	0.00	3.50	3.50
40	0.00	3.50	3.50

3. Wage inflation: 3.50%

4. Payroll growth: 3.50%

B. Demographic Assumptions

1. Mortality rates (post-retirement) – The valuation assumes fully generational mortality. The base mortality table used is Pub-2010 General Amount-Weighted Healthy Annuitant tables with the below median income adjustments for females. The base mortality tables are adjusted with a 89% multiplier on males and and 106% multiplier on females. Future mortality improvements are assumed each year using the Ultimate rates of the MP 2020 Scale. The following are sample rates for 2023 (adopted November 2023):

Sample Attained Ages	Probability of Death Post-Retirement	
	Men	**Women**
20	0.03 %	0.01 %
25	0.02	0.01
30	0.03	0.02
35	0.04	0.03
40	0.05	0.04
45	0.09	0.08
50	0.23	0.39
55	0.33	0.43
60	0.48	0.49
65	0.71	0.65
70	1.20	1.11
75	2.11	1.96
80	3.80	3.47
85	7.01	6.47
90	12.26	12.10

2. Mortality rates (pre-retirement) – The valuation assumes fully generational mortality. The base mortality table used is the Pub-2010 General Amount-Weighted Emploee tables with no adjustments. Future mortality improvements are assumed each year using the Ultimate rates of the MP 2020 Scale. The following are sample rates for 2023 (adopted November 2023):

Sample Attained Ages	**Probability of Death Pre-Retirement**	
	Men	**Women**
20	0.03 %	0.01 %
25	0.02	0.01
30	0.03	0.01
35	0.04	0.02
40	0.06	0.03
45	0.09	0.05
50	0.13	0.07
55	0.19	0.11
60	0.28	0.16
65	0.41	0.26
70	0.62	0.43
75	0.97	0.72
80	1.55	1.19
85	6.62	4.89
90	13.77	10.78

3. Mortality rates (post-disablement) – Pub-2010 General Amount Weighted Disabled tables with no adjustments. Future mortality improvements are assumed each year using the Ultimate MP 2020 Scale. Sample rates for 2023 shown below (adopted November 2023):

Sample Attained Ages	Probability of Death Post-Disability	
	Men	Women
20	0.41 %	0.23 %
25	0.28	0.16
30	0.35	0.26
35	0.46	0.40
40	0.65	0.63
45	1.01	0.99
50	1.57	1.41
55	2.04	1.67
60	2.37	1.85
65	2.78	2.04
70	3.35	2.42
75	4.00	2.98
80	4.73	3.46
85	5.00	3.34
90	4.22	2.09

3. Disability rates. Sample rates shown below (adopted November 2023):

Sample Attained Ages	Probability of Disablement Next Year	
	Men	Women
25	0.02 %	0.02 %
30	0.04	0.04
35	0.05	0.05
40	0.09	0.09
45	0.14	0.14
50	0.25	0.25
55	0.46	0.46
60	0.66	0.66

4. Termination rates (for causes other than death, disability or retirement): Termination rates are based on service. Termination rates are not applied after a member becomes eligible for a retirement benefit. Rates at selected ages are shown (adopted November 2023):

Completed Years of Service	Probability of Termination Next Year	
	Men	**Women**
0	13.00 %	13.00 %
5	11.00	11.00
10	4.00	4.00
15	4.00	4.00
20	2.50	2.50
25	1.50	1.50
30	1.50	1.50
35	1.50	1.50

5. Retirement rates (adopted November 2023).

Age	Tier 1 Age-based	Tier 1 Rule-based	Tier 2 Age-based	Tier 2 Rule-based	Tier 3 Age-based	Tier 3 Rule-based
< 46	17.00%	17.00%				
46	17.00%	17.00%				
47	17.00%	17.00%				
48	17.00%	17.00%				
49	17.00%	17.00%				
50	15.00%	15.00%		20.00%		
51	15.00%	15.00%		15.00%		
52	15.00%	15.00%		15.00%		
53	15.00%	15.00%		15.00%		
54	15.00%	15.00%		15.00%		
55	15.00%	15.00%	15.00%	15.00%	15.00%	25.00%
56	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
57	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
58	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
59	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
60	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
61	15.00%	15.00%	15.00%	15.00%	15.00%	15.00%
62	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%
63	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%
64	18.00%	18.00%	18.00%	18.00%	18.00%	18.00%
65	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
66	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
67	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
68	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
69	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
70	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
71	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
72	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
73	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
74	35.00%	35.00%	35.00%	35.00%	35.00%	35.00%
75	100.00%	100.00%	100.00%	100.00%	100.00%	100.00%

C. Expense Loading. Based on the prior three year average, rounded to the nearest $1,000.

Year	Noninvestment Expenses		
2021	773,793		
2022	904,806		
2023	776,747		
	$2,455,346	÷ 3 =	$818,448.67

Average	$818,449
Loading	$818,000

D. <u>Other Assumptions</u>

1. Percent married: 85% of employees are assumed to be married.

2. Age difference: Male members are assumed to be three years older than their spouses, and female members are assumed to be three years younger than their spouses.

3. Cost of living adjustment: None.

4. Optional forms: Members are assumed to elect the normal form of benefit.

5. Vested terminating members are assumed to elect a refund or a deferred benefit, whichever is more valuable at the time of termination.

6. Current and future deferred vested participants are assumed to retire at age 55 or the age they meet normal retirement eligibility if they are not eligible for early retirement at age 55. Deferred disabled participants are assumed to commence benefits at age 60.

7. Pay increase timing: Middle of year.

8. Decrement timing: Decrements of all types are assumed to occur mid-year.

9. Eligibility testing: Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.

10. Decrement relativity: Decrement rates are used directly, without adjustment for multiple decrement table effects.

11. Incidence of Contributions: Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made.

SECTION H

RISKS ASSOCIATED WITH MEASURING THE ACCRUED LIABILITY

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures, as illustrated in this report, are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the expected returns;
2. Asset/Liability mismatch – changes in asset values may not match changes in liabilities, thereby altering the gap between the accrued liability and assets and consequently altering the funded status and contribution requirements;
3. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
4. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
5. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
6. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example, if the investment return since the most recent actuarial valuation is less (or more) than the assumed rate, the cost of the plan can be expected to increase (or decrease). Likewise, if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The computed contribution rate shown on Exhibit B.4 may be considered as a minimum contribution rate that complies with the Board's policy. Actual contributions are set by statute. The timely receipt of the contributions is critical to support the financial health of the plan. Users of this report should be aware that contributions made at the statutory rate do not necessarily guarantee benefit security.

Plan Maturity Measures

Risks facing a pension plan evolve over time. A young plan with virtually no investments and paying few benefits may experience little investment risk. An older plan with a large number of members in pay status and a significant trust may be much more exposed to investment risk. Generally accepted plan maturity measures include the following:

	January 1, 2024	January 1, 2023	January 1, 2022
Ratio of the market value of assets to total payroll	1.7	1.8	2.2
Ratio of actuarial accrued liability to payroll	2.9	3.2	3.5
Ratio of actives to retirees and beneficiaries	1.9	1.7	1.7
Ratio of net cash flows to market value of assets	1%	-2%	-1%
Duration of the actuarial accrued liability	11.4	11.3	11.3

Ratio of Market Value of Assets to Payroll

The relationship between assets and payroll is a useful indicator of the potential volatility of contributions. For example, if the market value of assets is 4.0 times the payroll, a return on assets 5% different than assumed would equal 20% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in plan sponsor contributions as a percentage of payroll.

Ratio of Actuarial Accrued Liability to Payroll

The relationship between actuarial accrued liability and payroll is a useful indicator of the potential volatility of contributions for a fully funded plan. A funding policy that targets a funded ratio of 100% is expected to result in the ratio of assets to payroll and the ratio of liability to payroll converging over time.

The ratio of liability to payroll may also be used as a measure of sensitivity of the liability itself. For example, if the actuarial accrued liability is 5.5 times the payroll, a change in liability 2% other than assumed would equal 11% of payroll. A higher (lower) or increasing (decreasing) level of this maturity measure generally indicates a higher (lower) or increasing (decreasing) volatility in liability (and also plan sponsor contributions) as a percentage of payroll.

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

Ratio of Actives to Retirees and Beneficiaries

A young plan with many active members and few retirees will have a high ratio of active to retirees. A mature open plan may have close to the same number of actives to retirees resulting in a ratio near 1.0. A super-mature or closed plan may have significantly more retirees than actives resulting in a ratio below 1.0.

Ratio of Net Cash Flow to Market Value of Assets

A positive net cash flow means contributions exceed benefits and expenses. A negative cash flow means existing funds are being used to make payments. A certain amount of negative net cash flow is generally expected to occur when benefits are prefunded through a qualified trust. Large negative net cash flows as a percent of assets may indicate a super-mature plan or a need for additional contributions.

Duration of Actuarial Accrued Liability

The duration of the actuarial accrued liability may be used to approximate the sensitivity to a 1% change in the assumed rate of return. For example, duration of 10 indicates that the liability would increase approximately 10% if the assumed rate of return were lowered 1%.

Additional Risk Assessment

Additional risk assessment is outside the scope of the annual actuarial valuation. Additional assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability.

Risks Measures – Low Default Risk Obligation Measure

Introduction

In December 2021, the Actuarial Standards Board (ASB) adopted a revision to Actuarial Standard of Practice (ASOP) No. 4, Measuring Pension Obligations and Determining Pension Plan Costs or Contributions. The revised ASOP No. 4 requires the calculation and disclosure of a liability referred to by the ASOP as the "Low-Default-Risk Obligation Measure" (LDROM). The rationale that the ASB cited for the calculation and disclosure of the LDROM was included in the Transmittal Memorandum of ASOP No. 4 and is presented below (emphasis added):

> "The ASB believes that the calculation and disclosure of this measure provides **appropriate, useful information for the intended user regarding the funded status of a pension plan.** The calculation and disclosure of this additional measure is **not intended to suggest that this is the "right" liability measure** for a pension plan. However, the ASB does believe that **this additional disclosure provides a more complete assessment of a plan's funded status and provides additional information regarding the security of benefits that members have earned as of the measurement date."**

Comparing the Accrued Liabilities and the LDROM

One of the fundamental financial objectives of the Adams County Retirement Plan (the Plan) is to finance each member's retirement benefits over the period from the member's date of hire until the member's projected date of retirement (entry age actuarial cost method) as a level dollar amount. To fulfill this objective, the discount rate that is used to value the accrued liabilities of the Plan is set equal to the expected return on the Fund's diversified portfolio of assets (referred to sometimes as the investment return assumption). For the Plan, the investment return assumption is 6.00%.

The LDROM is meant to approximately represent the lump sum cost to a plan to purchase low-default-risk fixed income securities whose resulting cash flows essentially replicate in timing and amount the benefits earned (or the costs accrued) as of the measurement date. The LDROM is very dependent upon market interest rates at the time of the LDROM measurement. The lower the market interest rates, the higher the LDROM, and vice versa. The LDROM results presented in this report are based on the entry age actuarial cost method and discount rates based upon the intermediate rate from the FTSE Pension Discount Curve and Liability Index published by the Society of Actuaries. This rate is 4.80% as of December 31, 2023. This measure may not be appropriate for assessing the need for or amount of future contributions. This measure may not be appropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligation.

The difference between the two measures (Valuation and LDROM) is one illustration of the cost to de-risk the diversified portfolio.

Valuation Accrued Liabilities	LDROM
$618,942,681	$819,251,816

SECTION I

DETERMINISTIC PROJECTIONS

Deterministic Projections

Projections are a vital part of the annual valuation process for the Adams County Retirement Plan. The Adams County Retirement Plan is funded on a fixed rate basis meaning the contributions made to the plan do not automatically change as a result of experience, good or bad. As a result, long term projected outcomes can change significantly year to year due to fluctuations in investment returns.

Included in this section is the deterministic projection. This analysis is meant to demonstrate the positive impact on the Plan of increased County contributions. Please note that the projection set assumes an annual rate of return on assets of exactly 7.25%.

Deterministic Projections

Adams County Retirement Plan

Projection Results Based on January 1, 2024 Actuarial Valuation

Discount Rate: 7.25%

Valuation as of January 1,	Actuarial Accrued Liability (AAL, in thousands)	Actuarial Value of Assets (AVA, in thousands)	Unfunded Actuarial Accrued Liability (UAAL, in	Funded Ratio	Employer ADC	Employer Normal Cost and Admin	Amortization Payment	Market Return for FY Beginning on Valuation Date	Contribution Rate for Fiscal Year Following Valuation Date		Projected Payroll - (in thousands)	Employee Contributions (in thousands)	Employer Contributions (in thousands)	Mill Levy Revenue (in thousands)
									Employee	Employer				
(1)	(2)	(3)	(4)	(5)	(6)	(7)	(8)	(9)	(10)	(11)	(12)	(13)	(14)	(15)
2024	$618,943	$373,480	$245,462	60.3%	8.65%	0.57%	8.08%	7.25%	9.00%	11.50%	$215,978	$19,438	$24,837	$3,005
2025	643,606	407,642	235,964	63.3%	7.74%	0.02%	7.72%	7.25%	9.00%	11.50%	225,170	20,265	25,895	3,043
2026	666,983	443,834	223,149	66.5%	7.16%	-0.12%	7.28%	7.25%	9.00%	11.50%	234,645	21,118	26,984	3,081
2027	690,420	482,531	207,888	69.9%	6.54%	-0.25%	6.79%	7.25%	9.00%	11.50%	244,151	21,974	28,077	3,119
2028	714,360	524,337	190,023	73.4%	5.88%	-0.36%	6.24%	7.25%	9.00%	11.50%	253,879	22,849	29,196	3,158
2029	738,808	569,459	169,350	77.1%	5.17%	-0.45%	5.62%	7.25%	9.00%	11.50%	263,843	23,746	30,342	3,198
2030	763,629	617,972	145,657	80.9%	4.37%	-0.53%	4.90%	7.25%	9.00%	11.50%	274,154	24,674	31,528	-
2031	789,053	666,990	122,063	84.5%	3.59%	-0.60%	4.19%	7.25%	9.00%	11.50%	284,918	25,643	32,766	-
2032	815,252	720,043	95,210	88.3%	2.69%	-0.66%	3.35%	7.25%	9.00%	11.50%	296,031	26,643	34,044	-
2033	842,461	777,641	64,821	92.3%	1.63%	-0.72%	2.36%	7.25%	9.00%	11.50%	307,409	27,667	35,352	-
2034	870,778	840,167	30,610	96.5%	0.39%	-0.77%	1.16%	7.25%	9.00%	11.50%	319,094	28,718	36,696	-
2035	900,368	908,093	(7,725)	100.9%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	331,183	29,806	38,086	-
2036	931,424	981,949	(50,525)	105.4%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	343,701	30,933	39,526	-
2037	964,175	1,062,335	(98,160)	110.2%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	356,636	32,097	41,013	-
2038	998,760	1,149,789	(151,028)	115.1%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	369,989	33,299	42,549	-
2039	1,035,339	1,244,900	(209,561)	120.2%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	383,621	34,526	44,116	-
2040	1,073,965	1,348,168	(274,203)	125.5%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	397,521	35,777	45,715	-
2041	1,114,796	1,460,203	(345,406)	131.0%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	411,922	37,073	47,371	-
2042	1,157,882	1,581,613	(423,731)	136.6%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	426,466	38,382	49,044	-
2043	1,203,179	1,712,863	(509,684)	142.4%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	441,464	39,732	50,768	-
2044	1,250,828	1,854,699	(603,871)	148.3%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	456,956	41,126	52,550	-
2045	1,300,907	2,007,856	(706,949)	154.3%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	472,945	42,565	54,389	-
2046	1,353,343	2,172,970	(819,627)	160.6%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	489,355	44,042	56,276	-
2047	1,408,145	2,350,786	(942,641)	166.9%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	506,300	45,567	58,225	-
2048	1,465,346	2,542,153	(1,076,808)	173.5%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	523,755	47,138	60,232	-
2049	1,525,002	2,747,995	(1,222,993)	180.2%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	541,771	48,759	62,304	-
2050	1,587,221	2,969,358	(1,382,137)	187.1%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	560,380	50,434	64,444	-
2051	1,652,016	3,207,262	(1,555,246)	194.1%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	579,677	52,171	66,663	-
2052	1,719,337	3,462,763	(1,743,426)	201.4%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	599,594	53,963	68,953	-
2053	1,789,128	3,736,969	(1,947,841)	208.9%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	620,201	55,818	71,323	-
2054	1,861,401	4,031,153	(2,169,752)	216.6%	0.00%	0.00%	0.00%	7.25%	9.00%	11.50%	641,550	57,740	73,778	-