

North Attleboro Retirement System

Preliminary Results of the January 1, 2024 Actuarial Valuation

July 25, 2024

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2024 Action Plan

Today the Board will

- Review System experience since 2022
- Discuss alternative assumptions and methods
- Discuss appropriation for FY2026 and beyond
- Select Funding Schedule
- Other

Once a funding schedule is selected, KMS will

- Finalize January 1, 2024 Valuation Report
- Prepare December 31, 2023 GASB 67/68 report
 - based on January 1, 2024 valuation



2023 Events That Impact Valuation

- Actual vs. Expected Experience
 - Market Value of Assets (MVA) - \$157.8m
 - 7.00% expected return
 - -14.59% return for 2022
 - 16.67% return for 2023
 - Actuarial Value of Assets (AVA) - \$163.2m
 - 7.00% expected return
 - 6.06% return for 2022
 - 7.91% return for 2023
 - \$95,000 loss over 2-year period
 - \$5.4m deferred losses not recognized as of January 1, 2024
 - Demographic experience loss of \$1.9m
 - Losses
 - Salary increases greater than expected
 - New entrants with past service
 - Inactive ASF balances not paid
 - Gains
 - Number of terminations greater than expected
 - Change in method for recognizing net 3(8)(c) payments
- Assumption or Method Changes
 - Update retirement and disability decrement tables to PERAC standard
 - Update salary scale to service-based tables
 - 5.5% graded down to 3.5% for group 1, 6.5% graded down to 4% for group 4
- Benefit Changes
 - Increased COLA base from \$14,000 to \$16,000

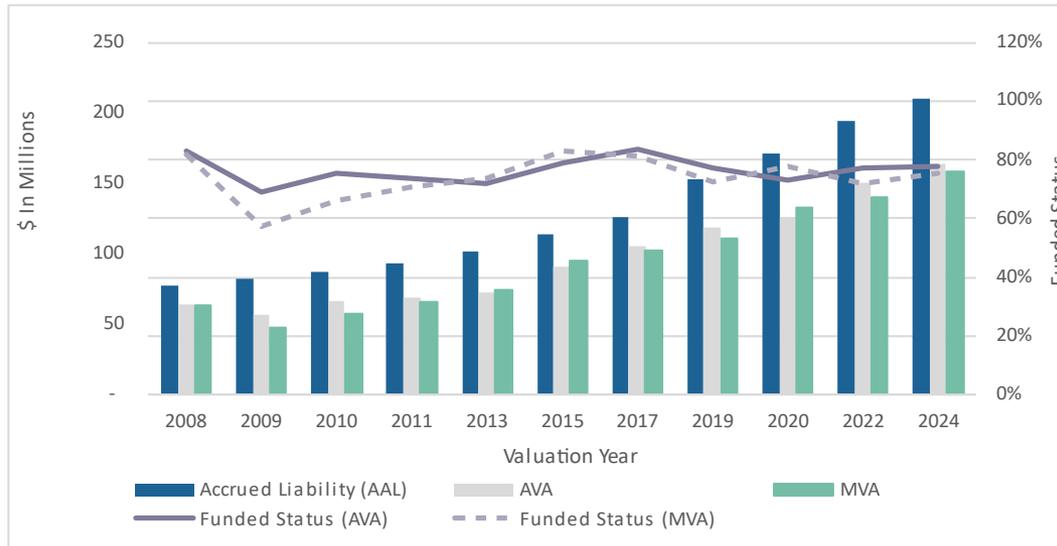


Impact of Events on Results

(results in millions)

Event	Change in Unfunded Liability	Change in Funded Status
January 1, 2022 Valuation	\$44.4m	77.2%
Expected January 1, 2024 Unfunded Liability	\$39.5m	Increased to 80.6%
Demographic Loss	Increased by \$1.9m	Decreased to 79.8%
Asset Loss	Increased by \$0.1m	Decreased to 79.7%
Increase COLA Base from \$14,000 to \$16,000	Increased by \$1.7m	Decreased to 79.1%
Update Pre-Retirement Decrements	Increased by \$2.8m	Decreased to 78.0%
Update Salary Scale	Increased by \$0.8m	Decreased to 77.7%
Total	Increased by \$7.3m	-

Funding Progress (results in millions)



For a System's funded status to improve, its AVA must grow faster than its liabilities.

	Prior Valuation	Before Assumption Changes	After Assumption Changes
Valuation Date	January 1, 2022	January 1, 2024	January 1, 2024
Actuarial Accrued Liability (AL)	\$194.4	\$206.4	\$210.0
Actuarial Value of Assets (AVA)	150.0	163.2	163.2
Unfunded Actuarial Liability (UAL)	\$44.4	\$43.2	\$46.8
Funded Status = AVA/AL	77.2%	79.1%	77.7%



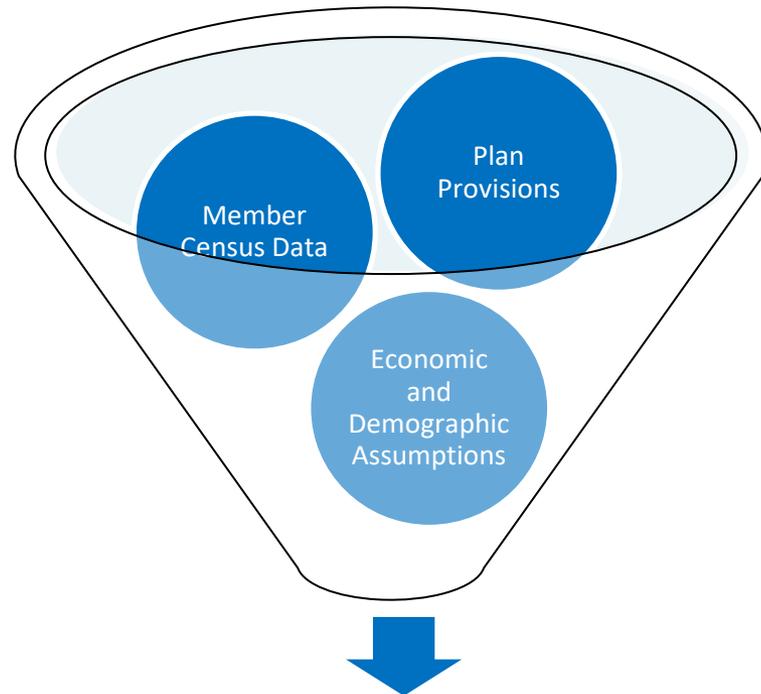
Purpose of Valuation

- Periodic review of system experience
 - Liabilities
 - Assets
- Review assumptions and methods
 - Appropriate
 - Consistent
 - Reasonable
 - Conform to Actuarial Standards of Practice (ASOPs)
- Develop annual appropriations
 - FY2026 and FY2027
- Adopt new funding schedule
- Determine cost for various benefit options



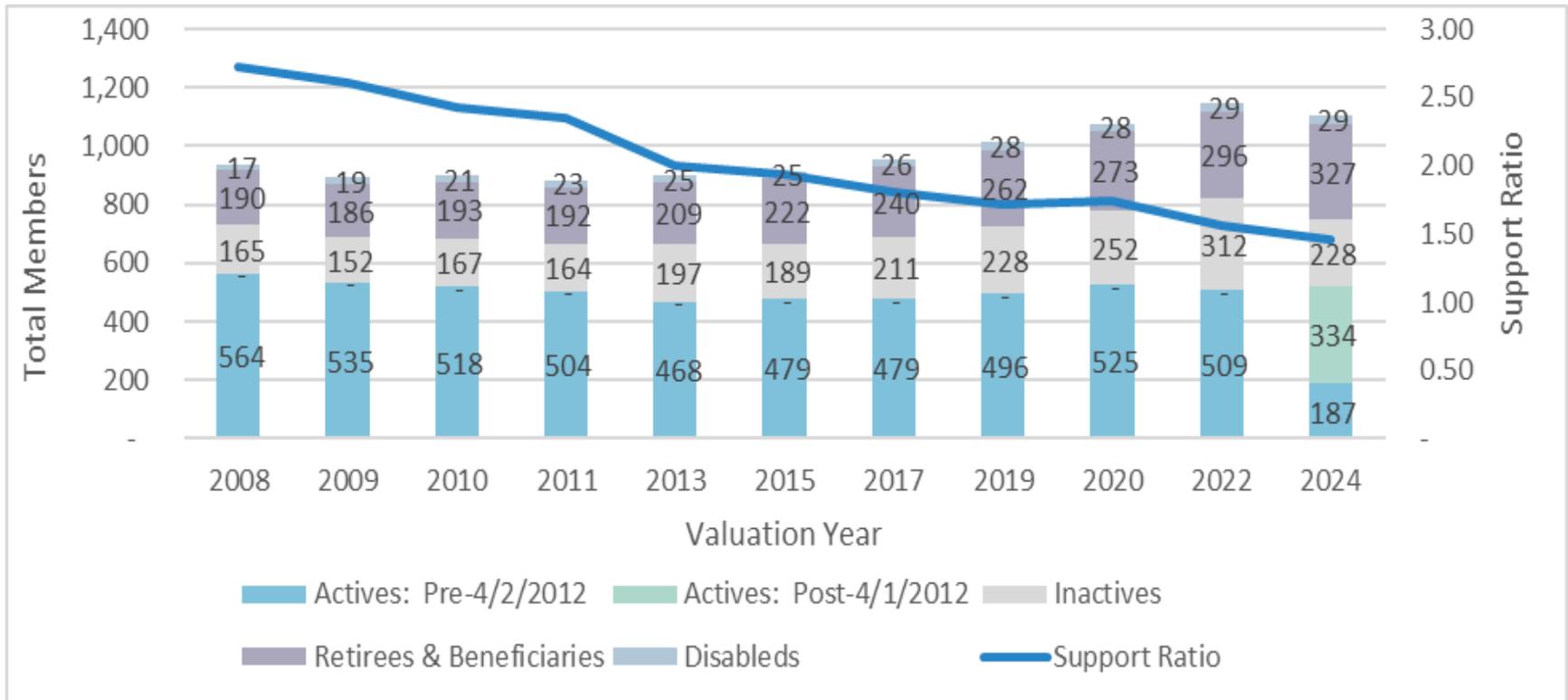
Actuarial Valuation Process

- Compile employee and retiree member census data
- Plan provisions
 - M.G.L. Chapter 32
 - COLA Base = \$16,000 effective July 1, 2023 (previously, \$14,000)
- Select actuarial assumptions
- Use Actuarial Results to develop funding, accounting disclosures, and other financial results



Actuarial Results

Historical Membership



Support ratio (number of actives per retiree) is 1.46 as of January 1, 2024

Public Funds Survey support ratio is 1.25 for FY2022

Split between Pre 4/2/2012 and Post 4/1/2012 not available in prior valuations



North Attleboro Retirement System January 1, 2024 Actuarial Valuation

Administrative Expense Assumption

Current Assumption

- Administrative expenses, excluding management fees and investment consultant expenses
- \$300,000 for FY2023, increasing at 2.75% per year

Calendar Year	Administrative Expenses	Increase
2023	318,601	32.10%
2022	241,174	0.98%
2021	238,837	-11.51%
2020	269,913	-1.46%
2019	273,924	36.94%
2018	200,036	
Average	257,081	11.41%

Analysis

Administrative expenses have increased an average of 11.41% per year over the last five years.

Recommendation

\$300,000 for FY2025, increasing at 3.25% per year



3(8)(c) Net Transfer Assumption

Current Assumption

- 3(8)(c) transfers expected to be paid during the current year offset by the amount received during the same period
- No defined 3(8)(c) assumption – prior valuation included in liability

Calendar Year	3(8)(c) Net Transfer
2023	408,519
2022	298,840
2021	276,594
2020	299,610
2019	251,554
2018	249,734
Average	297,475

Analysis

3(8)(c) net transfers have averaged 297,475 over the last six years.

Recommendation

Assume level payments of \$300,000 per year



Salary Scale and Pay Growth Assumptions

- Current Salary Scale Assumption
 - 3.5% for all years, all groups
- Current Pay Growth Assumption: 2.75%

Valuation Year	Actual Total Salary	Expected Total Salary	Ratio Actual to Expected
2024	\$23.9m	\$23.3m	1.028

Analysis

Total salary is higher than expected.

Recommendation

Update Salary Scale:

- Based on service, 5.5% graded down to 3.5% for Group 1
- Based on service, 6.5% graded down to 4% for Group 4

Increase pay growth assumption to 3.25%



Mortality Rates Assumption

Current Assumptions

- Active Lives: Pub-2010 General/Safety Employees Amount-Weighted Mortality with Scale MP-2021
- Retirees and Vested Lives: Pub-2010 General/Safety Retirees Amount-Weighted Mortality with Scale MP-2021
- Beneficiaries: Pub-2010 General/Safety Contingent Survivor Amount-Weighted Mortality with Scale MP-2021
- Disabled Lives: Pub-2010 General/Safety Disabled Amount-Weighted Mortality with Scale MP-2021

Analysis

Actual deaths were lower than expected.

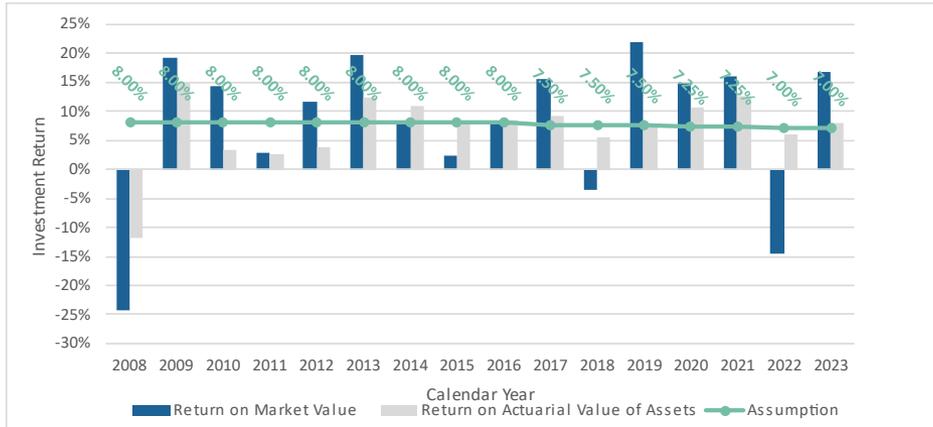
Recommendation

No Change

Valuation Year	Actual Deaths	Expected Deaths	Ratio Actual to Expected
2024	15.0	20.69	0.725



Historical Rates of Return

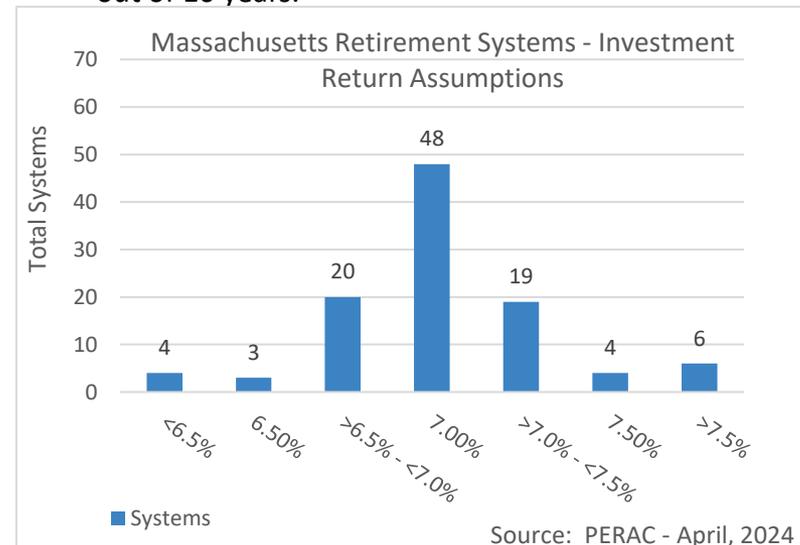


North Attleboro Actuarial Value of Assets (AVA)

- The AVA is the Market Value of Assets (MVA) adjusted to phase-in investment gains and losses over a 5-year period, further constrained to be within 20% of the MVA.
- Investment gains and losses are the excess or deficiency of the expected returns over the actual returns.
- Return on AVA are less volatile than return on MVA- *gray bars compared to blue bars*
- Actual AVA return has exceeded assumption in 10 out of 16 years.

Massachusetts Retirement Systems – Investment Return Assumptions

- 75% of the Massachusetts Retirement Systems’ investment return assumption is 7% or lower.
- This is a dramatic change from before the great recession (2008) – 100% of the Systems’ investment return assumption was 7.5% or higher.
- Only 10 Systems’ assumption is at or above 7.5%.



Source: PERAC - April, 2024



Investment Return Assumption Sources

Sources of Expected Returns	2022	2023	2024
NEPC 30-Year PRIT Fund Expected Return	6.90%	7.70%	7.70%
NEPC 10-Year PRIT Fund Expected Return	5.70%	7.00%	6.60%
Commonwealth Assumption (PERAC)	7.00	7.00%	7.00%
PERAC Reasonable Range	6.00% - 7.45%	6.00% - 7.35%	6.00% - 7.35%
PERAC Recommended Range	6.75% - 7.15%	6.75% - 7.15%	6.75% - 7.15%
Average of Massachusetts Retirement Systems	7.16%	7.03%	7.02%
Horizon Actuarial Survey ¹			
10-Year horizon	5.38%	5.63%	6.89%
20-Year horizon	6.25%	6.29%	7.17%
National State, Teacher and City Plan Average ²	7.04%	6.93%	6.91%

¹Horizon short-term and long-term returns are based on a hypothetical fund.

²NASRA average returns based on Public Funds Surveys.



Investment Return Assumption

Current Assumption

- Investment return assumption of 7.00% was adopted in the 2022 valuation.
- Previously, the assumption was 7.25% in 2020 through 2021, and 7.50% in 2017 through 2019.
- Nationally, the average investment return assumption continues to decrease annually, based on results of the NASRA Public Funds Survey

Analysis

Current assumption is within a reasonable range.

Recommendation

No Change



Summary of Actuarial Assumptions

Current Assumptions

- Investment Return
 - 7.00%
 - Sensitivity to 100 basis point decrease in investment return rate
 - Increases liabilities by \$25 million
- Mortality
 - Pub-2010 General/Safety Amount-Weighted Mortality with Scale MP-2021
- Decrements
 - Tables disclosed in 2022 Segal valuation report
- Salary Scale
 - 3.50% per year
- Payroll Growth
 - 2.75% per year
- Expenses
 - \$300,000, added to normal cost
 - Increases 2.75% per year
- 3(8)(c) Net Transfer
 - Estimate included in liabilities

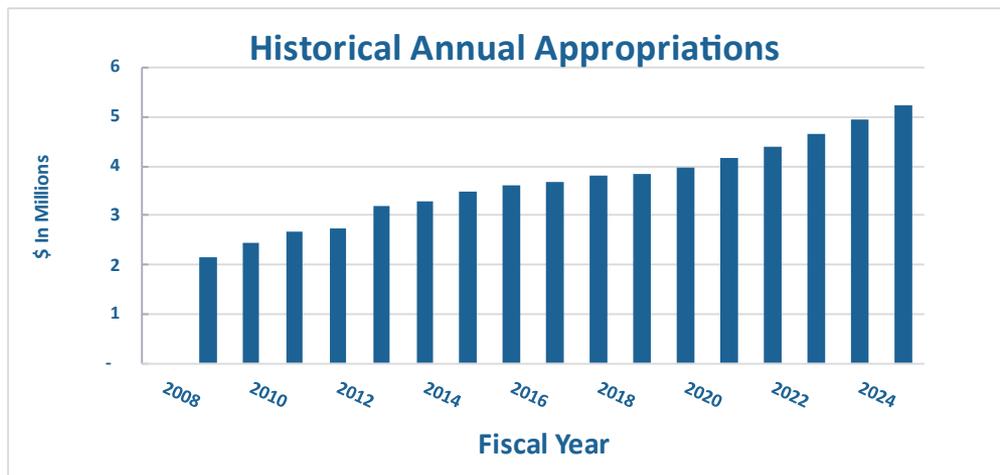
Recommended Assumptions

- Investment Return
 - No Change
- Mortality
 - No Change
- Decrements
 - **Update retirement and disability to PERAC standard**
- Salary Scale
 - **Based on service, 5.5% graded down to 3.5% for Group 1**
 - **Based on service, 6.5% graded down to 4% for Group 4**
- Payroll Growth
 - **Increase to 3.25%**
- Expenses
 - **Increasing at 3.25% per year**
- 3(8)(c) Net Transfer
 - **\$300,000 per year (level)**



Annual Appropriations

- Annual Appropriations Equal the sum of:
 - Employer Normal Cost (includes administrative expenses)
 - Unfunded Actuarial Liability (UAL) amortized through 2034
 - 3(8)(c) Net Transfers
- Normal Cost increases annually by assumed payroll growth of 3.25%
- UAL payments increase by 4% per year
- 3(8)(c) Net Transfers are level
- Selected funding schedule may smooth annual appropriations



Funding Schedule Scenarios

Schedule	UAAL (\$m)	LTRR	Full Funded	FY2026 Increase	Comments
A-1	\$43.2	7.00%	2034	22.12%	COLA Base Increase
A-2	\$46.8	7.00%	2034	37.99%	Assumption Changes
A-3	\$46.8	7.00%	2034	9.77%	9.77% Limit per year
A-4	\$46.8	7.00%	2035	28.10%	Extend Full Funded Year
A-5	\$46.8	7.00%	2035	8.00%	8.00% Limit per year
A-6	\$46.8	7.00%	2035	7.76%	7.76% Limit per year



Certification

- These results were developed by KMS Actuaries for the North Attleboro Retirement Board.
- Future actuarial valuation results may differ significantly from the current results presented here. Examples of potential sources of volatility include plan experience differing from that anticipated by the economic or demographic assumptions, the effect of new entrants, changes in economic or demographic assumptions, the effect of law changes and the delayed effect of smoothing techniques.
- The valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.
- This report is intended for the sole use of the North Attleboro Retirement Board and may only be provided to other parties in its entirety, unless expressly authorized by KMS Actuaries. Further, it is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.
- The independent consulting actuary is a member of the American Academy of Actuaries, has experience in performing valuations for public retirement plans, and meets the qualification standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The valuation was prepared in accordance with principles of practice prescribed by the Actuarial Standards Board and the actuarial calculations were performed by qualified actuaries in accordance with accepted actuarial procedures, based on the current provisions of the retirement system and on actuarial assumptions that are internally consistent and reasonable based on the actual experience of the System and future expectations.



RE: North Attleboro Retirement - Funding Schedule Selected?

From Linda Bournival <lindab@kmsactuaries.com>

Date Fri 9/27/2024 11:45 AM

To Nathaniel Chen <director@northretirement.org>

Cc Amanda Makarevich <amandam@kmsactuaries.com>; Michael Collins <michaelc@kmsactuaries.com>

 1 attachments (63 KB)

Funding Schedule A-7.pdf;

Good morning, Nate. Here is an update to schedule A-6, extending the full funding date to 2036. This is an increase in appropriations over FY2025 of about \$80,000 as compared to Schedule A-6.

We do not recommend this schedule A-7 for several reasons:

1. It extends the full funding date two years beyond the current full funding date of 2034.
2. It extends the full funding date beyond 2035 which may trigger a caveat in PERAC's funding schedule approval letter.
3. By deferring appropriations to later dates than shown in Schedule A-3, additional appropriations of almost \$4 million will be required through 2036.
4. Similarly, comparing to Schedule A-6, additional appropriations of almost \$2 million will be required through 2036.

Also, if the Board votes on the schedule at their October meeting, we will be able to provide the funding valuation report and GASB report sometime in mid to late November. You should check in with John Boorack at PERAC as well as Terenzio for their input.

Please let me know if you have any questions.

Linda

**North Attleboro Contributory Retirement System
30-Year Forecast of Annual Appropriations**

Funding Schedule A-7
6.24% Limit per year, FF 2036

Based on Results of January 1, 2024 Valuation

Fiscal Year Ending	Employer Normal Cost	Amortization Payment of UAL	Net 3(8)(c) Transfers	Total Employer Cost	Increase Over Prior Year	2022 Schedule	Unfunded Actuarial Accrued Liability
2025	\$1,030,214	\$3,908,123	300,000	\$5,238,337		\$5,238,336	\$46,763,986
2026	1,020,949	4,244,260	300,000	5,565,209	6.24%	5,559,446	45,994,871
2027	1,058,086	4,554,391	300,000	5,912,477	6.24%	5,900,240	44,824,216
2028	1,085,356	4,896,060	300,000	6,281,416	6.24%	6,261,925	43,250,812
2029	1,108,240	5,265,136	300,000	6,673,376	6.24%	6,645,781	41,213,845
2030	1,126,080	5,663,715	300,000	7,089,795	6.24%	7,053,167	38,652,515
2031	1,139,339	6,092,859	300,000	7,532,198	6.24%	7,485,526	35,499,599
2032	1,164,980	6,537,227	300,000	8,002,207	6.24%	7,944,389	31,682,069
2033	1,186,629	7,014,916	300,000	8,501,545	6.24%	8,431,380	27,137,654
2034	1,223,298	7,508,743	300,000	9,032,041	6.24%	8,895,549	21,781,005
2035	1,244,203	8,051,437	300,000	9,595,640	6.24%	1,107,046	15,538,571
2036	1,268,555	8,583,311	300,000	10,151,866	5.80%	1,144,406	8,297,800
2037	1,302,375	-	300,000	1,602,375	-84.22%	1,183,026	-
2038	1,331,027	-	300,000	1,631,027	1.79%	1,222,950	-
2039	1,364,855	-	300,000	1,664,855	2.07%	1,264,221	-
2040	1,395,867	-	300,000	1,695,867	1.86%	1,306,885	-
2041	1,427,201	-	300,000	1,727,201	1.85%	1,350,988	-
2042	1,464,493	-	300,000	1,764,493	2.16%	1,396,580	-
2043	1,492,063	-	300,000	1,792,063	1.56%	1,443,711	-
2044	1,529,116	-	300,000	1,829,116	2.07%	1,492,432	-
2045	1,580,068	-	300,000	1,880,068	2.79%	1,542,797	-
2046	1,621,332	-	300,000	1,921,332	2.19%	1,594,862	-
2047	1,662,049	-	300,000	1,962,049	2.12%	1,648,684	-
2048	1,707,681	-	300,000	2,007,681	2.33%	1,704,322	-
2049	1,757,327	-	300,000	2,057,327	2.47%	1,761,838	-
2050	1,799,281	-	300,000	2,099,281	2.04%	1,821,295	-
2051	1,858,479	-	300,000	2,158,479	2.82%	1,882,759	-
2052	1,908,090	-	300,000	2,208,090	2.30%	1,946,297	-
2053	1,959,822	-	300,000	2,259,822	2.34%	2,011,979	-
2054	2,016,654	-	300,000	2,316,654	2.51%	2,079,877	-

	Schedule A-7	Baseline	Increase
• Employer Normal Cost as of January 1, 2024:	705,924	341,538	364,386
• Administrative Expenses	300,000	300,000	-
• Unfunded Actuarial Accrued Liability (UAL):	46,763,986	41,511,008	5,252,978
• Funded Status:	77.7%	79.7%	
• Investment Return Rate:	7.000%	7.000%	
• Amortization Payments Increase Annually:	4.00%	4.00%	
• Limit on Annual Increase:	6.24% per year	None	
• Fully Funded in Fiscal Year:	2036	2034	
• COLA Base:	16,000	14,000	

**North Attleboro Contributory Retirement System
30-Year Forecast of Annual Appropriations**

Funding Schedule A-1
COLA Base Increase

Based on Results of January 1, 2024 Valuation

Fiscal Year Ending	Employer Normal Cost	Amortization Payment of UAL	Net 3(8)(c) Transfers	Total Employer Cost	Increase Over Prior Year	2022 Schedule	Unfunded Actuarial Accrued Liability
2025	\$701,289	\$4,237,047	300,000	\$5,238,336		\$5,238,336	\$43,237,589
2026	717,847	5,379,008	300,000	6,396,855	22.12%	5,559,446	41,881,385
2027	722,520	5,594,167	300,000	6,616,687	3.44%	5,900,240	39,248,994
2028	736,959	5,817,934	300,000	6,854,893	3.60%	6,261,925	36,209,773
2029	750,372	6,050,651	300,000	7,101,023	3.59%	6,645,781	32,726,339
2030	764,112	6,292,677	300,000	7,356,789	3.60%	7,053,167	28,758,341
2031	771,018	6,544,384	300,000	7,615,402	3.52%	7,485,526	24,262,230
2032	781,300	6,806,160	300,000	7,887,460	3.57%	7,944,389	19,191,022
2033	789,698	7,078,406	300,000	8,168,104	3.56%	8,431,380	13,494,047
2034	803,436	7,361,542	300,000	8,464,978	3.63%	8,895,549	7,116,671
2035	813,091	-	300,000	1,113,091	-86.85%	1,107,046	-
2036	825,586	-	300,000	1,125,586	1.12%	1,144,406	-
2037	840,274	-	300,000	1,140,274	1.30%	1,183,026	-
2038	854,724	-	300,000	1,154,724	1.27%	1,222,950	-
2039	869,467	-	300,000	1,169,467	1.28%	1,264,221	-
2040	882,222	-	300,000	1,182,222	1.09%	1,306,885	-
2041	897,165	-	300,000	1,197,165	1.26%	1,350,988	-
2042	911,112	-	300,000	1,211,112	1.17%	1,396,580	-
2043	924,057	-	300,000	1,224,057	1.07%	1,443,711	-
2044	944,616	-	300,000	1,244,616	1.68%	1,492,432	-
2045	971,854	-	300,000	1,271,854	2.19%	1,542,797	-
2046	996,566	-	300,000	1,296,566	1.94%	1,594,862	-
2047	1,018,673	-	300,000	1,318,673	1.71%	1,648,684	-
2048	1,040,487	-	300,000	1,340,487	1.65%	1,704,322	-
2049	1,063,055	-	300,000	1,363,055	1.68%	1,761,838	-
2050	1,086,746	-	300,000	1,386,746	1.74%	1,821,295	-
2051	1,111,555	-	300,000	1,411,555	1.79%	1,882,759	-
2052	1,137,650	-	300,000	1,437,650	1.85%	1,946,297	-
2053	1,162,946	-	300,000	1,462,946	1.76%	2,011,979	-
2054	1,189,381	-	300,000	1,489,381	1.81%	2,079,877	-

	Schedule A-1	Baseline	Increase
• Employer Normal Cost as of January 1, 2024:	387,941	341,538	46,403
• Administrative Expenses	300,000	300,000	-
• Unfunded Actuarial Accrued Liability (UAL):	43,237,589	41,511,008	1,726,581
• Funded Status:	79.1%	79.7%	
• Investment Return Rate:	7.000%	7.000%	
• Amortization Payments Increase Annually:	4.00%	4.00%	
• Limit on Annual Increase:	None	None	
• Fully Funded in Fiscal Year:	2034	2034	
• COLA Base:	16,000	14,000	

**North Attleboro Contributory Retirement System
30-Year Forecast of Annual Appropriations**

Funding Schedule A-2
Assumption Changes

Based on Results of January 1, 2024 Valuation

Fiscal Year Ending	Employer Normal Cost	Amortization Payment of UAL	Net 3(8)(c) Transfers	Total Employer Cost	Increase Over Prior Year	2022 Schedule	Unfunded Actuarial Accrued Liability
2025	\$1,030,214	\$3,908,123	300,000	\$5,238,337		\$5,238,336	\$46,763,986
2026	1,020,949	5,907,320	300,000	7,228,269	37.99%	5,559,446	45,994,871
2027	1,058,086	6,143,612	300,000	7,501,698	3.78%	5,900,240	43,103,934
2028	1,085,356	6,389,356	300,000	7,774,712	3.64%	6,261,925	39,766,208
2029	1,108,240	6,644,931	300,000	8,053,171	3.58%	6,645,781	35,940,641
2030	1,126,080	6,910,728	300,000	8,336,808	3.52%	7,053,167	31,582,916
2031	1,139,339	7,187,157	300,000	8,626,496	3.47%	7,485,526	26,645,207
2032	1,164,980	7,474,644	300,000	8,939,624	3.63%	7,944,389	21,075,918
2033	1,186,629	7,773,629	300,000	9,260,258	3.59%	8,431,380	14,819,400
2034	1,223,298	8,084,574	300,000	9,607,872	3.75%	8,895,549	7,815,653
2035	1,244,203	-	300,000	1,544,203	-83.93%	1,107,046	-
2036	1,268,555	-	300,000	1,568,555	1.58%	1,144,406	-
2037	1,302,375	-	300,000	1,602,375	2.16%	1,183,026	-
2038	1,331,027	-	300,000	1,631,027	1.79%	1,222,950	-
2039	1,364,855	-	300,000	1,664,855	2.07%	1,264,221	-
2040	1,395,867	-	300,000	1,695,867	1.86%	1,306,885	-
2041	1,427,201	-	300,000	1,727,201	1.85%	1,350,988	-
2042	1,464,493	-	300,000	1,764,493	2.16%	1,396,580	-
2043	1,492,063	-	300,000	1,792,063	1.56%	1,443,711	-
2044	1,529,116	-	300,000	1,829,116	2.07%	1,492,432	-
2045	1,580,068	-	300,000	1,880,068	2.79%	1,542,797	-
2046	1,621,332	-	300,000	1,921,332	2.19%	1,594,862	-
2047	1,662,049	-	300,000	1,962,049	2.12%	1,648,684	-
2048	1,707,681	-	300,000	2,007,681	2.33%	1,704,322	-
2049	1,757,327	-	300,000	2,057,327	2.47%	1,761,838	-
2050	1,799,281	-	300,000	2,099,281	2.04%	1,821,295	-
2051	1,858,479	-	300,000	2,158,479	2.82%	1,882,759	-
2052	1,908,090	-	300,000	2,208,090	2.30%	1,946,297	-
2053	1,959,822	-	300,000	2,259,822	2.34%	2,011,979	-
2054	2,016,654	-	300,000	2,316,654	2.51%	2,079,877	-

	Schedule A-2	Baseline	Increase
• Employer Normal Cost as of January 1, 2024:	705,924	341,538	364,386
• Administrative Expenses	300,000	300,000	-
• Unfunded Actuarial Accrued Liability (UAL):	46,763,986	41,511,008	5,252,978
• Funded Status:	77.7%	79.7%	
• Investment Return Rate:	7.000%	7.000%	
• Amortization Payments Increase Annually:	4.00%	4.00%	
• Limit on Annual Increase:	None	None	
• Fully Funded in Fiscal Year:	2034	2034	
• COLA Base:	16,000	14,000	

**North Attleboro Contributory Retirement System
30-Year Forecast of Annual Appropriations**

Funding Schedule A-3
9.77% Limit per year

Based on Results of January 1, 2024 Valuation

Fiscal Year Ending	Employer Normal Cost	Amortization Payment of UAL	Net 3(8)(c) Transfers	Total Employer Cost	Increase Over Prior Year	2022 Schedule	Unfunded Actuarial Accrued Liability
2025	\$1,030,214	\$3,908,123	300,000	\$5,238,337		\$5,238,336	\$46,763,986
2026	1,020,949	4,429,173	300,000	5,750,122	9.77%	5,559,446	45,994,871
2027	1,058,086	4,953,823	300,000	6,311,909	9.77%	5,900,240	44,632,941
2028	1,085,356	5,543,225	300,000	6,928,581	9.77%	6,261,925	42,632,973
2029	1,108,240	6,197,263	300,000	7,605,503	9.77%	6,645,781	39,883,324
2030	1,126,080	6,922,481	300,000	8,348,561	9.77%	7,053,167	36,264,658
2031	1,139,339	7,724,875	300,000	9,164,214	9.77%	7,485,526	31,642,514
2032	1,164,980	8,594,579	300,000	10,059,559	9.77%	7,944,389	25,866,817
2033	1,186,629	9,555,749	300,000	11,042,378	9.77%	8,431,380	18,787,193
2034	1,223,298	10,569,326	300,000	12,092,624	9.51%	8,895,549	10,217,753
2035	1,244,203	-	300,000	1,544,203	-87.23%	1,107,046	-
2036	1,268,555	-	300,000	1,568,555	1.58%	1,144,406	-
2037	1,302,375	-	300,000	1,602,375	2.16%	1,183,026	-
2038	1,331,027	-	300,000	1,631,027	1.79%	1,222,950	-
2039	1,364,855	-	300,000	1,664,855	2.07%	1,264,221	-
2040	1,395,867	-	300,000	1,695,867	1.86%	1,306,885	-
2041	1,427,201	-	300,000	1,727,201	1.85%	1,350,988	-
2042	1,464,493	-	300,000	1,764,493	2.16%	1,396,580	-
2043	1,492,063	-	300,000	1,792,063	1.56%	1,443,711	-
2044	1,529,116	-	300,000	1,829,116	2.07%	1,492,432	-
2045	1,580,068	-	300,000	1,880,068	2.79%	1,542,797	-
2046	1,621,332	-	300,000	1,921,332	2.19%	1,594,862	-
2047	1,662,049	-	300,000	1,962,049	2.12%	1,648,684	-
2048	1,707,681	-	300,000	2,007,681	2.33%	1,704,322	-
2049	1,757,327	-	300,000	2,057,327	2.47%	1,761,838	-
2050	1,799,281	-	300,000	2,099,281	2.04%	1,821,295	-
2051	1,858,479	-	300,000	2,158,479	2.82%	1,882,759	-
2052	1,908,090	-	300,000	2,208,090	2.30%	1,946,297	-
2053	1,959,822	-	300,000	2,259,822	2.34%	2,011,979	-
2054	2,016,654	-	300,000	2,316,654	2.51%	2,079,877	-

	Schedule A-3	Baseline	Increase
• Employer Normal Cost as of January 1, 2024:	705,924	341,538	364,386
• Administrative Expenses	300,000	300,000	-
• Unfunded Actuarial Accrued Liability (UAL):	46,763,986	41,511,008	5,252,978
• Funded Status:	77.7%	79.7%	
• Investment Return Rate:	7.000%	7.000%	
• Amortization Payments Increase Annually:	4.00%	4.00%	
• Limit on Annual Increase:	9.77% per year	None	
• Fully Funded in Fiscal Year:	2034	2034	
• COLA Base:	16,000	14,000	

**North Attleboro Contributory Retirement System
30-Year Forecast of Annual Appropriations**

Funding Schedule A-4
Extend Full Funding Date

Based on Results of January 1, 2024 Valuation

Fiscal Year Ending	Employer Normal Cost	Amortization Payment of UAL	Net 3(8)(c) Transfers	Total Employer Cost	Increase Over Prior Year	2022 Schedule	Unfunded Actuarial Accrued Liability
2025	\$1,030,214	\$3,908,123	300,000	\$5,238,337		\$5,238,336	\$46,763,986
2026	1,020,949	5,389,277	300,000	6,710,226	28.10%	5,559,446	45,994,871
2027	1,058,086	5,604,848	300,000	6,962,934	3.77%	5,900,240	43,639,801
2028	1,085,356	5,829,041	300,000	7,214,397	3.61%	6,261,925	40,896,887
2029	1,108,240	6,062,203	300,000	7,470,443	3.55%	6,645,781	37,730,062
2030	1,126,080	6,304,691	300,000	7,730,771	3.48%	7,053,167	34,100,375
2031	1,139,339	6,556,879	300,000	7,996,218	3.43%	7,485,526	29,965,778
2032	1,164,980	6,819,154	300,000	8,284,134	3.60%	7,944,389	25,280,894
2033	1,186,629	7,091,920	300,000	8,578,549	3.55%	8,431,380	19,996,769
2034	1,223,298	7,375,597	300,000	8,898,895	3.73%	8,895,549	14,060,604
2035	1,244,203	7,670,621	300,000	9,214,824	3.55%	1,107,046	7,415,469
2036	1,268,555	-	300,000	1,568,555	-82.98%	1,144,406	-
2037	1,302,375	-	300,000	1,602,375	2.16%	1,183,026	-
2038	1,331,027	-	300,000	1,631,027	1.79%	1,222,950	-
2039	1,364,855	-	300,000	1,664,855	2.07%	1,264,221	-
2040	1,395,867	-	300,000	1,695,867	1.86%	1,306,885	-
2041	1,427,201	-	300,000	1,727,201	1.85%	1,350,988	-
2042	1,464,493	-	300,000	1,764,493	2.16%	1,396,580	-
2043	1,492,063	-	300,000	1,792,063	1.56%	1,443,711	-
2044	1,529,116	-	300,000	1,829,116	2.07%	1,492,432	-
2045	1,580,068	-	300,000	1,880,068	2.79%	1,542,797	-
2046	1,621,332	-	300,000	1,921,332	2.19%	1,594,862	-
2047	1,662,049	-	300,000	1,962,049	2.12%	1,648,684	-
2048	1,707,681	-	300,000	2,007,681	2.33%	1,704,322	-
2049	1,757,327	-	300,000	2,057,327	2.47%	1,761,838	-
2050	1,799,281	-	300,000	2,099,281	2.04%	1,821,295	-
2051	1,858,479	-	300,000	2,158,479	2.82%	1,882,759	-
2052	1,908,090	-	300,000	2,208,090	2.30%	1,946,297	-
2053	1,959,822	-	300,000	2,259,822	2.34%	2,011,979	-
2054	2,016,654	-	300,000	2,316,654	2.51%	2,079,877	-

	Schedule A-4	Baseline	Increase
• Employer Normal Cost as of January 1, 2024:	705,924	341,538	364,386
• Administrative Expenses	300,000	300,000	-
• Unfunded Actuarial Accrued Liability (UAL):	46,763,986	41,511,008	5,252,978
• Funded Status:	77.7%	79.7%	
• Investment Return Rate:	7.000%	7.000%	
• Amortization Payments Increase Annually:	4.00%	4.00%	
• Limit on Annual Increase:	None	None	
• Fully Funded in Fiscal Year:	2035	2034	
• COLA Base:	16,000	14,000	

**North Attleboro Contributory Retirement System
30-Year Forecast of Annual Appropriations**

Funding Schedule A-5
8.00% Limit per year

Based on Results of January 1, 2024 Valuation

Fiscal Year Ending	Employer Normal Cost	Amortization Payment of UAL	Net 3(8)(c) Transfers	Total Employer Cost	Increase Over Prior Year	2022 Schedule	Unfunded Actuarial Accrued Liability
2025	\$1,030,214	\$3,908,123	300,000	\$5,238,337		\$5,238,336	\$46,763,986
2026	1,020,949	4,336,455	300,000	5,657,404	8.00%	5,559,446	45,994,871
2027	1,058,086	4,751,909	300,000	6,109,995	8.00%	5,900,240	44,728,849
2028	1,085,356	5,213,439	300,000	6,598,795	8.00%	6,261,925	42,944,455
2029	1,108,240	5,718,459	300,000	7,126,699	8.00%	6,645,781	40,557,743
2030	1,126,080	6,270,754	300,000	7,696,834	8.00%	7,053,167	37,481,565
2031	1,139,339	6,873,242	300,000	8,312,581	8.00%	7,485,526	33,618,756
2032	1,164,980	7,512,609	300,000	8,977,589	8.00%	7,944,389	28,862,332
2033	1,186,629	8,196,603	300,000	9,683,232	7.86%	8,431,380	23,111,592
2034	1,223,298	8,524,467	300,000	10,047,765	3.76%	8,895,549	16,250,772
2035	1,244,203	8,865,445	300,000	10,409,648	3.60%	1,107,046	8,570,549
2036	1,268,555	-	300,000	1,568,555	-84.93%	1,144,406	-
2037	1,302,375	-	300,000	1,602,375	2.16%	1,183,026	-
2038	1,331,027	-	300,000	1,631,027	1.79%	1,222,950	-
2039	1,364,855	-	300,000	1,664,855	2.07%	1,264,221	-
2040	1,395,867	-	300,000	1,695,867	1.86%	1,306,885	-
2041	1,427,201	-	300,000	1,727,201	1.85%	1,350,988	-
2042	1,464,493	-	300,000	1,764,493	2.16%	1,396,580	-
2043	1,492,063	-	300,000	1,792,063	1.56%	1,443,711	-
2044	1,529,116	-	300,000	1,829,116	2.07%	1,492,432	-
2045	1,580,068	-	300,000	1,880,068	2.79%	1,542,797	-
2046	1,621,332	-	300,000	1,921,332	2.19%	1,594,862	-
2047	1,662,049	-	300,000	1,962,049	2.12%	1,648,684	-
2048	1,707,681	-	300,000	2,007,681	2.33%	1,704,322	-
2049	1,757,327	-	300,000	2,057,327	2.47%	1,761,838	-
2050	1,799,281	-	300,000	2,099,281	2.04%	1,821,295	-
2051	1,858,479	-	300,000	2,158,479	2.82%	1,882,759	-
2052	1,908,090	-	300,000	2,208,090	2.30%	1,946,297	-
2053	1,959,822	-	300,000	2,259,822	2.34%	2,011,979	-
2054	2,016,654	-	300,000	2,316,654	2.51%	2,079,877	-

	Schedule A-5	Baseline	Increase
• Employer Normal Cost as of January 1, 2024:	705,924	341,538	364,386
• Administrative Expenses	300,000	300,000	-
• Unfunded Actuarial Accrued Liability (UAL):	46,763,986	41,511,008	5,252,978
• Funded Status:	77.7%	79.7%	
• Investment Return Rate:	7.000%	7.000%	
• Amortization Payments Increase Annually:	4.00%	4.00%	
• Limit on Annual Increase:	8.0% per year	None	
• Fully Funded in Fiscal Year:	2035	2034	
• COLA Base:	16,000	14,000	

**North Attleboro Contributory Retirement System
30-Year Forecast of Annual Appropriations**

Funding Schedule A-6
7.76% Limit per year

Based on Results of January 1, 2024 Valuation

Fiscal Year Ending	Employer Normal Cost	Amortization Payment of UAL	Payment of Net 3(8)(c) Transfers	Total Employer Cost	Increase Over Prior Year	2022 Schedule	Unfunded Actuarial Accrued Liability
2025	\$1,030,214	\$3,908,123	300,000	\$5,238,337		\$5,238,336	\$46,763,986
2026	1,020,949	4,323,882	300,000	5,644,831	7.76%	5,559,446	45,994,871
2027	1,058,086	4,724,784	300,000	6,082,870	7.76%	5,900,240	44,741,854
2028	1,085,356	5,169,545	300,000	6,554,901	7.76%	6,261,925	42,986,429
2029	1,108,240	5,655,321	300,000	7,063,561	7.76%	6,645,781	40,648,060
2030	1,126,080	6,185,612	300,000	7,611,692	7.76%	7,053,167	37,643,515
2031	1,139,339	6,763,021	300,000	8,202,360	7.76%	7,485,526	33,880,114
2032	1,164,980	7,373,882	300,000	8,838,862	7.76%	7,944,389	29,255,999
2033	1,186,629	8,038,129	300,000	9,524,758	7.76%	8,431,380	23,676,316
2034	1,223,298	8,740,581	300,000	10,263,879	7.76%	8,895,549	17,018,952
2035	1,244,203	9,484,437	300,000	11,028,640	7.45%	1,107,046	9,168,951
2036	1,268,555	-	300,000	1,568,555	-85.78%	1,144,406	-
2037	1,302,375	-	300,000	1,602,375	2.16%	1,183,026	-
2038	1,331,027	-	300,000	1,631,027	1.79%	1,222,950	-
2039	1,364,855	-	300,000	1,664,855	2.07%	1,264,221	-
2040	1,395,867	-	300,000	1,695,867	1.86%	1,306,885	-
2041	1,427,201	-	300,000	1,727,201	1.85%	1,350,988	-
2042	1,464,493	-	300,000	1,764,493	2.16%	1,396,580	-
2043	1,492,063	-	300,000	1,792,063	1.56%	1,443,711	-
2044	1,529,116	-	300,000	1,829,116	2.07%	1,492,432	-
2045	1,580,068	-	300,000	1,880,068	2.79%	1,542,797	-
2046	1,621,332	-	300,000	1,921,332	2.19%	1,594,862	-
2047	1,662,049	-	300,000	1,962,049	2.12%	1,648,684	-
2048	1,707,681	-	300,000	2,007,681	2.33%	1,704,322	-
2049	1,757,327	-	300,000	2,057,327	2.47%	1,761,838	-
2050	1,799,281	-	300,000	2,099,281	2.04%	1,821,295	-
2051	1,858,479	-	300,000	2,158,479	2.82%	1,882,759	-
2052	1,908,090	-	300,000	2,208,090	2.30%	1,946,297	-
2053	1,959,822	-	300,000	2,259,822	2.34%	2,011,979	-
2054	2,016,654	-	300,000	2,316,654	2.51%	2,079,877	-

	Schedule A-6	Baseline	Increase
• Employer Normal Cost as of January 1, 2024:	705,924	341,538	364,386
• Administrative Expenses	300,000	300,000	-
• Unfunded Actuarial Accrued Liability (UAL):	46,763,986	41,511,008	5,252,978
• Funded Status:	77.7%	79.7%	
• Investment Return Rate:	7.000%	7.000%	
• Amortization Payments Increase Annually:	4.00%	4.00%	
• Limit on Annual Increase:	7.76% per year	None	
• Fully Funded in Fiscal Year:	2035	2034	
• COLA Base:	16,000	14,000	