



# TOWN OF BRANFORD VOLUNTEER FIRE DEPARTMENT PENSION PLAN

## ACTUARIAL VALUATION REPORT

JANUARY 1, 2023





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## Executive Summary

	January 1, 2023	January 1, 2021
<b>Number of members</b>		
Active employees	228	223
Terminated vested members	0	0
Retired, disabled and beneficiaries	16	14
Total	244	237
<b>Covered employee payroll</b>	N/A	N/A
<b>Average plan salary</b>	N/A	N/A
<b>Actuarial present value of future benefits</b>	1,868,831	1,726,665
<b>Actuarial accrued liability</b>	1,656,034	1,509,644
<b>Plan assets</b>		
Market value of assets	1,439,684	1,395,377
Actuarial value of assets	1,627,237	1,365,503
<b>Unfunded accrued liability</b>	28,797	144,141
<b>Funded ratio</b>	98.3%	90.5%
<b>Actuarially determined employer contribution (ADEC)</b>		
Fiscal year ending	2025	2023
ADEC	38,980	50,840
Fiscal year ending	2026	2024
ADEC	39,550	51,430



## Valuation Results and Highlights

### Purpose of the Valuation

The purpose of the valuation is to develop the Actuarially Determined Employer Contribution (ADEC).

The ultimate cost of a pension plan is based primarily on the level of benefits promised by the plan. The pension fund's investment earnings serve to reduce the cost of plan benefits and expenses. Thus,

$$\text{Ultimate cost} = \text{Benefits Paid} + \text{Expenses Incurred} - \text{Investment Return} - \text{Employee Contributions}$$

The actuarial cost method distributes this ultimate cost over the working lifetime of current plan participants. By means of this budgeting process, costs are allocated to both past and future years, and a cost is assigned to the current year. The current year's allocated cost, or normal cost, is the building block upon which the actuarially determined employer contribution is developed. The January 1, 2023 valuation produces the contributions for the fiscal years ending 2025 and 2026.

### Information Available in the Valuation Report

The Executive Summary is intended to emphasize the notable results of the valuation from the perspective of the Plan Sponsor. Supporting technical detail is documented in Results of the Valuation, Supporting Exhibits and Description of Actuarial Methods and Assumptions. A concise summary of the principal provisions of the Plan is outlined in Summary of Plan Provisions.

### Changes Reflected in the Valuation

None.

### Cash Contribution for Fiscal Years Ending 2025 and 2026

The Town cost is:	2025 Fiscal Year	2026 Fiscal Year
	\$38,980	\$39,550

### Liability Experience During Period Under Review

The plan experienced a net actuarial gain on liabilities of approximately \$38,000 since the prior valuation. This gain was largely driven by the effect of lower than expected accruals by active members.

### Asset Experience During Period Under Review

The plan's assets provided the following rates of return during the past two fiscal years:

	2021 Fiscal Year	2022 Fiscal Year
Market Value Basis	9.7%	-12.5%
Actuarial Value Basis	7.5%	3.2%

The Actuarial Value of assets, rather than the Market Value, is used to determine plan contributions. The Actuarial Value spreads the asset volatility over 5 years, thereby smoothing out fluctuations that are inherent in the Market Value.



## Assessment and Measurement of Risks

### Financial Significance of Plan

It is important to understand the size of the pension plan compared to the size of the sponsor of that plan. Additional pension contributions may be required at inopportune times for the plan sponsor. In general, a plan sponsor with assets or revenue that are much larger than the liabilities in its pension plans will be better able to withstand increases in required pension contributions.

### Plan Maturity Measurements

	January 1, 2023	January 1, 2021
Actuarial accrued liability for members currently in pay status as a percentage of the total actuarial accrued liability	20.0%	17.7%
<ul style="list-style-type: none"> <li>• A lower percentage results in greater volatility as the investment return assumption changes.</li> <li>• A higher percentage results in greater demand on cash due to a proportionately higher percentage of benefits being in pay status.</li> </ul>		

	January 1, 2023
Duration of benefit payments using an investment rate of return of 6.50%	18.2 years
<ul style="list-style-type: none"> <li>• A higher duration will occur if the plan's percentage of members in pay status decreases. A plan with a higher duration will have a liability that is more sensitive to changes in the investment return assumption.</li> </ul>	

	January 1, 2023	January 1, 2021
Ratio of market value of assets to covered payroll	N/A	N/A
<ul style="list-style-type: none"> <li>• A higher ratio is more typical of relatively mature plans with a larger percentage of inactive members and may cause more potential contribution volatility as pension fund assets fluctuate.</li> </ul>		



**Risks to Assess**

**Overriding Minimum Contribution**

	Fiscal Year Ending 2025
Actuarially determined employer contribution (ADEC)	38,980
Overriding minimum contribution (OMC)*	<u>30,078</u>
Surplus (deficit) - ADEC vs. OMC	8,902

- A deficit suggests that a plan's current funding policy contribution approach may result in little to no progress being made towards: (1) reducing the plan's unfunded liability; and (2) increasing the plan's funded ratio in the near-term.

\* As defined in "Public Pension Plan Funding Policy" (Society of Actuaries, 2010).

**Estimated Impact of a 5% Reduction in Market Value of Assets**

	Fiscal Year Ending 2025	Fiscal Year Ending 2026
Increase in actuarially determined employer contribution (ADEC)	2,000	2,000

- Plans would generally be subject to a larger amortization payment if the market value of assets were 5% smaller. As a result, the ADEC would generally be higher for up to 10 years.

Due to the asset smoothing method, the ADEC will additionally increase by the same amount in each of the next few years. Each of these additional contributions will continue for up to 10 years.

**Estimated Impact of a 1-Year Increase in Life Expectancies**

	Fiscal Year Ending 2025	Fiscal Year Ending 2026
Increase in actuarially determined employer contribution (ADEC)	6,790	6,810

- If members live longer than expected, it generally results in larger benefits and/or additional benefit payments made. As a result, the ADEC would generally be higher for up to 10 years.



### Low-Default-Risk Obligation Measure

	July 1, 2022
Low-default-risk obligation measure (LDROM)*	2,585,630
Total actuarial accrued liability (AAL) for all members**	1,656,034
Difference between LDROM and AAL	929,596

- This exhibit illustrates the impact on the ongoing funding liability if the plan decided to invest completely in low-default-risk securities.

\* The LDROM discount rate is 3.65%. The discount rate used for this purpose is equal to the published Bond Buyer GO 20-Bond Municipal Index effective as of June 30, 2023. Other than the discount rate, the assumptions and methods are consistent with those used in the actuarial valuation. The disclosure of the LDROM is for illustrative purposes and does not necessarily imply that the associated discount rate should be used for funding purposes.

\*\* The discount rate used in the valuation is 6.50%.

### Historical Results

Valuation Year Beginning	Investment Return Assumption	Annual Effective Rate of Return on Market Value of Assets	Market Value of Assets as a % of Actuarial Accrued Liability	Benefit Payments as a % of Market Value of Assets
2023	6.50%	N/A	86.9%	N/A
2022	N/A	-12.5%	N/A	2.1%
2021	6.50%	9.7%	92.4%	2.3%
2020	N/A	8.7%	N/A	2.9%
2019	6.50%	15.9%	71.9%	3.7%
2018	N/A	-6.4%	N/A	4.2%
2017	6.75%	9.7%	72.6%	4.7%
2016	N/A	6.8%	N/A	7.9%
2015	7.00%	-4.1%	47.7%	7.9%

### Implications of Contribution Allocation Procedure or Funding Policy

I have assessed the impact of the funding policy on the anticipated employer contributions and the plan's funded status. The funding policy is described in the Description of Actuarial Methods section of this report.

I have estimated the approximate length of time before the unfunded accrued liability, if any, will become fully amortized. The period is estimated to be 2 years. Subsequent to the end of this period, the future anticipated employer contributions will be the corresponding annual normal costs.

I have assessed whether the funding policy will be sufficient to cover future benefit payments and administrative expenses. The current funding policy is anticipated to cover these costs indefinitely.



## Certification

This report presents the results of the January 1, 2023 Actuarial Valuation for Town of Branford Volunteer Fire Department Pension Plan (the Plan) for the purpose of estimating the funded status of the Plan and determining the Actuarially Determined Employer Contribution (ADEC) for the fiscal years ending June 30, 2025 and June 30, 2026. This report may not be appropriate for any other purpose.

The valuation has been performed in accordance with generally accepted actuarial principles and practices. It is intended to comply with all applicable Actuarial Standards of Practice.

I certify that the actuarial assumptions and methods that were selected by me and represent my best estimate of anticipated actuarial experience under the Plan. The combined effect of the actuarial assumptions and methods is not expected to contain significant bias, meaning it is not overly optimistic or pessimistic.

In preparing this valuation, I have relied on employee data provided by the Plan Sponsor, and on asset and contribution information provided by the Trustee. I have audited neither the employee data nor the financial information, although I have reviewed them for reasonableness.

The results in this valuation report are based on the Plan as summarized in the *Summary of Plan Provisions* section of this report and the actuarial assumptions and methods detailed in the *Description of Actuarial Methods and Assumptions* section of this report.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, 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. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

I have no relationship with the employer or the Plan that would impair, or appear to impair, my objectivity in performing the work presented in this report. I am a member of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.

Steve A. Lemanski, FSA, FCA, MAAA  
Enrolled Actuary 23-05506

February 23, 2024





## Development of Unfunded Accrued Liability and Funded Ratio

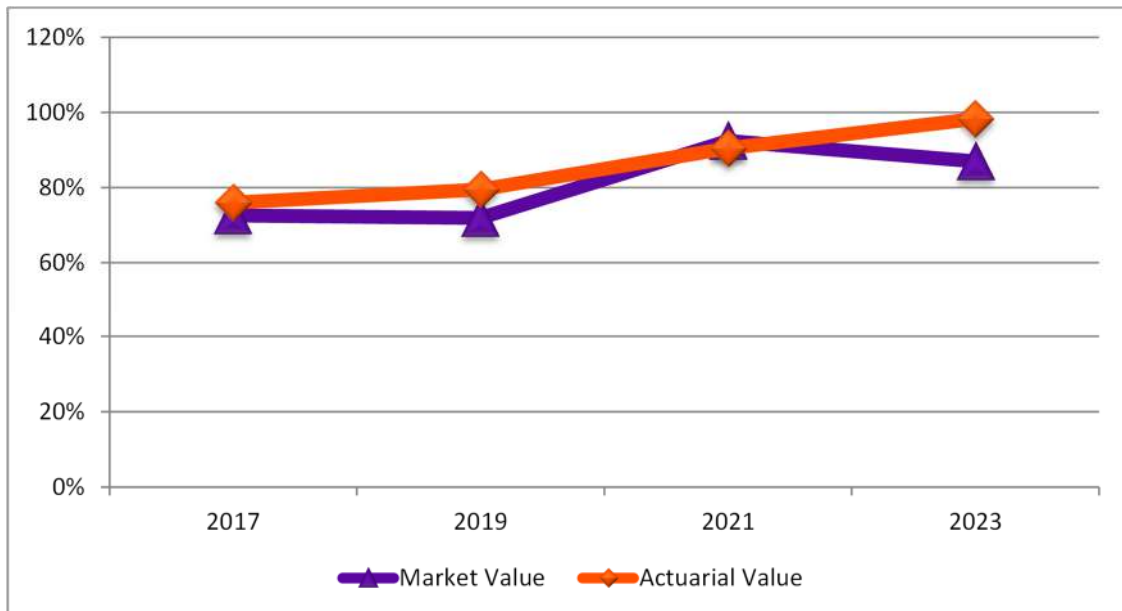
	January 1, 2023	January 1, 2021
Actuarial accrued liability for inactive members		
Retired, disabled and beneficiaries	\$330,953	\$266,618
Terminated vested members	0	0
Total	330,953	266,618
Actuarial accrued liability for active employees	1,325,081	1,243,026
Total actuarial accrued liability	1,656,034	1,509,644
Actuarial value of assets	1,627,237	1,365,503
Unfunded accrued liability	28,797	144,141
Funded ratio	98.3%	90.5%



### Actuarial Accrued Liability vs. Actuarial Value of Assets



### Funded Ratio



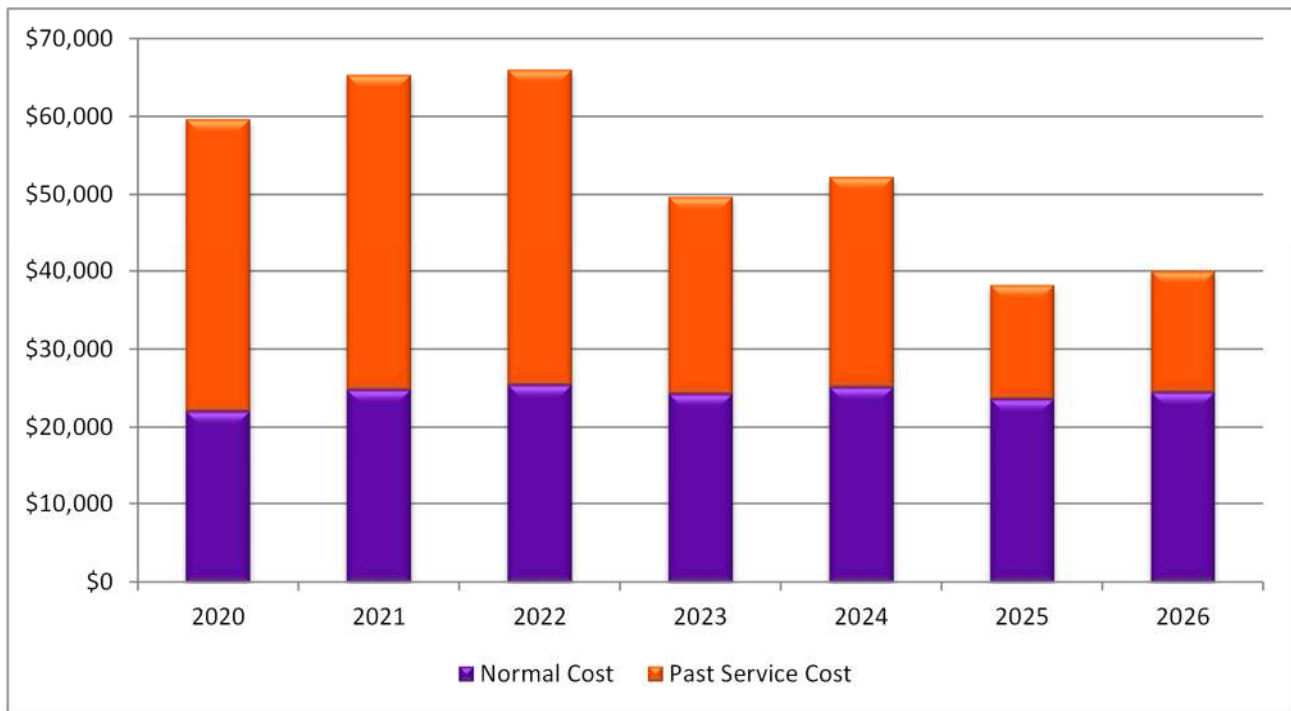


## Determination of Normal Cost and Actuarially Determined Employer Contribution

	January 1, 2023	January 1, 2021
Town's normal cost	\$22,372	\$22,996
Amortization of unfunded accrued liability	<u>14,133</u>	<u>24,646</u>
Contribution before adjustment as of the valuation date	36,505	47,642
Contribution rounded to nearest \$10	36,510	47,640
Fiscal year ending	2025	2023
Adjustment for interest and inflation	2,470	3,200
Actuarially determined employer contribution	38,980	50,840
Fiscal year ending	2026	2024
Adjustment for interest and inflation	570	590
Actuarially determined employer contribution	39,550	51,430



### Actuarially Determined Employer Contribution





## Determination of Actuarial Gain/Loss

The Actuarial Gain/Loss is the difference between the expected unfunded accrued liability and the actual unfunded accrued liability, without regard to any changes in actuarial methods, actuarial assumptions or plan provisions. This can also be referred to an Experience Gain/Loss, since it reflects the difference between what was expected and what was actually experienced.

<b>Actuarial Gain / Loss</b>	
<b>Expected unfunded accrued liability January 1, 2023</b>	
Expected unfunded accrued liability January 1, 2022	
Unfunded accrued liability January 1, 2021	\$144,141
Gross normal cost January 1, 2021	22,996
Town and employee contributions for 2021	(87,000)
Interest at 6.50% to January 1, 2022	8,058
Expected unfunded accrued liability January 1, 2022	<u>88,195</u>
Expected unfunded accrued liability January 1, 2023	
Expected unfunded accrued liability January 1, 2022	88,195
Expected gross normal cost January 1, 2022	23,548
Town and employee contributions for 2022	(87,000)
Interest at 6.50% to January 1, 2023	4,457
Expected unfunded accrued liability January 1, 2023	<u>29,200</u>
<b>Actuarial (gain) / loss January 1, 2023</b>	<u>(403)</u>
<b>Actual unfunded accrued liability January 1, 2023, prior to plan provision, assumption and method changes</b>	28,797
<b>Sources of (gain) / loss</b>	
Assets	37,735
Liabilities	<u>(38,138)</u>
Total (gain) / loss	(403)



## Development of Asset Values

Summary of Fund Activity		
	Market Value	Actuarial Value
<b>1. Beginning value of assets January 1, 2022</b>		
Trust assets	\$1,587,776	\$1,524,009
<b>2. Contributions</b>		
Town contributions during year	87,000	87,000
Employee contributions during year	0	0
Total for plan year	87,000	87,000
<b>3. Disbursements</b>		
Benefit payments during year	33,429	33,429
Administrative expenses during year	0	0
Total for plan year	33,429	33,429
<b>4. Net investment return</b>		
Interest and dividends	35,729	N/A
Realized and unrealized gain / (loss)	(233,285)	N/A
Expected return	N/A	104,933
Recognized gain / (loss)	N/A	(55,276)
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	(4,107)	N/A
Total for plan year	(201,663)	49,657
<b>5. Ending value of assets January 1, 2023</b>		
Trust assets: (1) + (2) - (3) + (4)	1,439,684	1,627,237
<b>6. Approximate rate of return</b>	-12.5%	3.2%



**Relationship of Actuarial Value to Market Value**

1. Market value 1/1/2023	\$1,439,684
2. Gain / (loss) not recognized in actuarial value 1/1/2023	(187,553)
3. Preliminary actuarial value 1/1/2023: (1) - (2)	1,627,237
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	113.0%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 1/1/2023 after corridor minimum / maximum: (3) + (5)	1,627,237
7. Actuarial value as a percentage of market value: (6) ÷ (1)	113.0%

**Development of Market Value Gain / Loss for 2022 Plan Year**

1. Market value 1/1/2022	\$1,587,776
2. Town contributions	87,000
3. Employee contributions	0
4. Benefit payments	33,429
5. Administrative expenses	0
6. Expected return at 6.50%	104,933
7. Expected value 1/1/2023: (1) + (2) + (3) - (4) - (5) + (6)	1,746,280
8. Market value 1/1/2023	1,439,684
9. Market value gain / (loss) for 2022 plan year: (8) - (7)	(306,596)

**Recognition of Gain / Loss in Actuarial Value**

Year	(a) Gain / (loss)	(b) Total recognized as of 1/1/2022	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 1/1/2023: (b) + (c)	(e) Not recognized as of 1/1/2023: (a) - (d)
2018	(\$140,064)	(\$112,052)	(\$28,012)	(\$140,064)	\$0
2019	97,279	58,368	19,456	77,824	19,455
2020	27,650	11,060	5,530	16,590	11,060
2021	45,347	9,069	9,069	18,138	27,209
2022	(306,596)	0	(61,319)	(61,319)	(245,277)
<b>Total</b>			(55,276)	(61,319)	(187,553)



<b>Summary of Fund Activity</b>		
	<b>Market Value</b>	<b>Actuarial Value</b>
<b>1. Beginning value of assets January 1, 2021</b>		
Trust assets	\$1,395,377	\$1,365,503
<b>2. Contributions</b>		
Town contributions during year	87,000	87,000
Employee contributions during year	0	0
Total for plan year	87,000	87,000
<b>3. Disbursements</b>		
Benefit payments during year	32,408	32,408
Administrative expenses during year	0	0
Total for plan year	32,408	32,408
<b>4. Net investment return</b>		
Interest and dividends	35,342	N/A
Realized and unrealized gain / (loss)	108,538	N/A
Expected return	N/A	92,460
Recognized gain / (loss)	N/A	11,454
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	(6,073)	N/A
Total for plan year	137,807	103,914
<b>5. Ending value of assets January 1, 2022</b>		
Trust assets: (1) + (2) - (3) + (4)	1,587,776	1,524,009
<b>6. Approximate rate of return</b>	9.7%	7.5%





**Relationship of Actuarial Value to Market Value**

1. Market value 1/1/2022	\$1,587,776
2. Gain / (loss) not recognized in actuarial value 1/1/2022	63,767
3. Preliminary actuarial value 1/1/2022: (1) - (2)	1,524,009
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	96.0%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 1/1/2022 after corridor minimum / maximum: (3) + (5)	1,524,009
7. Actuarial value as a percentage of market value: (6) ÷ (1)	96.0%

**Development of Market Value Gain / Loss for 2021 Plan Year**

1. Market value 1/1/2021	\$1,395,377
2. Town contributions	87,000
3. Employee contributions	0
4. Benefit payments	32,408
5. Administrative expenses	0
6. Expected return at 6.50%	92,460
7. Expected value 1/1/2022: (1) + (2) + (3) - (4) - (5) + (6)	1,542,429
8. Market value 1/1/2022	1,587,776
9. Market value gain / (loss) for 2021 plan year: (8) - (7)	45,347

**Recognition of Gain / Loss in Actuarial Value**

Year	(a) Gain / (loss)	(b) Total recognized as of 1/1/2021	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 1/1/2022: (b) + (c)	(e) Not recognized as of 1/1/2022: (a) - (d)
2017	\$27,060	\$21,648	\$5,412	\$27,060	\$0
2018	(140,064)	(84,039)	(28,013)	(112,052)	(28,012)
2019	97,279	38,912	19,456	58,368	38,911
2020	27,650	5,530	5,530	11,060	16,590
2021	45,347	0	9,069	9,069	36,278
<b>Total</b>			11,454		63,767

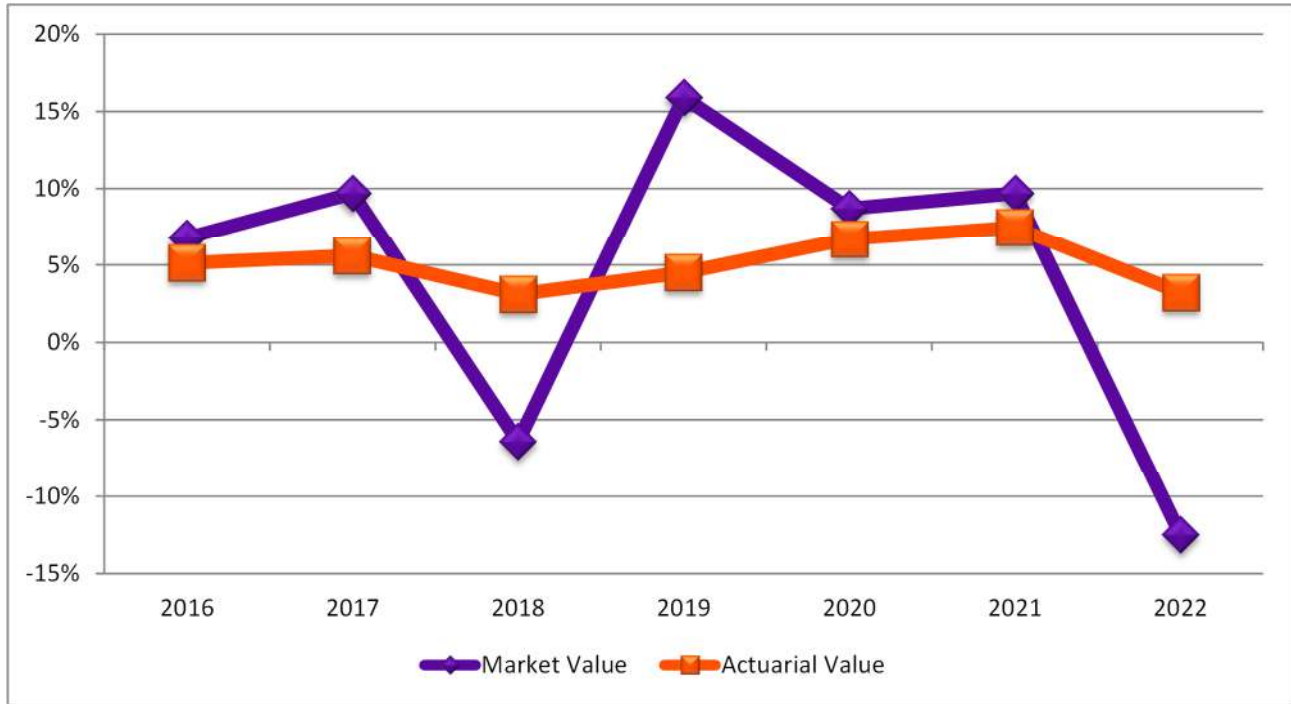


<b>Rate of Return on Market Value of Assets</b>				
<b>Period Ending December 31</b>	<b>Average Annual Effective Rate of Return</b>			
	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>
2013	8.8%	6.6%	9.3%	5.6%
2014	3.4%	7.4%	6.9%	5.3%
2015	-4.1%	2.5%	3.7%	4.4%
2016	6.8%	1.9%	4.8%	4.0%
2017	9.7%	3.9%	4.8%	4.3%
2018	-6.4%	3.1%	1.7%	5.4%
2019	15.9%	6.0%	4.0%	5.5%
2020	8.7%	5.6%	6.7%	5.2%
2021	9.7%	11.4%	7.2%	6.0%
2022	-12.5%	1.4%	2.5%	3.6%

<b>Rate of Return on Actuarial Value of Assets</b>				
<b>Period Ending December 31</b>	<b>Average Annual Effective Rate of Return</b>			
	<b>1 Year</b>	<b>3 Years</b>	<b>5 Years</b>	<b>10 Years</b>
2013	8.4%	5.8%	5.2%	3.9%
2014	6.7%	6.7%	5.9%	4.8%
2015	4.2%	6.4%	5.6%	5.0%
2016	5.1%	5.3%	5.9%	5.1%
2017	5.6%	5.0%	6.0%	5.0%
2018	3.1%	4.6%	4.9%	5.1%
2019	4.5%	4.4%	4.5%	5.2%
2020	6.7%	4.8%	5.0%	5.3%
2021	7.5%	6.2%	5.5%	5.7%
2022	3.2%	5.8%	5.0%	5.5%



### Actual Rate of Return on Assets





## Target Allocation and Expected Rate of Return January 1, 2023

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*	Weighting
US Large Cap	14.50%	5.00%	0.73%
Us Mid/Small Cap	11.00%	5.30%	0.58%
Developed Int'l Equities	12.50%	6.40%	0.80%
Emerging Market Equities	8.50%	7.70%	0.65%
Core Fixed Income	35.00%	2.05%	0.72%
High Yield Bonds	7.50%	4.05%	0.30%
Money Market, Short Term Bonds	2.50%	0.05%	0.00%
Real Estate (Core)	3.25%	4.90%	0.16%
MLPs	5.25%	4.05%	0.21%
	100.00%		4.15%
Long-Term Inflation Expectation			2.40%
Long-Term Expected Nominal Return			6.55%

*\*Long-Term Real Returns are provided by USI Advisors. The returns are geometric means.*

The long-term expected rate of return on pension plan investments was determined using a building block method in which best-estimate ranges of expected future real rates of return are developed. Best estimates of the real rates of return for each major asset class are included in the pension plan's target asset allocation.

The information above is based on arithmetic means. The investment return assumption was selected using the long term asset allocation shown above. An expected rate of return of 6.50% was used.



## Amortization of Unfunded Liability

Schedule of Amortization Bases					
	Date established	Original amount	Amortization installment	Years remaining	Present value of remaining installments as of January 1, 2023
Initial base	January 1, 2019	\$291,115	\$38,024	6	\$196,039
2021 base	January 1, 2021	(102,426)	(13,378)	8	(86,753)
2023 base	January 1, 2023	(80,489)	(10,513)	10	(80,489)
<b>Total</b>			14,133		28,797

Equivalent single amortization period

2 years



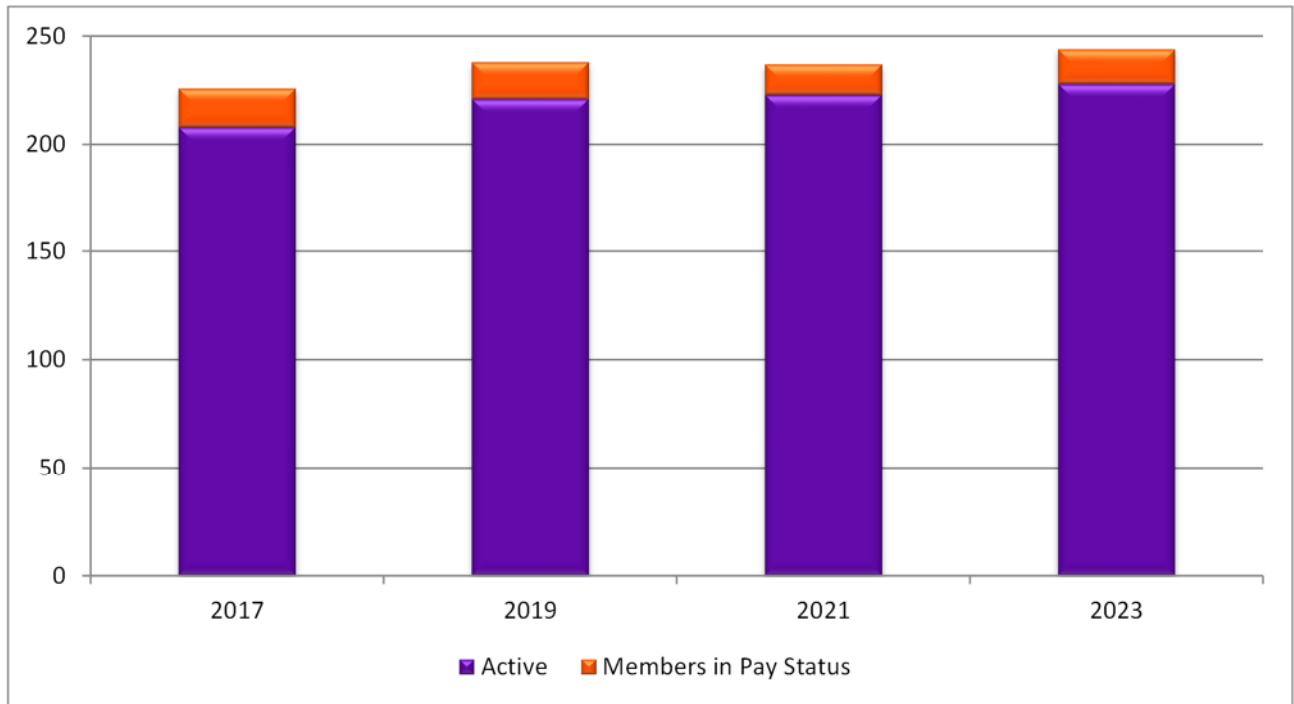
## Member Data

The data reported by the Plan Sponsor for this valuation includes 228 active employees who met the Plan's minimum age and service requirements as of January 1, 2023.

Member Data				
	Active	Terminated vested	Members in pay status	Total
<b>Total members January 1, 2021</b>	223	0	14	237
Adjustments	0	0	0	0
Retirements	-3	0	+3	0
Disabilities	0	N/A	0	0
Terminations				
Vested	0	0	N/A	0
Non-vested	0	0	N/A	0
Deaths				
With death benefit	0	0	0	0
Without death benefit	0	0	-1	-1
Transfers	0	0	N/A	0
Rehires	0	0	N/A	0
New beneficiaries	N/A	N/A	0	0
New entrants	+8	N/A	N/A	+8
<b>Total members January 1, 2023</b>	228	0	16	244



### Member Counts by Status





<b>Member Data</b>			
	<b>Active</b>	<b>Terminated vested</b>	<b>Members in pay status</b>
<b>Average age</b>			
January 1, 2021	44.2	N/A	75.1
January 1, 2023	46.0	N/A	74.1
<b>Average service</b>			
January 1, 2021	19.7	N/A	N/A
January 1, 2023	20.9	N/A	N/A
<b>Total annual benefits</b>			
January 1, 2021	N/A	N/A	\$33,578
January 1, 2023	N/A	N/A	39,449





### Active Member Count by Age and Years of Service

Attained age	Completed Years of Credited Service										
	Under 1	1 to 4	5 to 9	10 to 14	15 to 19	20 to 24	25 to 29	30 to 34	35 to 39	40 and over	All years
Under 25		6									6
25 to 29		19	4								23
30 to 34		19	10	2							31
35 to 39		21	4	2							27
40 to 44		16	4	4	4	1					29
45 to 49		13	7	3	1	1	1				26
50 to 54		8	10	4	1						23
55 to 59		8	11	5		1	2				27
60 to 64		3	6	3	3	1	1	1			18
65 to 69		1	2	4							7
70 & over		5	5	1							11
<b>All ages</b>		<b>119</b>	<b>63</b>	<b>28</b>	<b>9</b>	<b>4</b>	<b>4</b>	<b>1</b>			<b>228</b>



## Description of Actuarial Methods

### Asset Valuation Method

The Actuarial Value of assets used in the development of plan contributions phases in the recognition of differences between the actual return on Market Value and expected return on Market Value over a 5-year period at 20% per year. The Actuarial Value is adjusted, if necessary, to be within the range of 80% and 120% of the Market Value of assets.

### Actuarial Cost Method

Changes in Actuarial Cost Method: None.

Description of Current Actuarial Cost Method: Entry Age Normal (level percentage of salary)

Normal Cost: Under this method, the total normal cost is the sum of amounts necessary to fund each active member's normal retirement benefit if paid annually from entry age to assumed retirement age. Entry age is the age at which the employee would have been first eligible for the plan, if it had always been in effect. The normal cost for each participant is expected to remain a level percentage of the employee's salary. The normal cost for the plan is the difference between the total normal cost for the year and the anticipated member contributions for that year.

Past Service Liability: The present value of future benefits that relates to service before the valuation date is the total past service liability. The unfunded past service liability is the difference between the total past service liability and any assets (including accumulated member contributions). Unfunded accrued liabilities as of July 1, 2019 were amortized over a closed 10-year period. Future changes in the unfunded accrued liability will be amortized separately, assuming a new 10-year amortization each valuation.

Experience Gains and Losses: All experience gains and losses (the financial effect of the difference between the actual experience during the prior period and the result expected by the actuarial assumptions for that prior period) appear directly in the past service liability and are amortized at the same rate the plan is amortizing the remaining unfunded past service liability.



## Description of Actuarial Assumptions

### Changes in Actuarial Assumptions

There were no changes in the actuarial assumptions listed below.

#### Investment rate of return (net of investment-related and administrative expenses)

6.50%.

#### Inflation

2.40%.

This assumption is consistent with the Social Security Administration’s current best estimate of the ultimate long-term (75-year horizon) annual percentage increase in CPI, as published in the 2023 OASDI Trustees Report.

#### Mortality

Pub-2010 (B) Public Retirement Plans Headcount Weighted Mortality Tables for Safety employees, for non-annuitants and annuitants, projected to the valuation date with Scale MP-2021.

#### Mortality Improvement

Projected to date of decrement using Scale MP-2021 (generational).

#### Retirement age

Age	Rate
65	50%
66	25%
67	25%
68	25%
69	25%
70	100%

#### Termination prior to retirement

Sample termination rates are as follows:

Table T-3

Age	Rate
20	6.6%
25	5.3%
30	4.8%
35	4.5%
40	3.8%
45	3.2%
50	1.5%



**Disability**

None.

The actuarial assumptions in regards to rates of decrement shown above are based on standard tables modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor.

**Administrative expenses**

None. Expenses are assumed to be paid directly by the Town.

**Pre-Retirement Spouse Benefit, Disability Benefits and Termination Benefits**

Costed explicitly.

**Accrual of Service**

35% of Active Employees will qualify for service credit each year.



## Summary of Plan Provisions

*This exhibit summarizes the major provisions of the Plan. It is not intended to be, nor should it be interpreted as a complete statement of all plan provisions. To the extent that this summary does not accurately reflect the plan provisions, then the results of this valuation may not be accurate.*

### Plan identification

Single-employer pension plan.

### Effective Date

Original: January 1, 1991.

Last Amendment: February 20, 2002.

### Service

All years of service with the Fire Department from date of membership to early retirement, termination of employment, or Retirement Date.

### Credited Service

No credit prior to January 1, 1991, except active Firefighters with at least 10 years of firefighting service will receive credit for 5 years of service. Maximum years of credited service equals 30.

Based on requirements for credit established by the Committee:

#### 1991 and 1992

40% of calls of member's company

24 drills (company or town)

or

52 calls (Fire or EMS)

24 drills

#### 1993 and after

Minimum of 100 points

Min. 36 fire or EMS calls                      1 point each =                      36

Min. 8 town drills\*                              4 points each =                      32

Min. 16 company drills                      2 points each =                      32

100 points

Sanctioned parade may be substituted for a fire call.

\*Town drill may be substituted for a company drill when the minimum is reached (at 2 points per drill). A minimum of 12 will be held. A (sanctioned) parade may be substituted for a fire call. Drills must be approved by Training Division.

### Normal Form of Annuity

Life Annuity.

### Normal Retirement Date

The first day of the month coinciding with or next following the Participant's 65th birthday and the completion of five years of Credited Service after January 1, 1991.



### **Pension Benefits**

Eligibility for Plan Participation: Meet the requirements for an Active Firefighter.

Normal Retirement Benefit Formula: \$15.00 a month for each year of Credited Service, up to a maximum of twenty years, plus \$5.00 a month for each year in excess of 20, maximum \$350 per month.

### **Early Retirement**

Eligibility: None.

### **Postponed Retirement**

Benefit based on Credited Service at actual retirement.

### **Disability**

Eligibility: After 15 years of Credited Service and become totally and permanently disabled as a result of injuries incurred in the line of duty.

Benefit: \$250 per month commencing on the Participant's Normal Retirement Date.

### **Pre-Retirement Spouse Benefit**

Eligibility: After 20 years of Credited Service and any death.

Benefit: 50% of pension benefit at death. Benefit commences on the first day of January following the date of Participant's death.

### **Vesting**

Eligibility: Ten years of Credited Service (at least five years after January 1, 1991) or 100% at Normal Retirement Date, with five years of Credited Service, earned on and after January 1, 1991.

Benefit Formula: Benefit accrued to date of termination.