



TOWN OF BRANFORD VOLUNTEER FIRE DEPARTMENT PENSION PLAN

ACTUARIAL VALUATION REPORT

JANUARY 1, 2021





Table of Contents

Executive Summary	1
Valuation Results and Highlights	2
Purpose of the Valuation	2
Information Available in the Valuation Report.....	2
Changes Reflected in the Valuation.....	2
Cash Contribution for Fiscal Years Ending 2023 and 2024	2
Liability Experience During Period Under Review	2
Asset Experience During Period Under Review	3
Assessment and Measurement of Risks	3
Certification	6
Development of Unfunded Accrued Liability and Funded Ratio	7
Determination of Normal Cost and Actuarially Determined Employer Contribution	9
Determination of Actuarial Gain/Loss	11
Development of Asset Values.....	12
Target Allocation and Expected Rate of Return	18
Amortization of Unfunded Liability	19
Member Data	20
Active Member Count by Age and Years of Service	23
Description of Actuarial Methods	24
Description of Actuarial Assumptions	25
Summary of Plan Provisions	27

Report Prepared By:

Steve A. Lemanski
Vice President, Practice Leader, Consulting Actuary
860.856.2102
SLemanski@hhconsultants.com

Edward Holroyd
Senior Actuarial Associate
860.856.2140
EHolroyd@hhconsultants.com



Executive Summary

	January 1, 2021	January 1, 2019
Number of members		
Active employees	223	221
Terminated vested members	0	0
Retired, disabled and beneficiaries	14	17
Total	237	238
Covered employee payroll	N/A	N/A
Average plan salary	N/A	N/A
Actuarial present value of future benefits	1,726,665	1,657,830
Actuarial accrued liability	1,509,644	1,420,301
Plan assets		
Market value of assets	1,395,377	1,020,584
Actuarial value of assets	1,365,503	1,129,186
Unfunded accrued liability	144,141	291,115
Funded ratio	90.5%	79.5%
Actuarially determined employer contribution (ADEC)		
Fiscal year ending	2023	2021
ADEC	50,840	65,330
Fiscal year ending	2024	2022
ADEC	51,430	65,970



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, 2021 valuation produces the contributions for the fiscal years ending 2023 and 2024.

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

The actuarial assumptions listed below have been changed for this valuation. The impact of these changes was to decrease the unfunded actuarial liability by about 1.4% and to decrease the Fiscal Year 2023 ADEC by approximately \$800.

- Mortality Improvement
- Inflation

Cash Contribution for Fiscal Years Ending 2023 and 2024

The Town cost is:	2023 Fiscal Year	2024 Fiscal Year
	\$50,840	\$51,430

Liability Experience During Period Under Review

The plan experienced a net actuarial gain on liabilities of \$71,310 since the prior valuation. This gain was largely driven by the combined effect of retiree mortality and 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:

	2019 Fiscal Year	2020 Fiscal Year
Market Value Basis	15.9%	8.7%
Actuarial Value Basis	4.5%	6.7%

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, 2021	January 1, 2019
Ratio of market value of assets to covered payroll	N/A	N/A

- 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.



Risks to Assess

Overriding Minimum Contribution

	Fiscal Year Ending 2023
Actuarially determined employer contribution (ADEC)	50,840
Overriding minimum contribution (OMC)*	<u>26,508</u>
Surplus (deficit) - ADEC vs. OMC	24,332

- 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 2023	Fiscal Year Ending 2024
Increase in actuarially determined employer contribution (ADEC)	1,940	1,940

- 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 2023	Fiscal Year Ending 2024
Increase in actuarially determined employer contribution (ADEC)	6,320	6,340

- 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.



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
2021	6.50%	N/A	92.4%	N/A
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%



Certification

This report presents the results of the January 1, 2021 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, 2023 and June 30, 2024. 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.

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 20-05506

January 28, 2022

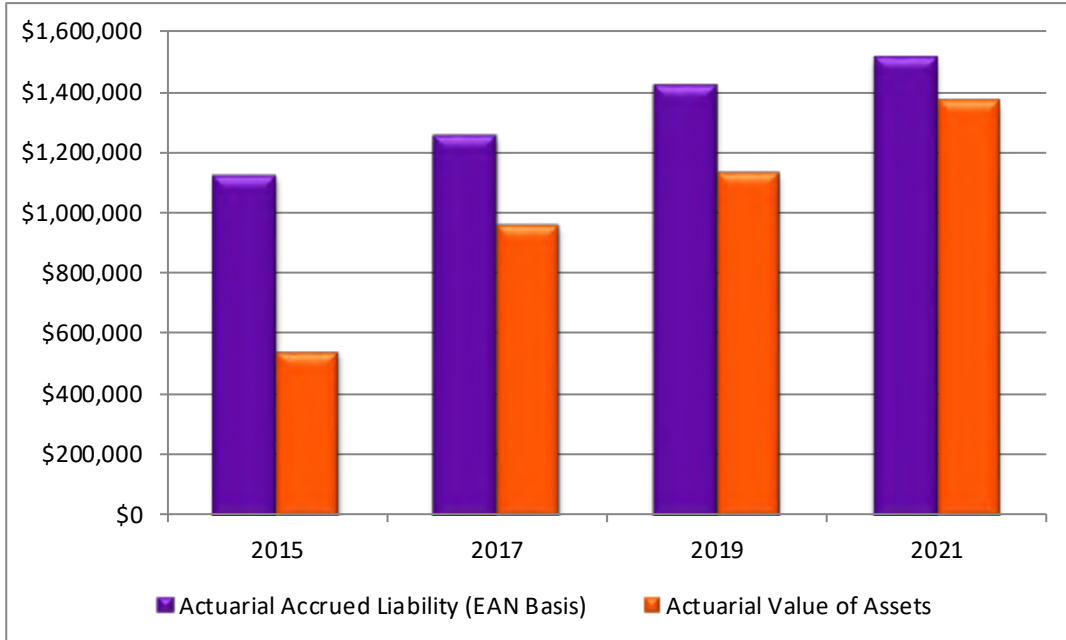


Development of Unfunded Accrued Liability and Funded Ratio

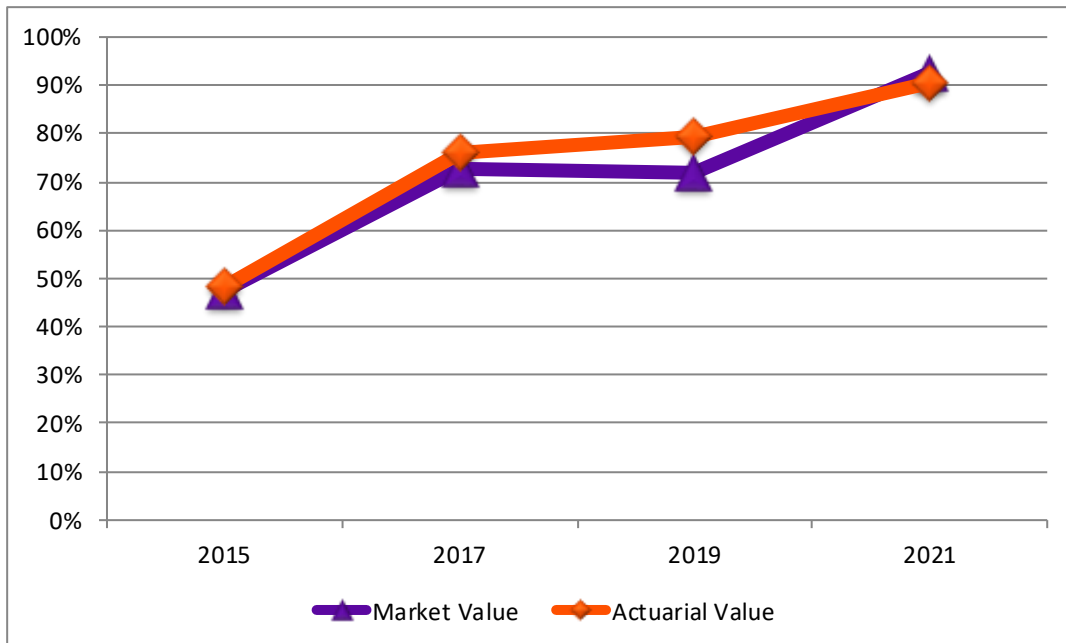
	January 1, 2021	January 1, 2019
Actuarial accrued liability for inactive members		
Retired, disabled and beneficiaries	\$266,618	\$332,698
Terminated vested members	0	0
Total	266,618	332,698
Actuarial accrued liability for active employees	1,243,026	1,087,603
Total actuarial accrued liability	1,509,644	1,420,301
Actuarial value of assets	1,365,503	1,129,186
Unfunded accrued liability	144,141	291,115
Funded ratio	90.5%	79.5%



Actuarial Accrued Liability vs. Actuarial Value of Assets



Funded Ratio



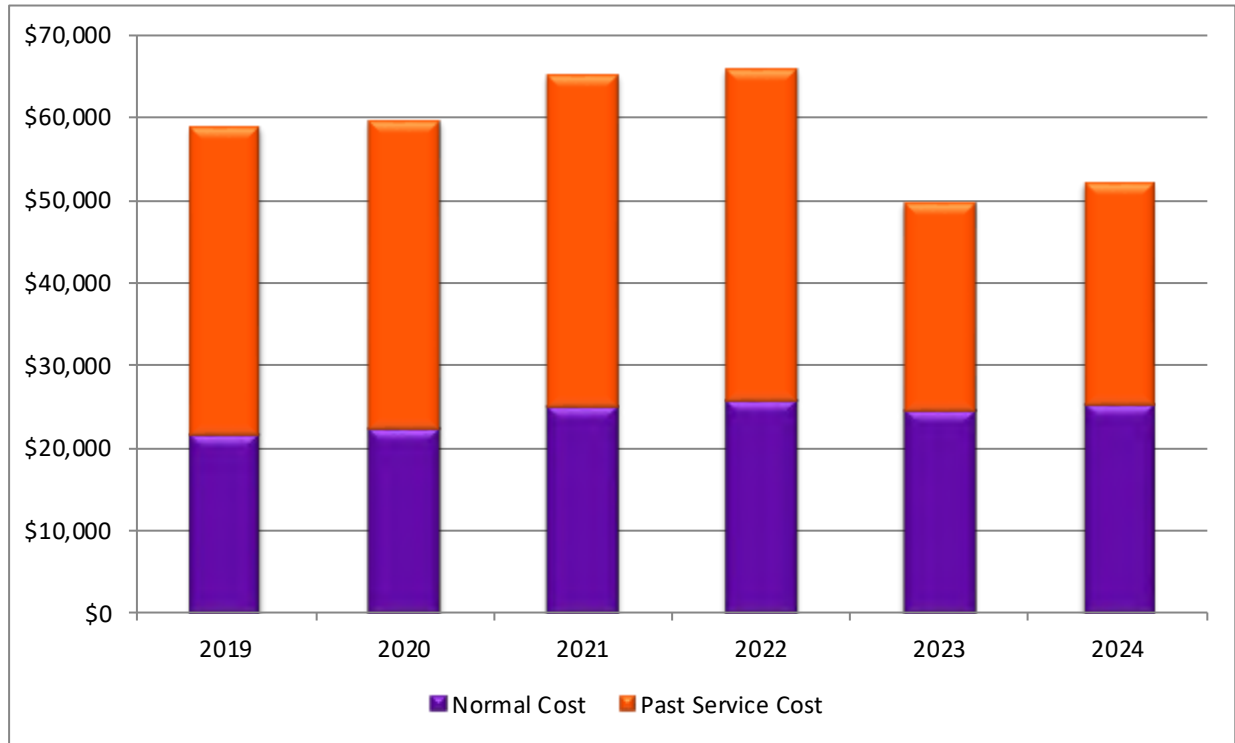


Determination of Normal Cost and Actuarially Determined Employer Contribution

	January 1, 2021	January 1, 2019
Town's normal cost	\$22,996	\$23,152
Amortization of unfunded accrued liability	<u>24,646</u>	<u>38,024</u>
Contribution before adjustment as of the valuation date	47,642	61,176
Contribution rounded to nearest \$10	47,640	61,180
Fiscal year ending	2023	2021
Adjustment for interest and inflation	3,200	4,150
Actuarially determined employer contribution	50,840	65,330
Fiscal year ending	2024	2022
Adjustment for interest and inflation	590	640
Actuarially determined employer contribution	51,430	65,970



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.

Actuarial Gain / Loss	
Expected unfunded accrued liability January 1, 2021	
Expected unfunded accrued liability January 1, 2020	
Unfunded accrued liability January 1, 2019	\$291,115
Gross normal cost January 1, 2019	23,152
Town and employee contributions for 2019	(87,000)
Interest at 6.50% to January 1, 2020	17,992
Expected unfunded accrued liability January 1, 2020	245,259
Expected unfunded accrued liability January 1, 2021	
Expected unfunded accrued liability January 1, 2020	245,259
Expected gross normal cost January 1, 2020	23,754
Town and employee contributions for 2020	(87,000)
Interest at 6.50% to January 1, 2021	15,119
Expected unfunded accrued liability January 1, 2021	197,132
Actuarial (gain) / loss January 1, 2021	(50,983)
Actual unfunded accrued liability January 1, 2021, prior to plan provision, assumption and method changes	146,149
Sources of (gain) / loss	
Assets	20,327
Liabilities	(71,310)
Total (gain) / loss	(50,983)
Assumption and method changes since prior valuation	(2,008)
Actual unfunded accrued liability January 1, 2021, after plan provision, assumption and method changes	144,141



Development of Asset Values

Summary of Fund Activity		
	Market Value	Actuarial Value
1. Beginning value of assets January 1, 2020		
Trust assets	\$1,234,638	\$1,230,346
2. Contributions		
Town contributions during year	87,000	87,000
Employee contributions during year	0	0
Total for plan year	87,000	87,000
3. Disbursements		
Benefit payments during year	35,378	35,378
Administrative expenses during year	0	0
Total for plan year	35,378	35,378
4. Net investment return		
Interest and dividends	31,745	N/A
Realized and unrealized gain / (loss)	81,626	N/A
Expected return	N/A	81,467
Recognized gain / (loss)	N/A	2,068
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	(4,254)	N/A
Total for plan year	109,117	83,535
5. Ending value of assets January 1, 2021		
Trust assets: (1) + (2) - (3) + (4)	1,395,377	1,365,503
6. Approximate rate of return	8.7%	6.7%



Relationship of Actuarial Value to Market Value

1. Market value 1/1/2021	\$1,395,377
2. Gain / (loss) not recognized in actuarial value 1/1/2021	<u>29,874</u>
3. Preliminary actuarial value 1/1/2021: (1) - (2)	1,365,503
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	97.9%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 1/1/2021 after corridor minimum / maximum: (3) + (5)	1,365,503
7. Actuarial value as a percentage of market value: (6) ÷ (1)	97.9%

Development of Market Value Gain / Loss for 2020 Plan Year

1. Market value 1/1/2020	\$1,234,638
2. Town contributions	87,000
3. Employee contributions	0
4. Benefit payments	35,378
5. Administrative expenses	0
6. Expected return at 6.50%	<u>81,467</u>
7. Expected value 1/1/2021: (1) + (2) + (3) - (4) - (5) + (6)	1,367,727
8. Market value 1/1/2021	<u>1,395,377</u>
9. Market value gain / (loss) for 2020 plan year: (8) - (7)	27,650

Recognition of Gain / Loss in Actuarial Value

Year	(a) Gain / (loss)	(b) Total recognized as of 1/1/2020	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 1/1/2021: (b) + (c)	(e) Not recognized as of 1/1/2021: (a) - (d)
2016	(\$1,581)	(\$1,264)	(\$317)	(\$1,581)	\$0
2017	27,060	16,236	5,412	21,648	5,412
2018	(140,064)	(56,026)	(28,013)	(84,039)	(56,025)
2019	97,279	19,456	19,456	38,912	58,367
2020	27,650	0	<u>5,530</u>	5,530	<u>22,120</u>
Total			2,068		29,874



Summary of Fund Activity		
	Market Value	Actuarial Value
1. Beginning value of assets January 1, 2019		
Trust assets	\$1,020,584	\$1,129,186
2. Contributions		
Town contributions during year	87,000	87,000
Employee contributions during year	0	0
Total for plan year	87,000	87,000
3. Disbursements		
Benefit payments during year	37,740	37,740
Administrative expenses during year	0	0
Total for plan year	37,740	37,740
4. Net investment return		
Interest and dividends	35,865	N/A
Realized and unrealized gain / (loss)	133,514	N/A
Expected return	N/A	67,515
Recognized gain / (loss)	N/A	(15,615)
Required adjustment due to corridor	N/A	0
Reversal of prior year required adjustment	N/A	0
Investment-related expenses	(4,585)	N/A
Total for plan year	164,794	51,900
5. Ending value of assets January 1, 2020		
Trust assets: (1) + (2) - (3) + (4)	1,234,638	1,230,346
6. Approximate rate of return	15.9%	4.5%



Relationship of Actuarial Value to Market Value

1. Market value 1/1/2020	\$1,234,638
2. Gain / (loss) not recognized in actuarial value 1/1/2020	<u>4,292</u>
3. Preliminary actuarial value 1/1/2020: (1) - (2)	1,230,346
4. Preliminary actuarial value as a percentage of market value: (3) ÷ (1)	99.7%
5. Gain / (loss) recognized for corridor minimum / maximum	N/A
6. Actuarial value 1/1/2020 after corridor minimum / maximum: (3) + (5)	1,230,346
7. Actuarial value as a percentage of market value: (6) ÷ (1)	99.7%

Development of Market Value Gain / Loss for 2019 Plan Year

1. Market value 1/1/2019	\$1,020,584
2. Town contributions	87,000
3. Employee contributions	0
4. Benefit payments	37,740
5. Administrative expenses	0
6. Expected return at 6.50%	<u>67,515</u>
7. Expected value 1/1/2020: (1) + (2) + (3) - (4) - (5) + (6)	1,137,359
8. Market value 1/1/2020	<u>1,234,638</u>
9. Market value gain / (loss) for 2019 plan year: (8) - (7)	97,279

Recognition of Gain / Loss in Actuarial Value

Year	(a) Gain / (loss)	(b) Total recognized as of 1/1/2019	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 1/1/2020: (b) + (c)	(e) Not recognized as of 1/1/2020: (a) - (d)
2015	(\$60,774)	(\$48,620)	(\$12,154)	(\$60,774)	\$0
2016	(1,581)	(948)	(316)	(1,264)	(317)
2017	27,060	10,824	5,412	16,236	10,824
2018	(140,064)	(28,013)	(28,013)	(56,026)	(84,038)
2019	97,279	0	<u>19,456</u>	19,456	<u>77,823</u>
Total			(15,615)		4,292

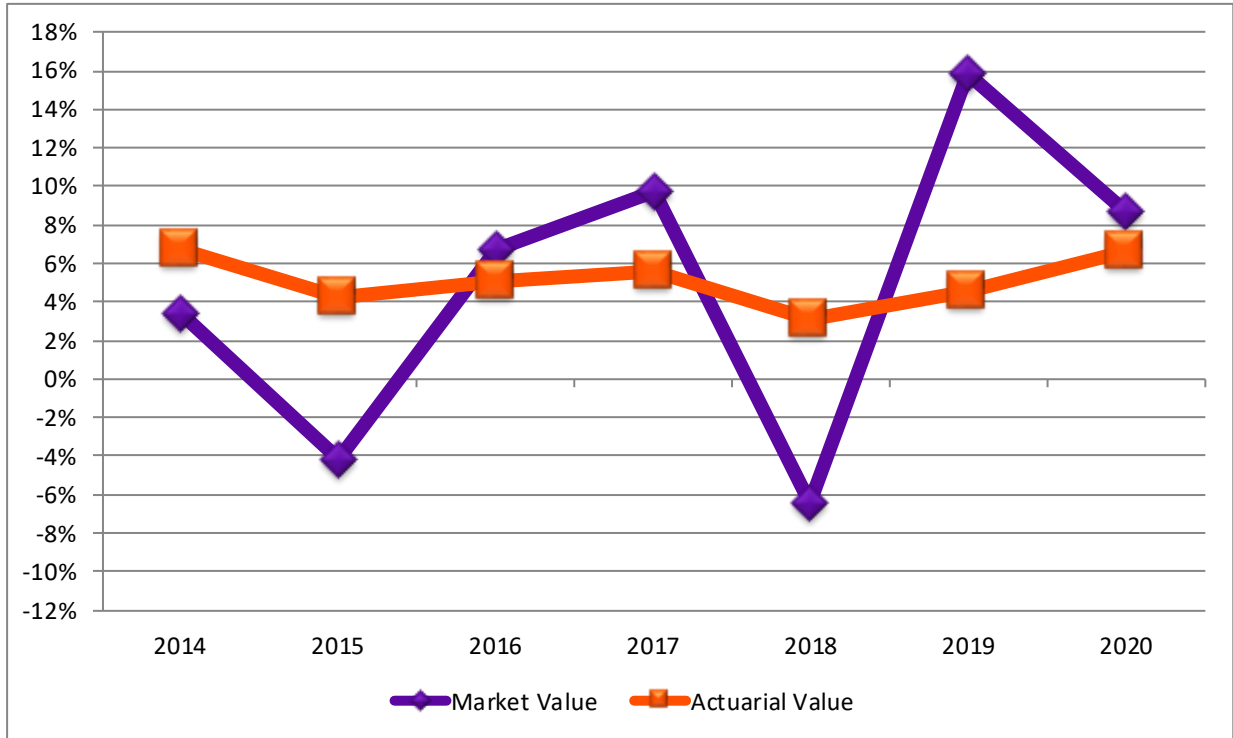


Rate of Return on Market Value of Assets				
Period Ending December 31	Average Annual Effective Rate of Return			
	1 Year	3 Years	5 Years	10 Years
2011	1.1%	9.2%	3.2%	3.3%
2012	10.1%	7.6%	3.8%	5.5%
2013	8.8%	6.6%	9.3%	5.6%
2014	3.4%	7.4%	6.9%	5.3%
2015	-4.1%	2.5%	3.7%	4.4%
2016	6.8%	1.9%	4.8%	4.0%
2017	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%

Rate of Return on Actuarial Value of Assets				
Period Ending December 31	Average Annual Effective Rate of Return			
	1 Year	3 Years	5 Years	10 Years
2011	4.1%	4.3%	4.4%	2.3%
2012	4.9%	4.7%	3.9%	3.9%
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%



Actual Rate of Return on Assets





Target Allocation and Expected Rate of Return January 1, 2021

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*	Weighting
Large Cap Domestic Equity	14.50%	4.50%	0.65%
Mid Cap Domestic Equity	5.50%	5.00%	0.28%
Small Cap Domestic Equity	5.50%	5.00%	0.28%
Developed International Equity	12.50%	5.25%	0.66%
Emerging Markets International Equity	8.50%	6.25%	0.53%
US Real Estate and MLP's	8.50%	4.50%	0.38%
US Investment Grade Bonds	35.50%	2.00%	0.71%
US High Yield Bonds	7.50%	3.25%	0.24%
Cash	2.00%	0.25%	0.01%
	100.00%		3.74%
Long-Term Inflation Expectation			2.40%
Long-Term Expected Nominal Return			6.14%

**Long-Term Real Returns are provided by HHIA. 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 geometric means and does not reflect additional returns through investment selection, asset allocation and rebalancing. The results support a rate between 6.125% and 6.625%. 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, 2021
Initial base	January 1, 2019	\$291,115	\$38,024	8	\$246,567
2021 base	January 1, 2021	(102,426)	<u>(13,378)</u>	10	<u>(102,426)</u>
Total			24,646		144,141



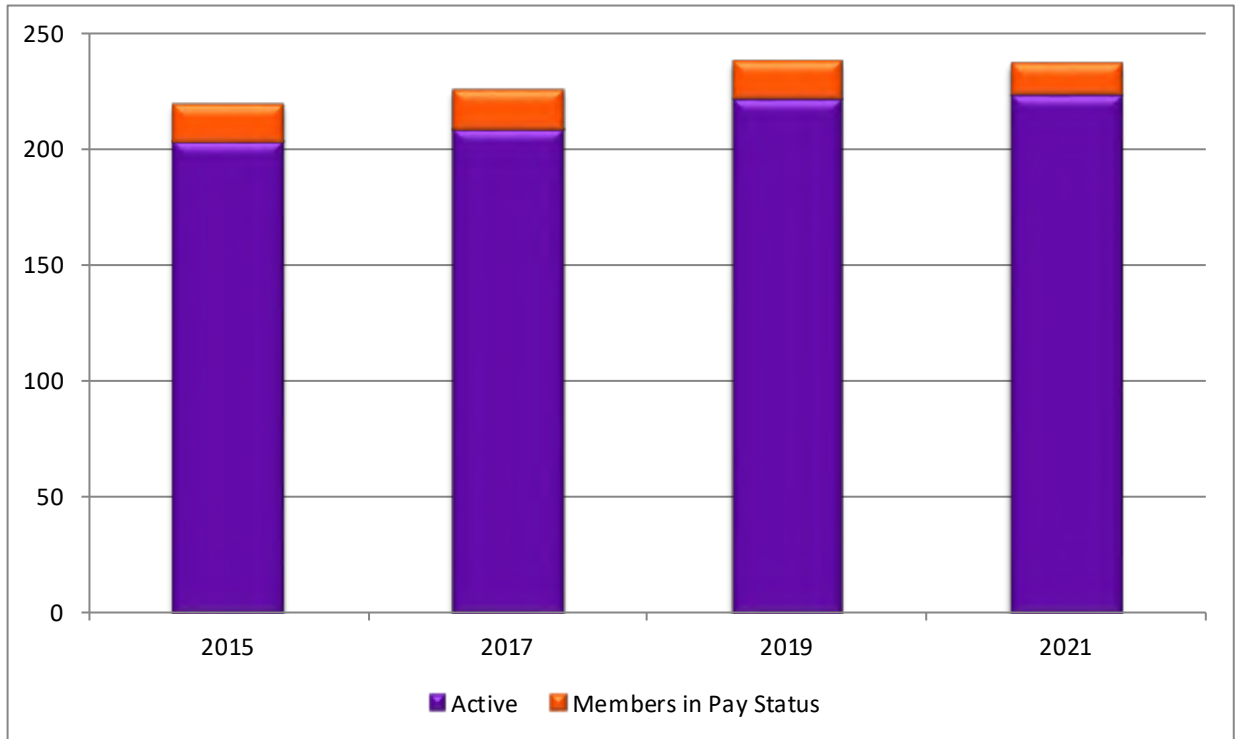
Member Data

The data reported by the Plan Sponsor for this valuation includes 223 active employees who met the Plan's minimum age and service requirements as of January 1, 2021.

Member Data				
	Active	Terminated vested	Members in pay status	Total
Total members January 1, 2019	221	0	17	238
Adjustments	0	0	0	0
Retirements	0	0	0	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	-1	-1
Without death benefit	0	0	-3	-3
Transfers	0	0	N/A	0
Rehires	0	0	N/A	0
New beneficiaries	N/A	N/A	+1	+1
New entrants	+2	N/A	N/A	+2
Total members January 1, 2021	223	0	14	237



Member Counts by Status





Member Data			
	Active	Terminated vested	Members in pay status
Average age			
January 1, 2019	42.4	N/A	74.2
January 1, 2021	44.2	N/A	75.1
Average service			
January 1, 2019	17.9	N/A	N/A
January 1, 2021	19.7	N/A	N/A
Total annual benefits			
January 1, 2019	N/A	N/A	\$40,260
January 1, 2021	N/A	N/A	33,578



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		15	1								16
25 to 29		14	2	2							18
30 to 34		23	11	1							35
35 to 39		16	5	1	2						24
40 to 44		19	3	4	2	1					29
45 to 49		7	10	4	1	1	1				24
50 to 54		9	9	4	1		2				25
55 to 59		5	8	6	1	1					21
60 to 64		3	4	6	3	2	1	1			20
65 to 69		1	1								2
70 & over		3	5	1							9
All ages		115	59	29	10	5	4	1			223



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

The valuation reflects changes in the actuarial assumptions listed below. (The assumptions used before and after these changes are more fully described in the next section.)

- Mortality improvement
- Inflation

The assumptions indicated were changed to represent the Enrolled Actuary’s current best estimate of anticipated experience of the plan.

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

6.50%.

Inflation

2.40%. (Prior: 2.60%)

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 2021 OASDI Trustees Report.

The assumption was changed to better reflect expected experience.

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.

Prior: 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-2018.

Mortality Improvement

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

Prior: Projected to date of decrement using Scale MP-2018 (generational).

The mortality improvement assumption was updated to better reflect the most recent annual update published by the Society of Actuaries.

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.

The assumption changes decreased liabilities by about 0.1%.



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 =	<u>32</u>
		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.