

VILLAGE OF GLENCOE  
FIREFIGHTERS' PENSION FUND

ACTUARIAL VALUATION  
AS OF JANUARY 1, 2022

CONTRIBUTIONS APPLICABLE TO THE  
PLAN/FISCAL YEAR ENDING DECEMBER 31, 2023

GASB 67/68 DISCLOSURE INFORMATION  
AS OF DECEMBER 31, 2021



**FOSTER & FOSTER**  
ACTUARIES AND CONSULTANTS



March 14, 2022

Ms. Nikki Larson  
Village of Glencoe Firefighters' Pension Fund

Re: Actuarial Valuation Report (including GASB Statements No. 67 and No. 68) –  
Village of Glencoe Firefighters' Pension Fund

Dear Ms. Larson:

We are pleased to present to the Village this report of the annual actuarial valuation of the Village of Glencoe Firefighters' Pension Fund. Included are the related results for GASB Statements No. 67 and No. 68. The funding valuation was performed to determine whether the assets and contributions are sufficient to provide the prescribed benefits and to develop the appropriate funding requirements for the applicable plan year. The calculation of the liability for GASB results was performed for the purpose of satisfying the requirements of GASB Statements No. 67 and No. 68. Use of the results for other purposes may not be applicable and could produce significantly different results.

The valuations have been conducted in accordance with generally accepted actuarial principles and practices, including the applicable Actuarial Standards of Practice as issued by the Actuarial Standards Board, and reflect laws and regulations issued to date pursuant to the provisions of Article 4, Illinois Pension Code, as well as applicable federal laws and regulations. In our opinion, the assumptions used in this valuation, as adopted by the Board of Trustees, represent reasonable expectations of anticipated plan experience. Future actuarial measurements may differ significantly from the current measurements presented in this report for a variety of reasons including: changes in applicable laws, changes in plan provisions, changes in assumptions, or plan experience differing from expectations. Due to the limited scope of the valuations, we did not perform an analysis of the potential range of such future measurements.

The funding percentages and unfunded accrued liability as measured based on the actuarial value of assets will differ from similar measures based on the market value of assets. These measures, as provided, are appropriate for determining the adequacy of future contributions, but may not be appropriate for the purpose of settling a portion or all of its liabilities.

In conducting the valuations, we have relied on personnel, plan design, and asset information supplied by the Village, financial reports prepared by the custodian bank and the actuarial assumptions and methods described in the Actuarial Assumptions section of this report. While we cannot verify the accuracy of all this information, the supplied information was reviewed for consistency and reasonableness. As a result of this review, we have no reason to doubt the substantial accuracy of the information and believe that it has produced appropriate results. This information, along with any adjustments or modifications, is summarized in various sections of this report.

The total pension liability, net pension liability, and certain sensitivity information shown in the GASB results are based on an actuarial valuation performed as of the valuation date.

In performing the analysis, we used third-party software to model (calculate) the underlying liabilities and costs. These results are reviewed in the aggregate and for individual sample lives. The output from the software is either used directly or input into internally developed models to generate the costs. All internally developed models are reviewed as part of the process. As a result of this review, we believe that the models have produced reasonable results. We do not believe there are any material inconsistencies among assumptions or unreasonable output produced due to the aggregation of assumptions.

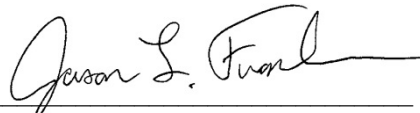
The undersigned are familiar with the immediate and long-term aspects of pension valuations and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinions contained herein. All of the sections of this report are considered an integral part of the actuarial opinions.


To our knowledge, no associate of Foster & Foster, Inc. working on valuations of the program has any direct financial interest or indirect material interest in the Village of Glencoe, nor does anyone at Foster & Foster, Inc. act as a member of the Board of Trustees of the Village of Glencoe Firefighters' Pension Fund. Thus, there is no relationship existing that might affect our capacity to prepare and certify this actuarial report.

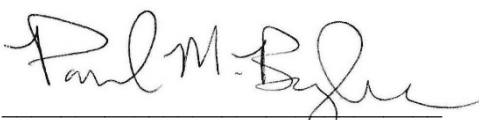
If there are any questions, concerns, or comments about any of the items contained in this report, please contact us at 630-620-0200.

Respectfully submitted,

Foster & Foster, Inc.

By:   
Jason L. Franken, FSA, EA, MAAA

By:   
Heidi E. Andorfer, FSA, EA, MAAA

By:   
Paul M. Baugher, FSA, EA, MAAA

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SUMMARY OF REPORT

The regular annual actuarial valuation of the Village of Glencoe Firefighters' Pension Fund, performed as of January 1, 2022, has been completed and the results are presented in this report. The contribution amounts set forth herein are applicable to the plan/fiscal year ended December 31, 2023.

The contribution requirements, compared with those set forth in the January 1, 2021 actuarial report, are as follows:

Valuation Date Applicable to Fiscal Year Ending	1/1/2022 <u>12/31/2023</u>	1/1/2021 <u>12/31/2022</u>
Total Recommended Contribution	\$48,293	\$48,293
Member Contributions (Est.)	0	0
Village Recommended Contribution	48,293	48,293

As you can see, the Total Recommended Contribution is the same as the results determined in the January 1, 2021 actuarial valuation report. This is due to the override in the contribution amount to cover the annual benefits paid out of the fund.

Plan experience was unfavorable overall on the basis of the plan's actuarial assumptions. The primary source of unfavorable experience was lower than expected inactive mortality. There were no significant sources of favorable experience.

## CHANGES SINCE PRIOR VALUATION

### Plan Changes Since Prior Valuation

There were no plan changes since the prior valuation.

### Actuarial Assumption/Method Changes Since Prior Valuation

There were no assumption or method changes since the prior valuation.

COMPARATIVE SUMMARY OF PRINCIPAL VALUATION RESULTS

	<u>1/1/2022</u>	<u>1/1/2021</u>
<b>A. Participant Data</b>		
Number Included		
Actives	0	0
Service Retirees	0	0
Beneficiaries	1	1
Disability Retirees	0	0
Terminated Vested	<u>0</u>	<u>0</u>
Total	1	1
Total Annual Payroll	\$0	\$0
Payroll Under Assumed Ret. Age	0	0
Annual Rate of Payments to:		
Service Retirees	0	0
Beneficiaries	48,293	48,293
Disability Retirees	0	0
Terminated Vested	0	0
<b>B. Assets</b>		
Actuarial Value	738	1,223
Market Value	559	1,201
<b>C. Liabilities</b>		
Present Value of Benefits		
Actives		
Retirement Benefits	0	0
Disability Benefits	0	0
Death Benefits	0	0
Vested Benefits	0	0
Service Retirees	0	0
Beneficiaries	238,139	254,067
Disability Retirees	0	0
Terminated Vested	<u>0</u>	<u>0</u>
Total	238,139	254,067

C. Liabilities - (Continued)	<u>1/1/2022</u>	<u>1/1/2021</u>
Total Normal Cost	0	0
Present Value of Future Normal Costs	0	0
Accrued Liability (Retirement)	0	0
Accrued Liability (Disability)	0	0
Accrued Liability (Death)	0	0
Accrued Liability (Vesting)	0	0
Accrued Liability (Inactives)	<u>238,139</u>	<u>254,067</u>
Total Actuarial Accrued Liability	238,139	254,067
Unfunded Actuarial Accrued Liability (UAAL)	237,401	252,844
Funded Ratio (AVA / AL)	0.3%	0.5%



	<u>1/1/2022</u>	<u>1/1/2021</u>
D. Actuarial Present Value of Accrued Benefits		
Vested Accrued Benefits		
Inactives	238,139	254,067
Actives	0	0
Member Contributions	<u>0</u>	<u>0</u>
Total	238,139	254,067
Non-vested Accrued Benefits	<u>0</u>	<u>0</u>
Total Present Value Accrued Benefits	238,139	254,067
Funded Ratio (MVA / PVAB)	0.2%	0.5%
Increase (Decrease) in Present Value of Accrued Benefits Attributable to:		
Plan Amendments	0	
Assumption Changes	0	
Plan Experience	32,365	
Benefits Paid	(48,293)	
Interest	0	
Other	<u>0</u>	
Total	(15,928)	

Valuation Date	1/1/2022	1/1/2021
Applicable to Fiscal Year Ending	<u>12/31/2023</u>	<u>12/31/2022</u>

E. Pension Cost

Normal Cost	\$0	\$0
Administrative Expenses	0	0
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 19 years (as of 1/1/2022) <sup>1</sup>	48,293	48,293
Total Recommended Contribution	48,293	48,293
Expected Member Contributions	0	0
Expected Village Contribution	48,293	48,293

F. Past Contributions

Plan Years Ending:	<u>12/31/2021</u>
Total Recommended Contribution	48,293
Village Requirement	48,293
Actual Contributions Made:	
Members (excluding buyback)	0
Village	<u>47,833</u>
Total	47,833

G. Net Actuarial (Gain)/Loss	32,390
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<sup>1</sup> Amortization subject to a minimum of the expected annual payment from the fund during the year.

H. Schedule Illustrating the Amortization of the Total Unfunded Actuarial Accrued Liability as of:

<u>Year</u>	<u>Projected Unfunded Accrued Liability</u>
2022	237,401
2023	224,906
2024	212,411
2028	162,431
2033	99,956
2037	49,976
2041	0

I. 5 Year Comparison of Investment Return on Actuarial Value

		<u>Actual MVA</u>	<u>Actual AVA</u>	<u>Assumed</u>
Year Ended	12/31/2021	-18.75%	-8.96%	0.00%
Year Ended	12/31/2020	-5.97%	-1.50%	0.00%
Year Ended	12/31/2019	1.36%	-0.51%	0.00%
Year Ended	12/31/2018	0.15%	-1.65%	0.00%
Year Ended	12/31/2017	1.48%	N/A	N/A

DEVELOPMENT OF JANUARY 1, 2022 AMORTIZATION PAYMENT

(1)	Unfunded Actuarial Accrued Liability as of January 1, 2021	\$252,844
(2)	Sponsor Normal Cost developed as of January 1, 2021	0
(3)	Expected administrative expenses for the year ended December 31, 2021	0
(4)	Expected interest on (1), (2) and (3)	0
(5)	Sponsor contributions to the System during the year ended December 31, 2021	47,833
(6)	Expected interest on (5)	0
(7)	Expected Unfunded Actuarial Accrued Liability as of December 31, 2021, (1)+(2)+(3)+(4)-(5)-(6)	205,011
(8)	Change to UAAL due to Benefits/Assumption Change	0
(9)	Change to UAAL due to Actuarial (Gain)/Loss	32,390
(10)	Unfunded Accrued Liability as of January 1, 2022	237,401
(11)	UAAL Subject to Amortization (100% AAL less Actuarial Assets)	237,401

<u>Date</u> <u>Established</u>	<u>Years</u> <u>Remaining</u>	<u>1/1/2022</u> <u>Amount</u>	<u>Amortization</u> <u>Amount</u> <sup>1</sup>
1/1/2022	19	237,401	12,495

<sup>1</sup> This is a theoretical amortization of the unfunded liability before consideration of the annual benefit payments.

## DETAILED ACTUARIAL (GAIN)/LOSS ANALYSIS

(1) Unfunded Actuarial Accrued Liability (UAAL) as of January 1, 2021	\$252,844
(2) Expected UAAL as of January 1, 2022	205,011
(3) Summary of Actuarial (Gain)/Loss, by component:	
Investment Return (Actuarial Asset Basis)	92
Salary Increases	0
Active Decrements	0
Inactive Mortality	31,209
Other	<u>1,089</u>
Change in UAAL due to (Gain)/Loss	32,390
Change to UAAL due to Benefits/Assumption Change	<u>0</u>
(4) Actual UAAL as of January 1, 2022	\$237,401

## STATUTORY MINIMUM REQUIRED CONTRIBUTION

Contribution requirements shown on this page are calculated according to statutory minimum funding requirements of the Illinois Pension Code. We do not believe this method is sufficient to fund future benefits; as such, we recommend funding according to the contributions developed in Section E of this report.

Valuation Date	1/1/2022	1/1/2021
Applicable to Fiscal Year Ending	<u>12/31/2023</u>	<u>12/31/2022</u>
Actuarial Accrued Liability (PUC)	238,139	254,067
Actuarial Value of Assets	<u>738</u>	<u>1,223</u>
Unfunded Actuarial Accrued Liability (UAAL)	237,401	252,844
UAAL Subject to Amortization	213,587	227,437
Normal Cost	\$0	\$0
Administrative Expenses	0	0
Payment Required to Amortize Unfunded Actuarial Accrued Liability over 19 years (as of 1/1/2022)	11,241	11,372
Total Required Contribution	11,241	11,372
Expected Member Contributions	0	0
Expected Village Contribution	11,241	11,372

### Assumptions and Methods:

Actuarial Cost Method	Projected Unit Credit
Amortization Method	90% Funding by 2040

All other assumptions and methods are as described in the Actuarial Assumptions and Methods section.

PROJECTION OF BENEFIT PAYMENTS

Year	Payments for Current Actives	Payments for Current Inactives	Total Payments
2022	0	45,356	45,356
2023	0	39,074	39,074
2024	0	33,119	33,119
2025	0	27,599	27,599
2026	0	22,597	22,597
2027	0	18,156	18,156
2028	0	14,292	14,292
2029	0	11,004	11,004
2030	0	8,269	8,269
2031	0	6,053	6,053
2032	0	4,311	4,311
2033	0	2,984	2,984
2034	0	2,005	2,005
2035	0	1,307	1,307
2036	0	826	826
2037	0	506	506
2038	0	301	301
2039	0	173	173
2040	0	97	97
2041	0	53	53
2042	0	28	28
2043	0	14	14
2044	0	7	7
2045	0	4	4
2046	0	2	2
2047	0	1	1
2048	0	0	0
2049	0	0	0
2050	0	0	0
2051	0	0	0
2052	0	0	0
2053	0	0	0
2054	0	0	0
2055	0	0	0
2056	0	0	0
2057	0	0	0
2058	0	0	0
2059	0	0	0
2060	0	0	0
2061	0	0	0

## ACTUARIAL ASSUMPTIONS AND METHODS

Interest Rate	0.00% per year compounded annually, net of investment related expenses. This is supported by the target asset allocation of the trust and the expected long-term return by asset class.
Mortality Rate	RP-2014 Blue Collar Total Healthy Annuitant mortality table, sex distinct, projected to the valuation date using scale MP-2017 and a base year of 2013.  The mortality assumptions sufficiently accommodate anticipated future mortality improvements.
Inflation	2.50%.
Cost-of-Living Adjustment	<u>Tier 1</u> : 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.  <u>Tier 2</u> : 1.25% per year after the later of attainment of age 60 or first anniversary of retirement.
Funding Method	Entry Age Normal Cost Method.
Actuarial Asset Method	Investment gains and losses are smoothed over a 5-year period. In the first year, 20% of the gain or loss is recognized. In the second year 40%, in the third year 60%, in the fourth year 80%, and in the fifth year 100% of the gain or loss is recognized. The actuarial investment gain or loss is defined as the actual return on investments minus the actuarial assumed investment return. Actuarial Assets shall not be less than 80% nor greater than 120% of the Market Value of Assets.
Funding Policy Amortization Method	The UAAL is amortized according to a Level Percentage of Payroll method over a period ending in 2041. The initial amortization amount is 100% of the Accrued Liability less the Actuarial Value of Assets.
Payroll Growth	0.00% per year.
Administrative Expenses	Expenses paid out of the fund other than investment-related expenses are assumed to be equal to those paid in the previous year.



## GLOSSARY

Total Annual Payroll is the projected annual rate of pay for the fiscal year following the valuation date of all covered members.

Present Value of Benefits is the single sum value on the valuation date of all future benefits to be paid to current Members, Retirees, Beneficiaries, Disability Retirees and Vested Terminations.

Normal (Current Year's) Cost is the current year's cost for benefits yet to be funded.

Unfunded Accrued Liability is a liability which arises when a pension plan is initially established or improved and such establishment or improvement is applicable to all years of past service.

Total Recommended Contribution is equal to the Normal Cost plus an amount sufficient to amortize the Unfunded Accrued Liability over a period ending in 2041. The recommended amount is adjusted for interest according to the timing of contributions during the year.

Entry Age Normal Cost Method - Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation.

- (a) The normal cost accrual rate equals:
  - (i) the present value of future benefits for the participant, determined as of the participant's entry age, divided by
  - (ii) the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.
- (b) In calculating the present value of future compensation, the salary scale is applied both retrospectively and prospectively to estimate compensation in years prior to and subsequent to the valuation year based on the compensation used for the valuation.
- (c) The accrued liability is the sum of the individual accrued liabilities for all participants and beneficiaries. A participant's accrued liability equals the present value, at the participant's attained age, of future benefits less the present value at the participant's attained age of the individual normal costs payable in the future. A beneficiary's accrued liability equals the present value, at the beneficiary's attained age, of future benefits. The unfunded accrued liability equals the total accrued liability less the actuarial value of assets.
- (d) Under this method, the entry age used for each active participant is the participant's age at the time he or she would have commenced participation if the plan had always been in existence under current terms, or the age as of which he or she first earns service credits for purposes of benefit accrual under the current terms of the plan.

## DISCUSSION OF RISK

ASOP No. 51, Assessment and Disclosure of Risk Associated with Measuring Pension Obligations and Determining Pension Plan Contributions, states that the actuary should identify risks that, in the actuary's professional judgment, may reasonably be anticipated to significantly affect the plan's future financial condition.

Throughout this report, actuarial results are determined under various assumption scenarios. These results are based on the premise that all future plan experience will align with the plan's actuarial assumptions; however, there is no guarantee that actual plan experience will align with the plan's assumptions. It is possible that actual plan experience will differ from anticipated experience in an unfavorable manner that will negatively impact the plan's funded position.

Below are examples of ways in which plan experience can deviate from assumptions and the potential impact of that deviation. Typically, this results in an actuarial gain or loss representing the current-year financial impact on the plan's unfunded liability of the experience differing from assumptions; this gain or loss is amortized over a period of time determined by the plan's amortization method. When assumptions are selected that adequately reflect plan experience, gains and losses typically offset one another in the long term, resulting in a relatively low impact on the plan's contribution requirements associated with plan experience. When assumptions are too optimistic, losses can accumulate over time and the plan's amortization payment could potentially grow to an unmanageable level.

- Demographic Assumptions: Actuarial results take into account various potential events that could happen to a plan participant, such as retirement, termination, disability, and death. Each of these potential events is assigned a liability based on the likelihood of the event and the financial consequence of the event for the plan. Accordingly, actuarial liabilities reflect a blend of financial consequences associated with various possible outcomes (such as retirement at one of various possible ages). Once the outcome is known (e.g. the participant retires) the liability is adjusted to reflect the known outcome. This adjustment produces a gain or loss depending on whether the outcome was more or less favorable than other outcomes that could have occurred.
- Contribution Risk: This risk results from the potential that actual employer contributions may deviate from actuarially determined contributions, which are determined in accordance with the Board's funding policy. The funding policy is intended to result in contribution requirements that if paid when due, will result in a reasonable expectation that assets will accumulate to be sufficient to pay plan benefits when due. Contribution deficits, particularly large deficits and those that occur repeatedly, increase future contribution requirements and put the plan at risk for not being able to pay plan benefits when due.

### Impact of Plan Maturity on Risk

For newer pension plans, most of the participants and associated liabilities are related to active members who have not yet reached retirement age. As pension plans continue in operation and active members reach retirement ages, liabilities begin to shift from being primarily related to active members to being shared amongst active and retired members. Plan maturity is a measure of the extent to which this shift has occurred. It is important to understand that plan maturity can have an impact on risk tolerance and the overall risk characteristics of the plan. For example, plans with a large amount of retired liability do not have as long of a time horizon to recover from losses (such as losses on investments due to lower than expected investment returns) as plans where the majority of the liability is attributable to active members.

For this reason, less tolerance for investment risk may be warranted for highly mature plans with a substantial inactive liability. Similarly, mature plans paying substantial retirement benefits resulting in a small positive or net negative cash flow can be more sensitive to near term investment volatility, particularly if the size of the fund is shrinking, which can result in less assets being available for investment in the market.

To assist with determining the maturity of the plan, we have provided some relevant metrics in the table following titled “Plan Maturity Measures and Other Risk Metrics”. Highlights of this information are discussed below:

- The Support Ratio, determined as the ratio of active to inactive members, has stayed about the same from March 1, 2019 to January 1, 2022, indicating that the plan's maturity level has not significantly changed during the period.
- The Accrued Liability Ratio, determined as the ratio of the Inactive Accrued Liability, which is the liability associated with members who are no longer employed but are due a benefit from the plan, to the Total Accrued Liability, is 100.0%. With a plan of this maturity, losses due to lower than expected investment returns or demographic factors will need to be made up for over a shorter time horizon than would be needed for a less mature plan.
- The Funded Ratio, determined as the ratio of the Actuarial Value of Assets to the Total Accrued Liability, has decreased from 1.7% on March 1, 2019 to 0.3% on January 1, 2022.
- The Net Cash Flow Ratio, determined as the ratio of the Net Cash Flow (contributions minus benefit payments and administrative expenses) to the Market Value of Assets, decreased from -3.3% on March 1, 2019 to -82.3% on January 1, 2022. The current Net Cash Flow Ratio of -82.3% indicates that contributions are not currently covering the plan's benefit payments and administrative expenses.

It is important to note that the actuary has identified the risks above as the most significant risks based on the characteristics of the plan and the nature of the project, however, it is not an exhaustive list of potential risks that could be considered. Additional advanced modeling, as well as the identification of additional risks, can be provided at the request of the audience addressed on page 2 of this report.

PLAN MATURITY MEASURES AND OTHER RISK METRICS

	<u>1/1/2022</u>	<u>1/1/2021</u>	<u>3/1/2020</u>	<u>3/1/2019</u>
<u>Support Ratio</u>				
Total Actives	0	0	0	0
Total Inactives	1	1	1	1
Actives / Inactives	0.0%	0.0%	0.0%	0.0%
 <u>Asset Volatility Ratio</u>				
Market Value of Assets (MVA)	559	1,201	3,775	8,502
Total Annual Payroll	0	0	0	0
MVA / Total Annual Payroll	N/A	N/A	N/A	N/A
 <u>Accrued Liability (AL) Ratio</u>				
Inactive Accrued Liability	238,139	254,067	485,959	506,663
Total Accrued Liability	238,139	254,067	485,959	506,663
Inactive AL / Total AL	100.0%	100.0%	100.0%	100.0%
 <u>Funded Ratio</u>				
Actuarial Value of Assets (AVA)	738	1,223	3,701	8,542
Total Accrued Liability	238,139	254,067	485,959	506,663
AVA / Total Accrued Liability	0.3%	0.5%	0.8%	1.7%
 <u>Net Cash Flow Ratio</u>				
Net Cash Flow <sup>1</sup>	(460)	(2,447)	(4,810)	(283)
Market Value of Assets (MVA)	559	1,201	3,775	8,502
Ratio	-82.3%	-203.7%	-127.4%	-3.3%

<sup>1</sup> Determined as total contributions minus benefit payments and administrative expenses.

STATEMENT OF FIDUCIARY NET POSITION  
December 31, 2021

<u>ASSETS</u>	MARKET VALUE
Cash and Cash Equivalents:	
Cash	559
Total Cash and Equivalents	559
Total Receivable	0
Total Investments	0
Total Assets	559
 <u>LIABILITIES</u>	
Total Liabilities	0
Net Assets:	
Active and Retired Members' Equity	559
NET POSITION RESTRICTED FOR PENSIONS	559
TOTAL LIABILITIES AND NET ASSETS	559

STATEMENT OF CHANGES IN FIDUCIARY NET POSITION  
FOR THE YEAR ENDED December 31, 2021  
Market Value Basis

ADDITIONS

Contributions:

Village 47,833

Total Contributions 47,833

Investment Income:

Net Increase in Fair Value of Investments 0

Interest & Dividends 5

Less Investment Expense <sup>1</sup> (187)

Net Investment Income (182)

Total Additions 47,651

DEDUCTIONS

Distributions to Members:

Benefit Payments 48,293

Refund of Contributions/Transfers 0

Total Distributions 48,293

Administrative Expenses 0

Total Deductions 48,293

Net Increase in Net Position (642)

NET POSITION RESTRICTED FOR PENSIONS

Beginning of the Year 1,201

End of the Year 559

<sup>1</sup> Investment Related expenses include investment advisory, custodial and performance monitoring fees.

ACTUARIAL ASSET VALUATION

December 31, 2021

Development of Actuarial Value of Assets

Market Value of Assets, 12/31/2021	559
(Gains)/Losses Not Yet Recognized	179
Actuarial Value of Assets, 12/31/2021	<u>738</u>
12/31/2021 Limited Actuarial Assets:	671

Development of Investment Gain/Loss

Market Value of Assets, 12/31/2020	1,201
Contributions Less Benefit Payments & Administrative Expenses	(460)
Expected Investment Earnings <sup>1</sup>	0
Actual Net Investment Earnings	<u>(182)</u>
2021 Actuarial Investment Gain/(Loss)	(182)

<sup>1</sup> Expected Investment Earnings = 0.00% x (1,201 + 0.5 x -460)

Gains/(Losses) Not Yet Recognized

Plan Year Ending	Gain/(Loss)	Amounts Not Yet Recognized by Valuation Year				
		2021	2022	2023	2024	2025
2/28/2018	123	4	0	0	0	0
2/28/2019	13	3	0	0	0	0
2/29/2020	83	36	19	3	0	0
12/31/2020	(127)	(76)	(51)	(25)	0	0
12/31/2021	(182)	(146)	(109)	(73)	(36)	0
Total		(179)	(141)	(95)	(36)	0

Development of Asset Returns

(A) 12/31/2020 Actuarial Assets:	1,223
(I) Net Investment Income:	
1. Interest and Dividends	5
2. Realized Gains (Losses)	0
3. Change in Actuarial Value	90
4. Investment Expenses	<u>(187)</u>
Total	(92)
(B) 12/31/2021 Actuarial Assets:	738
Actuarial Asset Rate of Return = (2 x I) / (A + B - I):	-8.96%
Market Value of Assets Rate of Return:	-18.75%
Actuarial Gain/(Loss) due to Investment Return (Actuarial Asset Basis)	(92)

CHANGES IN NET ASSETS AVAILABLE FOR BENEFITS  
December 31, 2021  
Actuarial Asset Basis

INCOME		
Contributions:		
Village	47,833	
Total Contributions		47,833
Earnings from Investments		
Interest & Dividends	5	
Change in Actuarial Value	90	
Total Earnings and Investment Gains		95
EXPENSES		
Administrative Expenses:		
Investment Related <sup>1</sup>	187	
Other	0	
Total Administrative Expenses		187
Distributions to Members:		
Benefit Payments	48,293	
Refund of Contributions/Transfers	0	
Total Distributions		48,293
Change in Net Assets for the Year		(552)
Net Assets Beginning of the Year		1,223
Net Assets End of the Year <sup>2</sup>		738

<sup>1</sup> Investment Related expenses include investment advisory, custodial and performance monitoring fees.

<sup>2</sup> Net Assets may be limited for actuarial consideration.



STATISTICAL DATA

	<u>1/1/2022</u>	<u>1/1/2021</u>	<u>3/1/2020</u>	<u>3/1/2019</u>
<u>Actives</u>				
Number	0	0	0	0
<u>Service Retirees</u>				
Number	0	0	1	1
Average Current Age	N/A	N/A	85.6	84.6
Average Annual Benefit	N/A	N/A	\$48,293	\$47,121
<u>Beneficiaries</u>				
Number	1	1	0	0
Average Current Age	90.6	89.6	N/A	N/A
Average Annual Benefit	\$48,293	\$48,293	N/A	N/A
<u>Disability Retirees</u>				
Number	0	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A
<u>Terminated Vested</u>				
Number	0	0	0	0
Average Current Age	N/A	N/A	N/A	N/A
Average Annual Benefit	N/A	N/A	N/A	N/A

## VALUATION PARTICIPANT RECONCILIATION

### 1. Active lives

a. Number in prior valuation 1/1/2021	0
b. Terminations	
i. Vested (partial or full) with deferred benefits	0
ii. Non-vested or full lump sum distribution received	0
iii. Transferred service to other fund	0
c. Deaths	
i. Beneficiary receiving benefits	0
ii. No future benefits payable	0
d. Disabled	0
e. Retired	<u>0</u>
f. Continuing participants	0
g. New entrants	<u>0</u>
h. Total active life participants in valuation	<u>0</u>

### 2. Non-Active lives (including beneficiaries receiving benefits)

	Service Retirees, Vested Receiving <u>Benefits</u>	Receiving Death <u>Benefits</u>	Receiving Disability <u>Benefits</u>	Vested <u>Deferred</u>	<u>Total</u>
a. Number prior valuation	0	1	0	0	1
Retired	0	0	0	0	0
Vested Deferred	0	0	0	0	0
Death, With Survivor	0	0	0	0	0
Death, No Survivor	0	0	0	0	0
Disabled	0	0	0	0	0
Refund of Contributions	0	0	0	0	0
Rehires	0	0	0	0	0
Expired Annuities	0	0	0	0	0
Data Corrections	0	0	0	0	0
Hired/Termed in Same Year	0	0	0	0	0
b. Number current valuation	0	1	0	0	1

## SUMMARY OF CURRENT PLAN

### Article 4 Pension Fund

The Plan is established and administered as prescribed by “Article 4. Firefighters’ Pension Fund – Municipalities 500,000 and Under” of the Illinois Pension Code.

### Plan Administration

The Plan is a single employer defined benefit pension plan administered by a Board of Trustees comprised of:

- a.) Two members appointed by the Municipality,
- b.) Two active Members of the Fire Department elected by the Membership, and
- c.) One retired Member of the Fire Department elected by the Membership.

### Credited Service

Years and fractional parts of years of service (except as noted below) as a sworn Firefighter employed by the Municipality.

### Salary

Annual salary, including longevity, attached to firefighter’s rank, as established by the municipality appropriation ordinance, excluding overtime pay, bonus pay and holiday pay except for the base 8 hours of the 10 pensionable holidays which is included.

For Tier 2 participants, the salary is capped at a rate of \$106,800 as of 2011, indexed annually at a rate of CPI-U, but not to exceed 3.00%.

### Normal Retirement

Date

**Tier 1:** Age 50 and 20 years of Credited Service.

**Tier 2:** Age 55 and 10 years of Credited Service.

Benefit

**Tier 1:** 50% of annual salary attached to rank on last day of service plus 2.50% of annual salary for each year of service over 20 years, up to a maximum of 75% of salary. The minimum monthly benefit is \$1,159.27 per month.

**Tier 2:** 2.50% per year of service times the average salary for the 48 consecutive months of service within the last 60 months of service in which the total salary was the highest prior to retirement times the number of years of service, up to a maximum of 75% of average salary. The minimum monthly benefit is \$1,159.27 per month.

Form of Benefit

**Tier 1:** For married retirees, an annuity payable for the life of the Member; upon the death of the member, 100% of the Member’s benefit payable to the spouse until death. For unmarried retirees, the normal form is a Single Life Annuity.

**Tier 2:** Same as above, but with 66 2/3% of benefit continued to spouse.

Early Retirement

Date	<b>Tier 1:</b> Age 60 and 10 years of Credited Service. <b>Tier 2:</b> Age 50 and 10 years of Credited Service.
Benefit	<b>Tier 1:</b> 1.50% plus 0.10% for each year of service in excess of 10 years, times salary x service (complete years). <b>Tier 2:</b> Normal Retirement Benefit, reduced 6.00% for each year before age 55, with no minimum benefit.
Form of Benefit	Same as Normal Retirement.

Disability Benefit

Eligibility	Total and permanent as determined by the Board of Trustees. Seven years of service required for non-service connected disability.
Benefit Amount	A maximum of:

- a.) 65% of salary attached to the rank held by Member on last day of service, and;
- b.) The monthly retirement pension that the Member is entitled to receive if he or she retired immediately.

For non-service connected disabilities, a benefit of 50% of salary attached to rank held by Member on last day of service.

Cost-of-Living Adjustment

**Tier 1:**

*Retirees:* An annual increase equal to 3.00% per year after age 55. Those that retire prior to age 55 receive an increase of 1/12 of 3.00% for each full month since benefit commencement upon reaching age 55.

*Disabled Retirees:* An annual increase equal to 3.00% per year of the original benefit amount beginning at age 60. Those that become disabled prior to age 60 receive an increase of 3.00% of the original benefit amount for each year since benefit commencement upon reaching age 60.

**Tier 2:** An annual increase each January 1 equal to 3.00% per year or one-half of the annual unadjusted percentage increase in the consumer price index-u for the 12 months ending with the September preceding each November 1, whichever is less, of the original pension after the attainment of age 60 or first anniversary of pension start date whichever is later.

### Pre-Retirement Death Benefit

Service Incurred	100% of salary attached to rank held by Member on last day of service.
Non-Service Incurred	A maximum of: a.) 54% of salary attached to the rank held by Member on last day of service, and; b.) The monthly retirement pension earned by the deceased Member at the time of death, regardless of whether death occurs before or after age 50.

### Vesting (Termination)

Vesting Service Requirement	10 years.
Non-Vested Benefit	Refund of Member Contributions.
Vested Benefit	Either the termination benefit, payable upon reaching age 60 (55 for Tier 2), provided contributions are not withdrawn, or a refund of member contributions.
Termination Benefit	Based on the monthly salary attached to the Member's rank at separation from service and equals:  <b>Tier 1:</b> 1.50% plus 0.10% for each year of service in excess of 10 years, times salary x service (based on complete years).  <b>Tier 2:</b> 2.50% of 8-year final average salary times creditable service.

### Contributions

Employee	9.455% of Salary.
Municipality	Remaining amount necessary for payment of Normal (current year's) Cost and amortization of the accrued past service liability.