Actuarial Funding Report

OAK PARK POLICE PENSION FUND

Actuarial Valuation
as of January 1, 2019

For the Contribution Year January 1, 2019 to December 31, 2019

LAUTERBACH & AMEN, LLP

Actuarial Valuation – Funding Recommendation

OAK PARK POLICE PENSION FUND

Contribution Year Ending: December 31, 2019
Actuarial Valuation Date: January 1, 2019
Utilizing Data as of December 31, 2018

Submitted by:

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May 7, 2019

LAUTERBACH & AMEN, LLP

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ACTUARIAL CERTIFICATION

This report documents the results of the Actuarial Valuation for the Oak Park Police Pension Fund. The information was prepared for use by the Oak Park Police Pension Fund and the Village of Oak Park, Illinois for determining the Recommended Contributions, under the selected Funding Policy and Statutory Minimum guidelines, for the Contribution Year January 1, 2019 to December 31, 2019. It is not intended or suitable for other purposes. Determinations for purposes other than the Employer's Actuarial Recommended Contribution may be significantly different from the results herein.

The results in this report are based on the census data and financial information submitted by the Village of Oak Park, Illinois and may include results from the prior Actuary. We did not prepare the Actuarial Valuations for the years prior to January 1, 2018. Those valuations were prepared by the prior Actuary whose reports have been furnished to us, and our disclosures are based on those reports. An audit of the prior Actuary's results was not performed, but high-level reviews were completed for general reasonableness, as appropriate, based on the purpose of this valuation. The accuracy of the results is dependent on the precision and completeness of the underlying information.

In addition, the results of the Actuarial Valuation involve certain risks and uncertainty as they are based on future assumptions, market conditions, and events that may never materialize as assumed. For this reason, certain assumptions and future results may be materially different than those presented in this report. See the *Management Summary* section of this report for a more detailed discussion of the Defined Benefit Plan Risks, as well as the limitations of this Actuarial Valuation on assessing those risks. We are not aware of any known events subsequent to the Actuarial Valuation Date, which are not reflected in this report but should be valued, that may materially impact the results.

The valuation results summarized in this report involve actuarial calculations that require assumptions about future events. The Village of Oak Park, Illinois selected certain assumptions, while others were the result of guidance and/or judgment from the Plan's Actuary or Advisors. We believe that the assumptions used in this valuation are reasonable and appropriate for the purposes for which they have been used. The selected assumptions represent our best estimate of the anticipated long-term experience of the Plan, and meet the guidelines set forth in the Actuarial Standards of Practice.

To the best of our knowledge, all calculations are in accordance with the applicable funding requirements, and the procedures followed and presentation of results conform to generally accepted actuarial principles and practices as prescribed by the Actuarial Standards Board. The undersigned of Lauterbach & Amen, LLP is an Associate of the Society of Actuaries and an Enrolled Actuary, and meets the Qualification Standards of the American Academy of Actuaries to render this Actuarial Certification. There is no relationship between the Village of Oak Park, Illinois and Lauterbach & Amen, LLP that impairs our objectivity.

Respectfully Submitted,

LAUTERBACH & AMEN, LLP

Todd A. Schroeder

Todd A. Schroeder, ASA, FCA, EA, MAAA

MANAGEMENT SUMMARY

Recommended Contribution
Funded Status
Management Summary – Comments and Analysis
Actuarial Recommended Contribution – Reconciliation

RECOMMENDED CONTRIBUTION

	Prior Valuation	Current Valuation
Contribution Requirement	$6,211,250	$6,338,241
Expected Payroll	$10,881,422	$10,535,470
Contribution Requirement as a Percent of Expected Payroll	57.08%	60.16%

Recommended Contribution has Increased $126,991 from Prior Year.

FUNDED STATUS

	Prior Valuation	Current Valuation
Normal Cost	$2,418,726	$2,258,136
Market Value of Assets	$98,885,224	$90,484,189
Actuarial Value of Assets	$93,085,023	$97,275,217
Actuarial Accrued Liability	$166,524,424	$172,661,768
Unfunded Actuarial Accrued Liability	$73,439,401	$75,386,551
Percent Funded		
Actuarial Value of Assets	55.90%	56.34%
Market Value of Assets	59.38%	52.41%

Funded Percentage has Increased by 0.44% on an Actuarial Value of Assets Basis.

MANAGEMENT SUMMARY – COMMENTS AND ANALYSIS

Contribution Results

The Recommended Contribution is based on the selected Funding Policy and methods that are outlined in the *Actuarial Funding Policy* section of this report.

The Illinois State Statutes for Pension Funds contain parameters that are used to determine the Statutory Minimum Contribution to a public Pension Fund. Those parameters and the resulting Statutory Minimum Contribution are found in the *Illinois Statutory Minimum Contribution* section of this report.

"Contribution Risk" is defined by the Actuarial Standards of Practice as the potential for actual future contributions to deviate from expected future contributions. For example, when actual contributions are not made in accordance to the Plan's Funding Policy, or when future experience deviates materially from assumed. While it is essential for the Actuary and Plan Sponsor to collaborate on implementing a sound and financially feasible Funding Policy, it is important to note that the Actuary is not required, and is not in the position to, evaluate the ability or willingness of the Plan Sponsor to make the Recommended Contribution under the selected Funding Policy.

As a result, while Contribution Risk may be a significant source of risk for the Plan, this Actuarial Valuation makes no attempt to assess the impact of future contributions falling short of those recommended under the selected Funding Policy. Notwithstanding the above, see later in this section for the impact on the current Recommended Contribution of any contribution shortfalls or excesses from the prior year.

Defined Benefit Plan Risks

Asset Growth:

Pension funding involves preparing Plan assets to pay for benefits when Members retire. During their working careers, assets grow with contributions and investment earnings; and then, the Pension Fund distributes assets in retirement. Based on the Plan's current mix of Employees and funded status, the Plan should experience positive asset growth, on average, if the Recommended Contributions are made and expected investment earnings come in. In the current year, the Plan's asset growth was negative by approximately $8.4 million.

Asset growth is important in the long-term. Long-term cash flow out of the Pension Fund is primarily benefit payments, and expenses are a smaller portion. The Plan should monitor the impact of expected benefit payments on future asset growth. In the next 5 years, benefit payments are anticipated to increase 35-40%, or approximately $2.8 million. In the next 10 years, the expected increase in benefit payments is 65-70%, or approximately $5.2 million.

Furthermore, Plans' with a large number of retirees have an increased "Longevity Risk". Longevity Risk is the possibility that retirees may live longer than projected by the Plan's mortality assumption. As shown above, benefit payments are expected to increase over the next 5-year and 10-year horizons. The projected increases assume that current retirees pass away according to the Plan's mortality assumption. To the extent that current retirees live longer than expected, the future 5-year and 10-year benefit projections may be larger than the amounts disclosed above. Higher levels of benefit payments, payable for a longer period of time, may cause a significant strain to the Plan's cash flow, future Recommended Contributions, and may lead to Plan insolvency.

Unfunded Liability:
Unfunded Liability represents the financial shortfall of the Actuarial Value of Assets compared to the Actuarial Accrued Liability. To the extent that Unfunded Liability exists, the Plan is losing potential investment earnings due to the financial shortfall. Contributions towards Unfunded Liability pay for the lost investment earnings, as well as the outstanding unfunded amount. If payments towards Unfunded Liability are not made, the Unfunded Liability will grow.

In the early 1990s, many Pension Funds in Illinois adopted an increasing payment towards Unfunded Liability due to a change in legislation. The initial payment decreased, and future payments are anticipated to increase annually after that. In many situations, payments early on were less than the interest on Unfunded Liability, which means that Unfunded Liability increased even though contributions were made at the recommended level.

The current Recommended Contribution includes a payment towards Unfunded Liability that is approximately $46,000 less than the interest on Unfunded Liability. All else being equal and contributions being made, Unfunded Liability is expected to increase. The Employer and Fund should anticipate that improvement in the current Percent Funded will be mitigated in the short-term. The Employer and Fund should understand this impact as we progress forward to manage expectations.

Actuarial Value of Assets:
The Pension Fund smooths asset returns that vary from expectations over a five-year period. The intention over time is that asset returns for purposes of funding recommendations are a combination of several years. The impact is intended to smooth out the volatility of contribution recommendations over time, but not necessarily increase or decrease the level of contributions over the long-term.

When asset returns are smoothed, there are always gains or losses on the Market Value of Assets that are going to be deferred for current funding purposes, and recognized in future years. Currently, the Pension Fund is deferring approximately $6.8 million in losses on the Market Value of Assets. These are asset losses that will be recognized in upcoming periods, independent of the future performance of the Market Value of Assets.

Cash Flow Risk:
Assets, liabilities, and Funded Status are good metrics to monitor over time to assess the progress of the Funding Policy. However, these metrics may provide limited forward-looking insights. Specifically, the maturity of a pension fund can pose certain risks that often cannot be assessed with a point-in-time metric such as Funded Percentage.

For example, two different pension funds could have the same Funded Percentage, but have completely different risk profiles. One fund might mostly cover active employees with little to no benefits in pay status, whereas a second fund might mostly cover retirees with a significant level of annual benefit payments. The latter fund has a greater "Cash Flow Risk", i.e. a more significant chance that negative cash flows could lead to a deteriorating, rather than improving, Funded Percentage over time.

It is also important to note that, in general, positive net cash flows are good, but also need to be sufficient to cover the growth in the liabilities (i.e. the Normal Cost as well as interest on the Actuarial Accrued Liability). Typically, when cash flows are assumed to be insufficient to cover the growth in liabilities, the Funded Percentage will decline, while future contribution requirements will increase.

For this Plan, the Market Value of Assets is less than the Actuarial Accrued Liability for inactive participants. This means, there is not enough money in the Plan to cover the benefits payable to the current retiree population, and there will not be any money left for any of the active Members to receive a benefit when they retire. Significant Cash Flow Risk exists in the Plan Sponsor's ability to pay retirement benefits in the future. Without additional funding and the establishment of a Formal Funding Policy, the Plan is at risk of becoming insolvent.

Benefit Payment Risk:
Ideally, a plan in good financial standing will have the ratio of annual benefits payments to the Market Value of Assets to be less than the Expected Return on Investments assumption (i.e. 6.75%). Theoretically, in this case it can be considered that investment returns will fully cover the annual benefit payments, and therefore, all Employer and Employee Contributions made to the Fund will be used to pay for future benefit accruals and pay down the existing Unfunded Liability. To the extent the ratio of the annual benefit payments to the Market Value of Assets increases to above the Expected Rate of Return assumption, the Plan may experience some additional risks, such as the need to keep assets in more liquid investments, inability to pay down Unfunded Liability, and may lead to Plan insolvency.

As of the Valuation Date, the Oak Park Police Pension Fund has a ratio of benefit payments to the Market Value of Assets of 8.75%. In this case, a portion of the Employer Contributions are being used to pay the annual benefit payments creating Benefit Payment Risk and Cash Flow Risk. The Funded Percentage of the Plan may not grow as quickly as expected under the current Funding Policy, since the amortization payment towards the Unfunded Liability is not being fully realized. As shown in the *Asset Growth* section in this report, the 5-year and 10-year horizons of future benefit payments are expected to increase. The Plan Sponsor should monitor the percentage of annual benefit payments to the Market Value of Assets and consider to change the Funding Policy if this ratio continues to increase.

Plan Assets

The results in this report are based on the assets held in the Pension Fund. Assets consist of funds held for investment and for benefit payments as of the Actuarial Valuation Date. In addition, assets may be adjusted for other events representing dollars that are reasonably expected to be paid out from the Pension Fund or deposited into the Pension Fund after the Actuarial Valuation Date as well.

The current Fund assets are audited.

The Plan Assets Used in this Report are Audited.

The Actuarial Value of Assets under the Funding Policy is equal to the fair Market Value of Assets, with unexpected gains and losses smoothed over 5 years. More detail on the Actuarial Value of Assets can be found in the *Funding Policy* section of this report.

Demographic Data

Demographic factors can change from year to year within the Pension Fund. Changes in this category include hiring new employees, employees retiring or becoming disabled, retirees passing away, and other changes. Demographic changes can cause an actuarial gain (contribution that is less than expected compared to the prior year) or an actuarial loss (contribution that is greater than expected compared to the prior year).

Demographic gains and losses occur when the assumptions over the one-year period for employee changes do not meet our long-term expectation. For example, if no employees become disabled during the year, we would expect a liability gain. If more employees become disabled than anticipated last year, we would expect a liability loss. Generally, we expect short-term fluctuations in demographic experience to create gains or losses of up to 3% of the Actuarial Accrued Liability in any given year, but to balance out in the long-term.

"Demographic Risk" occurs when Plan census experience differs significantly from expected. Similar to Longevity Risk discussed previously, additional risk is created when demographic experience differs from the assumed rates of disability, retirement, or termination. Under the chosen assumptions, actuarial gains and/or losses will always occur, as the assumptions will never be exactly realized. However, the magnitude of the gain and/or loss and its influence on the Recommended Contribution largely depends on the size of the Plan.

Based on the number of active participants in the Plan, the Recommended Contribution has a low risk of having a significant increase due to demographic experience. For example, 1 new disabled member would typically generate an increase to the Actuarial Accrued Liability. However, due to the size of the Plan, there is an appropriate means to absorb demographic losses without causing a significant increase to the Recommended Contribution.

In the current report, the key demographic changes were as follows:

New hires: The Fund added 10 new active Members in the current year through hiring, 3 of whom terminated employment within the current year. When a new member is admitted to the Pension Fund, the Employer Contribution will increase to reflect the new member. The increase in the Recommended Contribution in the current year for new Fund Members is approximately $21,000.

Retirement: There were 5 members of the Fund who retired during the year. When a Fund member retires, the Normal Cost will decrease. Any change in the Actuarial Accrued Liability will be considered when determining the amount to pay towards Unfunded Liability each year. The decrease in the Recommended Contribution in the current year due to the retirement experience is approximately $73,000.

Disability: There was 1 member of the Fund who became disabled during the year. When a member becomes disabled, the Fund will often experience a decrease in Normal Cost, but an increase in Unfunded

Liability. The increase in the Recommended Contribution in the current year for the new disability was approximately $16,000.

Deferred Annuitants: There were 2 vested members of the Fund who terminated employment during the year. The Fund may be obligated to pay a benefit to the members in the future. The decrease in the Recommended Contribution in the current year due to the termination experience is approximately $97,000.

Termination: There were 8 non-vested Members of the Fund who terminated employment during the year, 3 of whom were hired within the current year. 3 of the Members took a refund. The Fund is no longer obligated to pay a benefit to the Members in the future. The decrease in the Recommended Contribution in the current year due to the termination experience is approximately $48,000.

Mortality: There was 1 retiree who passed away during the year. When a retiree passes away, the Fund liability will decrease as the Pension Fund no longer will make future payments to the retiree. If there is an eligible surviving spouse, the Fund liability will increase to represent the value of the expected payments that will be made to the spouse.

As the inactive population ages and continues to collect benefits, the Fund liability will also increase. In the current year, there were 120 inactive participants who maintained their benefit collection status throughout the year. The net increase in the Recommended Contribution in the current year due to the mortality experience is approximately $35,000.

Salary Increases: Salary increases were less than anticipated in the current year. Most active Members received an increase of 3.50% or less. This caused a decrease in the Recommended Contribution in the current year of approximately $17,000.

Assumption Changes

In the current valuation, we have reviewed the individual pay scale assumption to reflect the newly settled bargaining agreement between the Village of Oak Park, the Illinois Fraternal Order of Police Labor Council, and the Fraternal Order of Police Oak Park Lodge No. 8, Inc. for the period January 1, 2018 through December 31, 2020. The year over year step increases dictated by the wage schedule did not change from the prior year contract, therefore, we have not updated the assumption for individual pay increases.

Funding Policy Changes

The Funding Policy was not changed from the prior year.

ACTUARIAL CONTRIBUTION RECOMMENDATION - RECONCILIATION

Actuarial Accrued Liability is expected to increase each year for both interest for the year and as active employees earn additional service years towards retirement. Similarly, Actuarial Accrued Liability is expected to decrease when the Fund pays benefits to inactive employees.

Contributions are expected to increase as expected pay increases under the Funding Policy for the Fund.

	Actuarial Liability	Contribution Recommendation
Prior Valuation	$ 166,524,424	$ 6,211,250
Expected Changes	5,599,039	186,338
Initial Expected Current Valuation	$ 172,123,463	$ 6,397,588

Other increases or decreases in Actuarial Accrued Liability (key changes noted below) will increase or decrease the amount of Unfunded Liability in the plan. To the extent Unfunded Liability increases or decreases unexpectedly, the contribution towards Unfunded Liability will also change unexpectedly.

	Actuarial Liability	Contribution Recommendation
Salary Increase Less than Expected	(192,417)	(16,710)
Demographic Changes	730,722	(132,000)
Asset Return Less than Expected *	-	63,121
Contributions Less than Expected	-	26,241
Total Actuarial Experience	$ 538,305	$ (59,347)
Current Valuation	$ 172,661,768	$ 6,338,241

*The impact on contribution due to asset performance is based on the Actuarial Value of Assets.

Key demographic changes were discussed in the prior section.

VALUATION OF FUND ASSETS

Market Value of Assets
Market Value of Assets (Gain)/Loss
Development of the Actuarial Value of Assets
Actuarial Value of Assets (Gain)/Loss
Historical Asset Performance

MARKET VALUE OF ASSETS

Statement of Assets

	Prior Valuation	Current Valuation
Cash and Cash Equivalents	$ 36,082	$ 19,659
Money Market	3,154,721	4,566,357
Fixed Income	29,163,222	31,542,706
Stock Equities	17,693,134	13,635,493
Mutual Funds	48,683,558	40,527,897
Receivables (Net of Payables)	154,508	192,077
Net Assets Available for Pensions	$ 98,885,224	$ 90,484,189

The Total Value of Assets has Decreased Approximately $8,401,000 from Prior Valuation.

Statement of Changes in Assets

Total Market Value - Prior Valuation	$ 98,885,224
Plus - Employer Contributions	5,724,005
Plus - Employee Contributions	1,173,251
Plus - Return on Investments	(7,214,487)
Less - Benefit and Related Payments	(8,009,047)
Less - Other Expenses	(74,757)
Total Market Value - Current Valuation	$ 90,484,189

The Rate of Return on Investments on the Market Value of Assets for the Fund was Approximately (7.4%) Net of Administrative Expenses.

The Rate of Return on Investments shown above has been determined as the Return on Investments from the Statement of Changes in Assets, as a percent of the average of the beginning and ending Market Value of Assets. The Rate of Return on Investments is net of Other Expenses, and has been excluded from the Total Market Value of Assets at the end of the Fiscal Year for this calculation.

MARKET VALUE OF ASSETS (GAIN)/LOSS

Current Year (Gain)/Loss on Market Value of Assets

Total Market Value - Prior Valuation	$ 98,885,224
Contributions	6,897,256
Benefit Payments	(8,009,047)
Expected Return on Investments	6,637,230
Expected Total Market Value - Current Valuation	104,410,663
Actual Total Market Value - Current Valuation	90,484,189
Current Market Value (Gain)/Loss	$ 13,926,474
Expected Return on Investments	$ 6,637,230
Actual Return on Investments (Net of Expenses)	(7,289,244)
Current Market Value (Gain)/Loss	$ 13,926,474

The Return on the Market Value of Assets was Lower than Expected Over the Most Recent Year.

The (Gain)/Loss on the Market Value of Assets has been determined based on the Expected Return on Investments as shown in the *Actuarial Assumptions* section of this report.

DEVELOPMENT OF THE ACTUARIAL VALUE OF ASSETS

Total Market Value - Current Valuation		$ 90,484,189
Adjustment for Prior (Gains)/Losses		
	Full Amount	
First Preceding Year	$ 13,926,474	11,141,179
Second Preceding Year	(7,250,252)	(4,350,151)
Third Preceding Year	-	-
Fourth Preceding Year	-	-
Total Deferred (Gain)/Loss		6,791,028
Initial Actuarial Value of Assets - Current Valuation		$ 97,275,217
Less Contributions for the Current Year and Interest		-
Less Adjustment for the Corridor		-
Actuarial Value of Assets - Current Valuation		$ 97,275,217

The Actuarial Value of Assets is Equal to the Fair Market Value of Assets with Unanticipated Gains/Losses Recognized over 5 Years. The Actuarial Value of Assets is Currently 108% of the Market Value.

ACTUARIAL VALUE OF ASSETS (GAIN)/LOSS

Total Actuarial Value - Prior Valuation	$ 93,085,023
Plus - Employer Contributions	5,724,005
Plus - Employee Contributions	1,173,251
Plus - Return on Investments	5,376,742
Less - Benefit and Related Payments	(8,009,047)
Less - Other Expenses	(74,757)
Total Actuarial Value - Current Valuation	$ 97,275,217

The Rate of Return on Investments on the Actuarial Value of Assets for the Fund was Approximately 5.7% Net of Administrative Expenses.

The Actuarial Value of Assets incorporates portions of gains and losses over multiple years.

HISTORICAL ASSET PERFORMANCE

The chart below shows the historical Rates of Return on Investments for both Market Value of Assets and Actuarial Value of Assets.

	Market Value	Actuarial Value
First Preceding Year	(7.4%)	5.7%
Second Preceding Year	15.1%	8.4%

The historical Rates of Return on Investments shown above were calculated based on the annual Return on Investment for the year, as a percentage of the average value of the assets for the year.

For purposes of determining the average value of assets during the year, the ending Market Value of Assets has been adjusted to net out to the portion related to the investment returns themselves. All other cash flows are included.

For purposes of determining the annual Return on Investment we have adjusted the figures shown on the preceding pages. The figures shown on the preceding pages are net of Investment Expenses. We have made an additional adjustment to net out Administrative Expenses. Netting out Administrative Expenses allows us to capture returns for the year that can be used to make benefit payments as part of the ongoing actuarial process.

The adjustment we make is for actuarial reporting purposes only. By netting out Administrative Expenses and capturing investment returns that are available to pay benefits, it provides us a comparison to the Expected Return on Investments, but does not provide a figure that would be consistent with the return rates that are determined by other parties. Therefore, this calculated rate of return should not be used to analyze investment performance of the Fund or the performance of the investment professionals.

VALUATION OF FUND ASSETS

<u>Expected Return on Investments Assumption</u>

The Expected Return on Investments for this valuation is 6.75%. "Investment Risk" is the potential that actual Return on Investments will be different from what is expected. The selected Expected Return on Investments assumption is chosen to be a long-term assumption, producing a return that, on average, would produce a stable rate of return over a long-term horizon. Actual asset returns in the short-term may deviate from this long-term assumption due to current market conditions. Furthermore, establishing the Expected Return on Investments assumption may be dependent on the State of Illinois State Statutes pertaining to the limitations on types of investments Plan Sponsors may use. If the actual annual rates of return are less than the Expected Return on Investments, actuarial losses will be produced, thus increasing the Plan's Unfunded Liability and, subsequently, future contribution requirements.

"Asset/Liability Mismatch" risk is a similar concept as Investment Risk, as it relates to setting the Expected Return on Investments assumption compared to the actual Return on Investments achieved. The Interest Rate used to discount future Plan liabilities is set equal to the Expected Return on Investments. It is expected that the selected Interest Rate be a rate that is reasonably expected to be achieved over the long-term. To the extent the selected Interest Rate to value plan liabilities is unreasonable, or significantly different than the actual Return on Investments earned over an extended period of time, additional Interest Rate risk is created. For example, determining plan liabilities at an Interest Rate higher than what is expected to be achieved through investment returns results in Unfunded Liability that is not a true representation of the Plan's condition and Funded Percentage. As a result, the Actuarial Accrued Liability determined is an amount smaller than the liability that would be produced with an Interest Rate more indicative of future Expected Return on Investments. Therefore, the Recommended Contributions under the established Funding Policy may not be sufficient to appropriately meet the true pension obligations.

RECOMMENDED CONTRIBUTION DETAIL

Actuarial Accrued Liability
Funded Status
Development of the Employer Normal Cost
Normal Cost as a Percentage of Expected Payroll
Contribution Recommendation
Actuarial Methods – Recommended Contribution

ACTUARIAL ACCRUED LIABILITY

	Prior Valuation	Current Valuation
Active Employees	$ 60,724,690	$ 58,692,333
Inactive Employees		
Terminated Employees - Vested	1,579,549	899,620
Retired Employees	91,034,105	98,858,148
Disabled Employees	3,263,734	4,420,113
Other Beneficiaries	9,922,346	9,791,554
Total Inactive Employees	105,799,734	113,969,435
Total Actuarial Accrued Liability	$ 166,524,424	$ 172,661,768

The Total Actuarial Liability has Increased Approximately $6,137,000 from Prior Valuation.

FUNDED STATUS

	Prior Valuation	Current Valuation
Total Actuarial Accrued Liability	$ 166,524,424	$ 172,661,768
Total Actuarial Value of Assets	93,085,023	97,275,217
Unfunded Actuarial Accrued Liability	$ 73,439,401	$ 75,386,551
Total Market Value of Assets	$ 98,885,224	$ 90,484,189
Percent Funded		
Actuarial Value of Assets	55.90%	56.34%
Market Value of Assets	59.38%	52.41%

Funded Percentage as of the Valuation Date is Subject to Volatility on Assets and Liability in the Short-Term.

RECOMMENDED CONTRIBUTION DETAIL

Development of the Employer Normal Cost

	Prior Valuation	Current Valuation
Total Normal Cost	$ 2,418,726	$ 2,258,136
Estimated Employee Contributions	(1,078,349)	(1,044,065)
Employer Normal Cost	$ 1,340,377	$ 1,214,071

At a 100% Funding Level, the Normal Cost Contribution is Still Required.

Normal Cost as a Percentage of Expected Payroll

	Prior Valuation	Current Valuation
Expected Payroll	$ 10,881,422	$ 10,535,470
Employee Normal Cost Rate	9.910%	9.910%
Employer Normal Cost Rate	12.32%	11.52%
Total Normal Cost Rate	22.23%	21.43%

Ideally, the Employer Normal Cost Rate will Remain Stable.

Contribution Recommendation

	Prior Valuation	Current Valuation
Employer Normal Cost*	$ 1,430,852	$ 1,296,021
Amortization of Unfunded Accrued Liability/(Surplus)	4,780,398	5,042,220
Funding Requirement	$ 6,211,250	$ 6,338,241

The Recommended Contribution has Increased 2.0% from Prior Valuation.

*Employer Normal Cost Contribution includes interest through the end of the year.

ACTUARIAL METHODS – RECOMMENDED CONTRIBUTION

Actuarial Valuation Date	January 1, 2019
Data Collection Date	December 31, 2018
Actuarial Cost Method	Entry Age Normal (Level % Pay)
Amortization Method	Level % Pay (Closed)
Amortization Target	100% Funded over 23 years
Asset Valuation Method	5-Year Smoothed Market Value

The contributions and benefit values of the Pension Fund are calculated by applying actuarial assumptions to the benefit provisions and census information furnished, using the Actuarial Cost Methods described. The Actuarial Cost and Amortization Methods allocate the projected obligations of the plan over the working lifetimes of the plan participants.

The Recommended Contribution amount shown in this report is based on the methods summarized above. The *Actuarial Funding Policies* section of the report includes a more detailed description of the Actuarial Funding Methods being used.

The Actuarial Funding Methods are meant to provide a systematic process for determining contributions on an annual basis. The methods do not impact the expectation of future benefit payments. The methods only impact the way contributions are made towards future benefit payments.

Different Actuarial Funding Methods may achieve funding goals with differing levels of success. Certain methods are more efficient and more stable on an annual basis.

ILLINOIS STATUTORY MINIMUM CONTRIBUTION

Statutory Minimum Contribution
Funded Status – Statutory Minimum
Actuarial Methods – Illinois Statutory Minimum Contribution
Methods and Assumptions

STATUTORY MINIMUM CONTRIBUTION

	Minimum Contribution
Contribution Requirement	$5,477,918
Expected Payroll	$10,535,470
Contribution Requirement as a Percent of Expected Payroll	52.00%

FUNDED STATUS – STATUTORY MINIMUM

	Minimum Contribution
Normal Cost	$2,780,261
Market Value of Assets	$90,484,189
Actuarial Value of Assets	$97,275,217
Actuarial Accrued Liability	$166,577,523
Unfunded Actuarial Accrued Liability	$69,302,306
Percent Funded	
Actuarial Value of Assets	58.40%
Market Value of Assets	54.32%

ILLINOIS STATUTORY MINIMUM CONTRIBUTION

The Statutory Minimum Contribution is based on Actuarial Funding Methods and funding parameters in the Illinois statutes for pension funding. The resulting contribution is lower than the Recommended Contribution for the current plan year. The lower contribution amount is not recommended because it represents only a deferral of contributions when compared to the Recommended Contribution method.

Actuarial Funding Methods for pensions are best applied to provide a balance between the long-term goals of a variety of stakeholders:

1. Beneficiaries – the Members are interested in benefit security and having the funds available to pay benefits when retired

2. Employers – cost control and cost stability over the long-term

3. Taxpayers – paying for the services they are receiving from active employees

The Statutory Minimum Contribution methods are not intended to provide a better system in any of the above categories long-term. The parameters are not recommended for a long-term funding strategy.

The Statutory Minimum methods put into place in 2011 were intended to provide short-term budget relief for Employer Contributions. An Employer using the Statutory Minimum parameters for current funding should view the contributions as short-term relief. Our recommendation in this situation is for a pension fund and an Employer to work towards a long-term funding strategy that better achieves the long-term funding goals, over a period that does not exceed 3-5 years.

The Securities and Exchange Commission in 2013 used the phrase "Statutory Underfunding" to describe situations where contributions appear to be more manageable in the short-term, but set up future contribution requirements that are less likely to be manageable.

ACTUARIAL METHODS – ILLINOIS STATUTORY MINIMUM CONTRIBUTION

Actuarial Valuation Date	January 1, 2019
Data Collection Date	December 31, 2018
Actuarial Cost Method	Projected Unit Credit (Level % of Pay)
Amortization Method	Level % Pay (Closed)
Remaining Amortization Period	90% Funded over 22 years
Asset Valuation Method	5-Year Smoothed Market Value

The contribution and benefit values of the Pension Fund are calculated by applying actuarial assumptions to the benefit provisions and census information furnished, using the Actuarial Cost Methods described. The Actuarial Cost and Amortization methods allocate the projected obligations of the plan over the working lifetimes of the plan participants.

The Actuarial Funding Methods are meant to provide a systematic process for determining contributions on an annual basis. The methods do not impact the expectation of future benefit payments. The methods only impact the way contributions are made towards future benefit payments.

Different Actuarial Funding Methods may achieve funding goals with differing levels of success. Certain methods are more efficient and more stable on an annual basis.

ACTUARIAL VALUATION DATA

Active Employees
Inactive Employees
Summary of Benefit Payments

ACTUARIAL VALUATION DATA

ACTIVE EMPLOYEES

	Prior Valuation	Current Valuation
Vested	80	75
Nonvested	31	30
Total Active Employees	111	105
Total Payroll	$ 10,720,613	$ 10,379,773

INACTIVE EMPLOYEES

	Prior Valuation	Current Valuation
Terminated Employees - Vested	5	6
Retired Employees	91	96
Disabled Employees	4	5
Other Beneficiaries	28	27
Total Inactive Employees	128	134

SUMMARY OF BENEFIT PAYMENTS

	Prior Valuation	Current Valuation
Terminated Employees - Vested	$ 14,105	$ 12,880
Retired Employees	522,278	566,921
Disabled Employees	17,466	23,493
Other Beneficiaries	89,819	89,819
Total Inactive Employees	$ 643,669	$ 693,113

Benefits shown for Terminated Employees under deferred retirement are not currently in pay status.

ACTUARIAL FUNDING POLICIES

Actuarial Cost Method
Financing Unfunded Actuarial Accrued Liability
Actuarial Value of Assets

ACTUARIAL COST METHOD

The Actuarial Cost Method allocates the projected obligations of the plan over the working lifetimes of the plan participants.

In accordance with the Pension Fund's Funding Policy the Actuarial Cost Method for the Recommended Contribution basis is Entry Age Normal (Level Percent of Pay). The Entry Age Normal Cost Method is a method under which the actuarial present value of the projected benefits of each individual included in an Actuarial Valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age. The portion of this actuarial present value allocated to a valuation year is called Normal Cost. The portion of the actuarial present value not provided at an Actuarial Valuation Date by the actuarial present value of future Normal Costs is called the Actuarial Accrued Liability.

The Entry Age Normal method attempts to create a level cost pattern. In contrast to other Actuarial Cost Methods which inherently lead to uneven or less predictable cost patterns, the Entry Age Normal method is generally understood to be less risky in terms of contribution stability from year to year.

The Conference of Consulting Actuaries Public Plans Community produced a "white paper" detailing Funding Policy model practices for public sector pension plans. Under the Level Cost Actuarial Methodology ("LCAM"), one of the principal elements to a Funding Policy is the Actuarial Cost Method. When deciding which Actuarial Cost Method to use, several objectives may be considered, such as the following:

- Each participant's benefit should be funded under a reasonable allocation method by the expected retirement date
- Pay-related benefit costs should reflect anticipated pay at retirement
- The expected cost of each year of service (i.e. Normal Cost) for each active Member should be reasonably related to the expected cost of that Member's benefit
- The Member's Normal Cost should emerge as a level percent of Member compensation
- No gains or losses should occur if all assumptions are met.

Following these criteria, the use of the Entry Age Normal cost method (Level Percent of Pay) is a model practice.

FINANCING UNFUNDED ACTUARIAL ACCRUED LIABILITY

The Unfunded Actuarial Accrued Liability may be amortized over a period either in level dollar amounts or as a level percentage of payroll.

When amortizing the Unfunded Actuarial Accrued Liability as a level percentage of payroll, additional risk is incurred since the amortization payments in the early years of the payment period may not be large enough to cover the interest accrued on the existing Unfunded Liability. As a result, the Unfunded Liability may increase initially, before the amortization payments grow large enough to cover all interest accruals. Generally speaking, the Plan Sponsor will be required to contribute a larger total contribution amount over the course of the funding period under a level percentage of payroll basis as compared to a level dollar payroll schedule.

The Government Finance Office Association notes that best practices in public pension finance include utilizing amortization periods that do not exceed 20 years. Longer amortization periods elevate the risk of failing to reduce any Unfunded Liability. For example, when the amortization payment in full only covers interest on the Unfunded Liability, but does not reduce the existing Unfunded Liability, the required contribution will increase in future years.

A second principal element under the Level Cost Actuarial Methodology described above is to establish an Amortization Policy that determines the length of time and the structure of the increase or decrease in contributions required to systematically fund the Unfunded Actuarial Accrued Liability. When deciding upon the Amortization Policy, several objectives may be considered, such as the following:

- Variations in the source of liability changes (i.e. gains or losses, plan changes, assumption changes) should be funded over periods consistent with an appropriate balance between the policy objectives of demographic matching and volatility management
- The cost changes in Unfunded Actuarial Accrued Liability should emerge as a level percentage of Member compensation

The LCAM model practices for the Amortization Policy include the following:

- Layered fixed period amortization by source
- Level percent of pay amortization
- An amortization period ranging from 15-20 years for experience gains or losses
- An amortization period of 15-25 years for assumption changes

In accordance with the Pension Fund's Funding Policy for the Recommended Contribution, the Unfunded Actuarial Accrued Liability is amortized by level percent of payroll contributions to a 100% funding target over the remaining 23 years. See the *Actuarial Methods – Recommended Contribution* section of this report for more detail.

We believe additional consideration should be given to reducing the amortization period so that the amortization payment can become more effective in reducing the Unfunded Liability.

Actuarial Value of Assets

The Pension Fund is an ongoing plan. The Employer wishes to smooth the effect of volatility in the Market Value of Assets on the annual contribution. Therefore, the Actuarial Value of Assets is equal to the Market Value of Assets with unanticipated gains/losses recognized over a five-year period.

The Asset Valuation Method is intended to create an Actuarial Value of Assets that remains reasonable in relation to the Market Value of Assets over time. The method produces results that can fall either above or below the Market Value of Assets. The period of recognition is short.

It is intended that the period of recognition is short enough to keep the Actuarial Value of Assets within a decent range of the Market Value. In the event that the Actuarial Value of Assets exceeds or falls below a 10% corridor of the Market Value of Assets, the additional gain or loss will be recognized immediately.

ACTUARIAL ASSUMPTIONS

Nature of Actuarial Calculations
Actuarial Assumptions in the Valuation Process
Actuarial Assumptions Utilized

ACTUARIAL ASSUMPTIONS

NATURE OF ACTUARIAL CALCULATIONS

The results documented in this report are estimates based on data that may be imperfect and on assumptions about future events. Certain Plan Provisions may be approximated or deemed immaterial, and, therefore, are not valued. Assumptions may be made about participant data or other factors. Reasonable efforts were made in this valuation to ensure that significant items in the context of the Actuarial Accrued Liability or costs are treated appropriately, and not excluded or included inappropriately.

Actual future experience will differ from the assumptions used in the calculations. As these differences arise, the expense for accounting purposes will be adjusted in future valuations to reflect such actual experience.

A range of results different from those presented in this report could be considered reasonable. The numbers are not rounded, but this is for convenience only and should not imply precision which is not inherent in actuarial calculations.

ACTUARIAL ASSUMPTIONS IN THE VALUATION PROCESS

The contributions and benefit values of the Pension Fund are calculated by applying actuarial assumptions to the benefit provisions and census information furnished, using the Actuarial Cost Methods described in the previous section.

The principal areas of financial risk which require assumptions about future experience are:

- Long-term Expected Return on Investments
- Patterns of pay increases for Members
- Rates of Mortality among Members and Beneficiaries
- Rates of Withdrawal of Active Members
- Rates of Disability among Members
- Age patterns of actual retirement

Actual experience of the Pension Fund will not coincide exactly with assumed experience. Each valuation provides a complete recalculation of assumed future experience and takes into account all past differences between assumed and actual experience. The result is a continual series of adjustments to the computed Contribution Recommendation.

Details behind the selection of the actuarial assumptions can be found in the Assumptions Summary document provided to the client upon request. The client has reviewed and approved the assumptions as a reasonable expectation of the future anticipated experience under the Plan.

ASSESSMENT OF RISK EXPOSURES

From time to time it becomes appropriate to modify one or more of the assumptions, to reflect experience trends (but not random year-to-year fluctuations).

In addition, Actuarial Standards of Practice require that the Actuary minimally perform a qualitative assessment of key financial and demographic risks as part of the risk assessment process with each annual Actuarial Valuation. The risk assessments we perform include, but are not limited to, the following:

- Periodic demographic experience studies every 3 to 5 years to confirm the ongoing appropriateness of demographic assumptions
- Highlight the impact of demographic experience over the past year, as well as other sources of change and volatility in the *Actuarial Contribution Recommendation – Reconciliation* section of this report
- Detail year-over-year changes in contribution levels, assets, liabilities, and Funded Status in the *Contribution Recommendation* and *Funded Status* sections of the Management Summary of this report
- Review any material changes in the covered population as summarized in the *Actuarial Valuation Data* section of this report
- Provide and discuss a separate written Assumptions Summary document highlighting the rationale for each key economic and demographic assumption chosen by the Plan Sponsor
- Identify potential cash flow risks by highlighting expected benefit payments over the next 5-year and 10-year periods in the *Asset Growth* section of the Management Summary in this report
- Describe the impact of any assumption, method, or policy change in the Management Summary
- Utilize supplemental information, such as the GASB discount rate sensitivity disclosures to understand, for example, what impact an alternative Expected Return on Investments assumption might have on the estimation of Actuarial Accrued Liability and Funded Status
- Utilize supplemental information, such as the GASB solvency test, to better understand the cash flow risk and long-term sustainability of the Plan.

LIMITATIONS OF RISK ANALYSIS

Since future experience may never be precisely as assumed, the process of selecting funding methods and actuarial assumptions may inherently create risk and volatility of results. A more detailed evaluation of the above risk exposures is beyond the scope and nature of the annual Actuarial Valuation process. For example, scenario tests, sensitivity tests, stress tests, and/or stochastic modeling for multi-year projections to assess the impact of alternative assumptions and methods, or modeling future experience different from the assumptions in these results, are not included in this Actuarial Valuation.

The Oak Park Police Pension Fund and/or Village of Oak Park, Illinois should contact the Actuary if they desire a more detailed assessment of any of these forward-looking risk exposures.

ACTUARIAL ASSUMPTIONS UTILIZED

Expected Return on Investments 6.75% net of administrative expenses.

CPI-U 2.50%

Total Payroll Increases 3.00%

Individual Pay Increases 3.50% - 16.41%

Individual salary increases include a long-term average increase for inflation, average annual increases for promotions, and any additional increases for a step program. Sample rates as follows:

Service	Rate	Service	Rate
0	16.41%	8	4.00%
1	13.03%	9	4.00%
2	7.52%	10	4.00%
3	7.45%	15	4.00%
4	5.73%	20	3.50%
5	4.00%	25	3.50%
6	4.00%	30	3.50%
7	4.00%	35	3.50%

Retirement Rates 100% of the L&A Assumption Study Cap Age 65 for Police 2016. Sample rates as follows:

Age	Rate	Age	Rate
50	0.117	53	0.139
51	0.124	54	0.147
52	0.131	55	0.156

Withdrawal Rates

100% of the L&A Assumption Study for Police 2016. Sample rates as follows:

Age	Rate	Age	Rate
25	0.041	40	0.027
30	0.039	45	0.014
35	0.036	50	0.003

Disability Rates

100% of the L&A Assumption Study for Police 2016. Sample rates as follows:

Age	Rate	Age	Rate
25	0.0005	40	0.0028
30	0.0010	45	0.0043
35	0.0018	50	0.0064

Mortality Rates

Active Mortality follows the Sex Distinct Raw Rates as developed in the RP-2014 Study, with Blue Collar Adjustment. These rates are improved generationally using MP-2016 Improvement Rates.

Retiree Mortality follows the L&A Assumption Study for Police 2016. These rates are experience weighted with the Raw Rates as developed in the RP-2014 Study, with Blue Collar Adjustment and improved generationally using MP-2016 Improvement Rates.

Disabled Mortality follows the Sex Distinct Raw Rates as developed in the RP-2014 Study for Disabled Participants. These rates are improved generationally using MP-2016 Improvement Rates.

Spouse Mortality follows the Sex Distinct Raw Rates as developed in the RP-2014 Study. These rates are improved generationally using MP-2016 Improvement Rates.

Married Participants

80% of Active Participants are assumed to be married. Female Spouses are assumed to be 3 Years younger than Male Spouses.

SUMMARY OF PRINCIPAL PLAN PROVISIONS

SUMMARY OF PRINCIPAL PLAN PROVISIONS

ESTABLISHMENT OF THE FUND

The Police Pension Fund is established and administered as prescribed by "Article 3 – Police Pension Fund – Municipalities 500,000 and Under" of the Illinois Pension Code.

ADMINISTRATION

The Police Pension Fund is administered by a Board of Trustees whose duties are to manage the Pension Fund, determine applications for pensions, authorize payment of pensions, establish rules, pay expenses, invest assets, and keep records.

EMPLOYEE CONTRIBUTIONS

Employees contribute 9.910% of pensionable salary.

REGULAR RETIREMENT PENSION BENEFIT

Hired Prior to January 1, 2011

Eligibility: Age 50 with at least 20 years of creditable service.

Benefit: 50% of final salary for the first 20 years of service, plus an additional 2.5% of final salary for each year of service beyond 20 years of service, and not to exceed 75% of final salary. "Final salary" is based on the police officer's pensionable salary attached to rank held on the last day of service, unless the pensionable salary was higher at some point within the year prior to the last day of service. If so, the pensionable salary is averaged over the last 12 months.

Annual Increase in Benefit: A police officer is entitled to receive an initial increase equal to 1/12 of 3% of the original monthly benefit for each full month that has passed since the pension began. The initial increase date will be the latter of the first day of the month after the pensioner turns age 55 or the first day of the month after the benefit date anniversary. Subsequent increases of 3% of the current monthly benefit will be granted every January 1st thereafter.

REGULAR RETIREMENT PENSION BENEFIT - CONTINUED

Hired on or After January 1, 2011

Eligibility: Age 55 with at least 10 years of creditable service.

Benefit: 2.5% of final average salary for each year of service, and not to exceed 75% of final average salary. “Final average salary” is determined by dividing the total pensionable salary during 96 consecutive months of service within the last 120 months of service in which total pensionable salary was the highest, by the number of months of service in that period. Annual salary for this purpose will not exceed the salary cap, indexed by the lesser of 3% or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st. The salary cap will not decrease.

Annual Increase in Benefit: The initial increase date will be the latter of the January 1st after the the pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st.

EARLY RETIREMENT PENSION BENEFIT

Hired Prior to January 1, 2011

None.

Hired on or After January 1, 2011

Eligibility: Age 50 with at least 10 years of creditable service.

Benefit: The regular retirement pension benefit reduced by ½ of 1% for each month that the police officer’s age is between 50 and 55.

Annual Increase in Benefit: The initial increase date will be the latter of the January 1st after the pensioner turns age 60 or the January 1st after the retirement date anniversary. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st.

SURVIVING SPOUSE BENEFIT

Hired Prior to January 1, 2011

Eligibility: Married to an active police officer with at least 8 years of creditable service or disabled pensioner at the time of death or married to a retired pensioner on the last day of service.

Active Line of Duty Death Benefit: An eligible surviving spouse is entitled to receive 100% of the police officer's final pensionable salary attached to rank held on the last day of service.

Non-Duty Death Benefit:

Disabled or Retired Pensioner: An eligible surviving spouse is entitled to receive the pensioner's benefit at the time of death.

Active Employee with 20+ Years of Service: An eligible surviving spouse is entitled to the police officer's benefit at the time of death.

Active Employee with 10-20 Years of Service: An eligible surviving spouse is entitled to receive 50% of the police officer's pro-rated pensionable salary attached to rank over the last 12 months.

Annual Increase in Benefit: None.

Hired on or After January 1, 2011

Eligibility: Married to an active police officer with at least 8 years of creditable service or disabled pensioner at the time of death or married to a retired pensioner on the last day of service.

Active Line of Duty Death Benefit: An eligible surviving spouse is entitled to receive 100% of the police officer's final pensionable salary attached rank held on the last day of service.

Non-Duty Death Benefit:

Disabled or Retired Pensioner, Active Employee with 20+ Years of Service, and Active Employee with 10-20 Years of service: An eligible surviving spouse is entitled to receive 66 ⅔% of the police officer's pension benefit at the time of death.

Annual Increase in Benefit: The initial increase date will be the January 1st after the surviving spouse turns age 60. Subsequent increases will be granted every January 1st thereafter. The initial increase and subsequent increases will be the lesser of 3% of the original benefit or ½ of the CPI-U for the 12 months ending with the September preceding each November 1st.

TERMINATION BENEFIT – VESTED

Hired Prior to January 1, 2011

Eligibility: Age 60 with at least 8 but less than 20 years of creditable service.

Benefit: 2.5% of final salary for each year of service. "Final salary" is based on the police officer's pensionable salary attached to rank held on the last day of service, unless the pensionable salary was higher at some point within the year prior to the last day of service. If so, the pensionable salary is averaged over the last 12 months.

Annual Increase in Benefit: A police officer is entitled to receive an initial increase equal to 1/12 of 3% of the original monthly benefit for each full month that has passed since the pension began on the first day of the month after the benefit date anniversary. Subsequent increases of 3% of the current monthly benefit will be granted every January 1st thereafter.

Hired on or After January 1, 2011

None.

DISABILITY BENEFIT

Hired Prior to January 1, 2011

Eligibility: Duty or Non-Duty Disability.

Benefit: For a duty disability, a police officer is entitled to receive the greater of 65% of final salary or the regular retirement pension benefit at the time of disability. For a non-duty disability, a police officer is entitled to receive 50% of final salary. "Final salary" is based on the police officer's pensionable salary attached to rank held on the last day of service.

Annual Increase in Benefit: A police officer is entitled to receive an initial increase equal to 3% of the original monthly benefit for each full year that has passed since the pension began. The initial increase date will be the latter of the January 1st after following pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases of 3% of the original monthly benefit will be granted every January 1st thereafter.

Hired on or after January 1, 2011

Eligibility: Duty or Non-Duty Disability.

Benefit: For a duty disability, a police officer is entitled to receive the greater of 65% of final salary or the regular retirement pension benefit at the time of disability. For a non-duty disability, a police officer is entitled to receive 50% of final salary. "Final salary" is based on the police officer's pensionable salary attached to rank held on the last day of service.

Annual Increase in Benefit: A police officer is entitled to receive an initial increase equal to 3% of the original monthly benefit for each full year that has passed since the pension began. The initial increase date will be the latter of the January 1st after following pensioner turns age 60 or the January 1st after the benefit date anniversary. Subsequent increases of 3% of the original monthly benefit will be granted every January 1st thereafter.

GLOSSARY OF TERMS

Glossary of Terms

GLOSSARY OF TERMS

Actuarial Accrued Liability – The Actuarial Present Value of future benefits based on the Employees' service rendered to the Measurement Date using the selected Actuarial Cost Method. It is that portion of the Actuarial Present Value of plan benefits and expenses allocated to prior years of employment. It is not provided for by future Normal Costs.

Actuarial Cost Method – The method used to allocate the projected obligations of the plan over the working lifetimes of the plan participants.

Actuarial Value of Assets – The value of the assets used in the determination of the Unfunded Actuarial Accrued Liability. The Actuarial Value of Assets is related to Market Value of Assets, with adjustments made to spread unanticipated gains and losses for a given year over a period of several years. Actuarial Value of Assets is generally equally likely to fall above or below the Market Value of Assets, and generally does not experience as much volatility over time as the Market Value of Assets.

Asset Valuation Method **–** A valuation method designed to smooth random fluctuations in asset values. The objective underlying the use of an Asset Valuation Method is to provide for the long-term stability of Employer Contributions.

Funding Policy – A set of procedures for a Pension Fund that outlines the "best practices" for funding the pension benefits based on the goals of the Plan Sponsor. A Funding Policy discusses items such as assumptions, Actuarial Cost Method, assets, and other parameters that will best help the sponsor meet their goal of working in the best interest of the plan participant.

Market Value of Assets – The value of the cash, bonds, securities and other assets held in the pension trust as of the measurement date.

Normal Cost –The present value of future benefits earned by employees during the current Fiscal Year. It is that portion of the Actuarial Present Value of benefits and expenses which is allocated to a valuation year by the Actuarial Cost Method.

Unfunded Actuarial Accrued Liability **–** The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets. The Unfunded Actuarial Accrued Liability is amortized over a period either in level dollar amounts or as a level percentage of projected payroll.

Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS