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Actuarial Valuation
as of May 1, 2016



ALSIP POLICE
PENSION FUND

GASB 67/68 Reporting

LAUTERBACH & AMEN, LLP

Actuarial GASB Disclosures Statements 67 and 68



Lauterbach & Amen, LLP

CERTIFIED PUBLIC ACCOUNTANTS

GASB 67: ALSIP POLICE PENSION FUND

Fiscal Year Ending: April 30, 2016

Actuarial Valuation Date: May 1, 2016

Measurement Date: **April 30, 2016**

GASB 68: CITY OF ALSIP, ILLINOIS

Fiscal Year Ending: April 30, 2016

Actuarial Valuation Date: May 1, 2016

Measurement Date: **April 30, 2016**

Submitted by:

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September 21, 2016

LAUTERBACH & AMEN, LLP



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ACTUARIAL CERTIFICATION

This certification provides supplemental information as required by the Governmental Accounting Standards Board. The enclosed schedules were prepared by the undersigned to provide general information to assist in the preparation of the Annual Financial Report. The assumptions and methods used in the preparation of this disclosure meet the parameters set for the disclosures presented in the financial section as required by the Governmental Accounting Standards Board. Additional information is also provided solely to assist the auditors in preparation of the required footnote disclosures.

The results in this report are based on information and data submitted by the Alsip Police Pension Fund. We did not prepare the actuarial valuations for the years prior to May 1, 2015. Those Valuations were prepared by other actuaries whose reports have been furnished to us, and our disclosures are based upon those reports. An audit of the information was not performed, but high-level reviews were performed for general reasonableness as appropriate based on the purpose of the valuation. The accuracy of the results is dependent upon the accuracy and completeness of the underlying information. The results of the actuarial valuation and these supplemental disclosures rely on the information provided.

The valuation results summarized involve actuarial calculations that require assumptions about future events. The Alsip Police Pension Fund selected certain assumptions, while others were the result of guidance and/or judgment. We believe that the assumptions used in the valuation are reasonable and appropriate for the purposes for which they have been used.

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. The undersigned consultant of Lauterbach & Amen, LLP with actuarial credentials meets the Qualification Standards of the American Academy of Actuaries to render this Actuarial Certification. There is no relationship between the Alsip Police Pension Fund and Lauterbach & Amen, LLP that impairs our objectivity.

Respectfully Submitted,
LAUTERBACH & AMEN, LLP

Todd A. Schroeder, EA



PENSION FUND NET POSITION

Statement of Net Position
Statement of Changes in Net Position

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STATEMENT OF FIDUCIARY NET POSITION

	<u>2016</u>	<u>2015</u>
Assets		
Cash and Cash Equivalents	\$ 3,399,445	\$ 528,953
Total cash	<u>3,399,445</u>	<u>528,953</u>
Receivables:		
Due from Treasury	109,596	109,595
Investment Income - Accrued Interest	42,749	43,685
Other	50,630	50,630
Total Receivables	<u>202,975</u>	<u>203,910</u>
Investments:		
Fixed Income	5,189,841	7,739,393
Mutual Funds	6,412,786	6,653,843
Common Stock	3,088,022	3,163,672
Total Investments	<u>14,690,649</u>	<u>17,556,908</u>
Total Assets	<u>18,293,069</u>	<u>18,289,771</u>
Liabilities		
Payables:		
Expenses Due/Unpaid	12,076	-
Total Liabilities	<u>12,076</u>	<u>-</u>
Net Position Restricted for Pensions	<u>\$ 18,280,993</u>	<u>\$ 18,289,771</u>

The Fiduciary Net Position of the Fund shown above is intended to be in accordance with GAAP and Government Accounting Standards Board rules. The Fair Market Value of Investments has been provided by the reporting entity, and the results are being audited by an independent auditor. The level of the assets has been reviewed for reasonableness, but we make no representation as to the accuracy of the measurement of the fair market value of the investments. The assets for 2016 are based on Year End Financials only and are preliminary & tentative – subject to change as of the preparation of this report.



STATEMENT OF CHANGES IN FIDUCIARY NET POSITION

	<u>2016</u>
Additions	
Contributions	
Employer	\$ 2,439,154
Member	351,042
Total Contributions	<u>2,790,196</u>
Investment Income	
Net Appreciation in Fair Value of Investments	(557,872)
Interest and Dividends	588,287
Less Investment Expense	(99,230)
Net Investment Income	<u>(68,815)</u>
Total Additions	<u>2,721,381</u>
Deductions	
Benefit payments and Refunds of Member Contributions	2,721,440
Administrative Expense	8,720
Total Deductions	<u>2,730,160</u>
Net Increase in Net Position	<u>(8,779)</u>
Net Position Restricted for Pensions	
Beginning of Year	<u>18,289,771</u>
End of Year	<u>\$ 18,280,993</u>

The Changes in Fiduciary Net Position of the Fund shown above is intended to be in accordance with GAAP and Government Accounting Standards Board rules. The changes have been provided by the reporting entity, and the results are being audited by an independent auditor. The changes have been reviewed for reasonableness, but we make no representation as to the accuracy of the measurement of the fair market value of the investments. The assets for 2016 are based on Year End Financials only and are preliminary & tentative – subject to change as of the preparation of this report.



ACTUARIAL PENSION LIABILITY INFORMATION

Statement of Total Pension Liability
Statement of Changes in Total Pension Liability
Statement of Changes in Net Pension Liability
Deferred Outflows and Inflows of Resources

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STATEMENT OF TOTAL PENSION LIABILITY

	<u>2016</u>	<u>2015</u>
Active Employees	\$ 15,066,195	\$ 15,498,467
Inactive Employees		
Terminated Employees - Vested	494,710	136,343
Retired Employees	35,419,470	31,896,329
Disabled Employees	2,077,953	2,139,710
Other Beneficiaries	<u>1,405,721</u>	<u>1,278,169</u>
Total Inactive Employees	<u>39,397,854</u>	<u>35,450,551</u>
Total Pension Liability	<u>\$ 54,464,049</u>	<u>\$ 50,949,018</u>

The Total Pension Liability (TPL) shown is dependent on several factors such as plan provisions and actuarial assumptions used in the report. In addition, the calculation of the TPL may be dependent on the Fiduciary Net Position shown on the prior page. Changes in the Fiduciary Net Position due to any factor including adjustment on final audit could change the TPL. The dependence of the TPL on the Net Position is due to the role of the Net Position (and projected Net Position) on the determination of the discount rate used for the TPL.

The TPL has been determined for GASB 67/68 reporting purposes only. The resulting TPL is intended to be used in the financial statement reporting of the fund and/or the Employer. The resulting liability is not intended to be a representation of the fund liability for other purposes, including but not limited to determination of cash funding requirements and recommendations. The TPL is based on data as of the Data Date shown in this report. The TPL has been determined as of the Actuarial Valuation Date and based on the assumptions shown in this report, and adjusted to the Measurement Date as needed.



STATEMENT OF CHANGES IN TOTAL PENSION LIABILITY

	<u>2016</u>
Changes in Total Pension Liability	
Service Cost	\$ 689,917
Interest	3,471,181
Changes of Benefit Terms	-
Differences Between Expected and Actual Experience	(470,405)
Changes in Assumptions	2,545,778
Benefit Payments and Refunds	(2,721,440)
Net Change in Total Pension Liability	3,515,031
Total Pension Liability - Beginning	50,949,018
Total Pension Liability - Ending (a)	<u>\$ 54,464,049</u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 18,280,993</u>
Employer's Net Pension Liability - Ending (a) - (b)	<u>\$ 36,183,056</u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	34%
Covered-Employee Payroll	\$ 3,438,864
Employer's Net Pension Liability as a Percentage of Employee Payroll	1052%

The plan Fiduciary Net Position was detailed in the prior section of this report. The employer's Net Pension Liability is the excess of the Total Pension Liability over the plan Fiduciary Net Position.

Total Pension Liability may be dependent on the Net Position of the fund. Changes in the Net Position could change the determination of the Total Pension Liability. Any changes in Net Position including adjustments on final audit can have an impact on Net Pension Liability that extends beyond the dollar-for-dollar change in Net Position.

Covered employee payroll is based on total pensionable pay for the fund members during the fiscal year.



STATEMENT OF CHANGES IN NET PENSION LIABILITY

The table below illustrates the change in the Net Pension Liability (NPL) from the prior Measurement Date to the current Measurement Date. Under Statement 68, the difference between the NPL from the prior measurement date to the current measurement date should be recognized as an expense, unless permitted to be recognized as a deferred outflow or inflow of resources.

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances Beginning at 05/01/15	<u>\$ 50,949,018</u>	<u>\$ 18,289,771</u>	<u>\$ 32,659,247</u>
Changes for the year:			
Service Cost	689,917	-	689,917
Interest	3,471,181	-	3,471,181
Actuarial Experience	(470,405)	-	(470,405)
Assumptions Changes	2,545,778	-	2,545,778
Plan Changes	-	-	-
Contributions - Employer	-	2,439,154	(2,439,154)
Contributions - Employee	-	351,042	(351,042)
Contributions - Other	-	-	-
Net Investment Income	-	(68,815)	68,815
Benefit payments, including refunds	(2,721,440)	(2,721,440)	-
Administrative Expense	-	(8,720)	8,720
Net Changes	<u>3,515,031</u>	<u>(8,778)</u>	<u>3,523,809</u>
Balances Beginning at 04/30/16	<u>\$ 54,464,049</u>	<u>\$ 18,280,993</u>	<u>\$ 36,183,056</u>

The changes in total pension liability above are described on the prior page. The plan fiduciary net position was detailed in the prior section of this report. The employer's Net Pension Liability is the excess of the Total Pension Liability over the plan fiduciary net position.



DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES

The table below shows the cumulative amounts to be shown as deferred outflows and inflows of resources. Changes in total pension liability related to the difference in actual and expected experience, or changes in assumptions regarding future events, are recognized in pension expense over the expected remaining service life of all employees (active and retired) in the pension fund. Differences in projected and actual earnings over the measurement period are recognized over a 5-year period. Amounts not yet recognized are summarized below:

	<u>Deferred Outflows of Resources</u>	<u>Deferred Inflows of Resources</u>
Differences Between Expected and Actual Experience	\$ -	\$ 410,557
Changes of Assumptions	2,221,887	-
Net Difference Between Projected and Actual Earnings on Pension Plan Investments	1,080,960	-
Contributions Subsequent to the Measurement Date*	-	-
Total	<u>\$ 3,302,847</u>	<u>\$ 410,557</u>

* Contributions subsequent to the measurement date may be recognized as a reduction to the NPL. The amount is not known as of the date of this report. Subsequent to the measurement date, the following amounts will be recognized in pension expense in the upcoming years:

Year ended April, 30:

2017	\$ 534,283
2018	534,283
2019	534,283
2020	534,283
2021	264,043
Thereafter	491,115



DEFERRED OUTFLOWS AND INFLOWS OF RESOURCES - DETAILS

The table below shows the annual detail amounts that have been summarized on the prior page. Under Statement 68, the level of detail shown on the prior page is sufficient for financial statement reporting. The detail shown below is primarily for tracking purposes.

Pension Expense Source	Date Established	Initial Period	Initial Balance	Remaining Period	4/30/2016	4/30/2016
					Expense Recognized	Deferred Balance
Asset (Gain)/Loss	4/30/2016	5.00	\$ 1,351,200	5.00	\$ 270,240	\$ 1,080,960
Change in Assumptions (Gain)/Loss	4/30/2016	7.86	2,545,778	7.86	323,891	2,221,887
Actuarial (Gain)/Loss	4/30/2016	7.86	(470,405)	7.86	(59,848)	(410,557)
Total			\$ 3,426,573		\$ 534,283	\$ 2,892,290

Each detail item in the chart above was established as of the Fiscal Year End shown and the full amount deferred has been determined as of that time. Any events that occur in subsequent fiscal years do not have an impact on the prior fiscal year. The bases are established independently each year.



PENSION EXPENSE DEVELOPMENT

The table below displays the pension expense development for the current year. The pension expense includes items that change the Net Pension Liability from one year to the next, netted out for amounts that are deferred under GASB pronouncement, plus any amounts that are being recognized that were deferred previously.

See below for development of the pension expense:

	<u>2016</u>
Pension Expense/(Income) Under GASB 68	
Service Cost	\$ 689,917
Interest	3,471,181
Plan Changes	-
Contributions - Employee	(351,042)
Contributions - Other	-
Expected Investment Income	(1,282,385)
Administrative Expense	8,720
Other Changes	-
Initial Pension Expense/(Income)	<u>2,536,391</u>
Recognition of Outflow/(Inflow) of Resources due to Liabilities	264,043
Recognition of Outflow/(Inflow) of Resources due to Assets	<u>270,240</u>
Total Pension Expense/(Income)	<u>\$ 3,070,674</u>



ACTUARIAL ASSUMPTION INFORMATION

Statement of Significant Actuarial Assumptions
Notes on Actuarial Assumptions
Development of the Discount Rate
Sensitivity of the Discount Rate

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STATEMENT OF SIGNIFICANT ACTUARIAL ASSUMPTIONS

Actuarial Assumptions (Economic)

Discount Rate used for the Total Pension Liability	7.00%
Long-Term Expected Rate of Return on Plan Assets	7.00%
High Quality 20 Year Tax-Exempt G.O. Bond Rate	3.32%
Projected Individual Salary Increases	4.00% - 24.16%
Projected Increase in Total Payroll	3.25%
Consumer Price Index (Urban)	2.50%
Inflation Rate Included	2.50%

Actuarial Assumptions (Demographic)

Mortality Table	L&A 2016 Illinois Police Mortality Rates
Retirement Rates	L&A 2016 Illinois Police Retirement Rates Capped at age 65
Disability Rates	L&A 2016 Illinois Police Disability Rates
Termination Rates	L&A 2016 Illinois Police Termination Rates
Percent Married	80.0%

All rates shown in the economic assumptions are assumed to be annual rates, compounded on an annual basis. For more information on the selection of the actuarial assumptions, please see the assumption document prepared for the Fund.

ASSUMPTION CHANGES

The Assumptions were changed from the prior year.

The assumed rate on High Quality 20 Year Tax-Exempt G.O. Bonds was changed from 3.62% to 3.32% for the current year. The underlying index used is The Bond Buyer 20-Bond GO Index as discussed in more detail later in this section. The choice of index is unchanged from the prior year. The rate has



been updated to the current fiscal year end based on changes in market conditions as reflected in the Index. The change was made to reflect our understanding of the requirements of GASB under Statement 67 and Statement 68.

The discount rate used in the determination of the Total Pension Liability remained constant at 7.00%. The discount rate is impacted by a couple of metrics. Any change in the underlying High Quality 20 Year Tax Exempt G.O. Bond Rate will impact the blended discount rate.

In addition, changes made that impact the projection of the Net Position of the fund. For example, changes in the formal or informal funding policy can impact the discount rate. Actual changes in the net position from one year to the next can impact the projections as well.

The demographic assumptions were changed to the tables shown on the prior page. The changes were made based on a study of Police Officers and police pension funds in Illinois. The changes are described in the assumption document for the pension fund. The changes were made to better reflect the future anticipated experience of the fund. The assumptions impacted include:

- Mortality Rates
- Mortality Improvement Rates
- Retirement Rates
- Disability Rates
- Termination Rates



NOTES ON ACTUARIAL ASSUMPTIONS

Individual Pay Increases

Individual pay increases include provisions for annual cost of living increases, plus any additional increases in pensionable pay provided (step increases, longevity increases, promotions, educations, etc). Sample rates are as follows:

Service	Rate	Service	Rate
0	24.16%	8	4.00%
1	6.70%	9	4.00%
2	6.59%	10	4.00%
3	6.77%	15	4.00%
4	12.63%	20	4.00%
5	4.00%	25	4.00%
6	4.00%	30	4.00%
7	4.00%		

Demographic Assumptions

Mortality rates are based on the assumption study prepared by Lauterbach & Amen, LLP in 2016. The table combines observed experience of Illinois Police Officers with the RP-2014 mortality table for blue collar workers. Mortality improvements have been made to 5 years past the valuation date.

Other demographic assumption rates are based on a review of assumptions in the L&A 2016 study for Illinois Police Officers.

POSTEMPLOYMENT BENEFIT CHANGES

Eligibility for postemployment benefit increases is determined based on the Illinois Pension code. Tier 1 Police retirees are provided with an annual 3.0% increase in retirement benefits by statute when eligible. Tier 2 Police retirees are provided postemployment benefit increases based on one-half of the Consumer Price Index (Urban) for the prior September.

The CPI-U for September, 1985 was 108.3. The CPI-U for September, 2015 was 237.9. The average increase in the CPI-U for September, 1985 through September, 2015 was 2.66% (on a compounded basis).



EXPECTED RETURN ON PENSION PLAN INVESTMENTS

The long-term expected rate of return on assets is intended to represent the best estimate of future real rates of return and is shown for each of the major asset classes in the investment policy. The expected rates of return on assets shown here is from the State of Illinois Department of Insurance Actuarial Experience Study dated September 26, 2012. Long-term Real Rates of Return are shown as the Expected Rate of Return, net of the assumed inflation rate.

There are multiple approaches seen to providing these rates. Typically, the information is either based on capital market projections, or historical rates seen for the asset classes. We do not provide an opinion on the reasonableness of the returns provided nor the reasonableness of the approach used in the determination of the rates provided. The information provided is shown below for convenience.

The rates provided in the table below are based on an arithmetic average. The Investment Policy Statement will provide more detail regarding the Fund's policies on asset allocation targets and acceptable ranges.

<u>Asset Class</u>	<u>Long-Term Expected Rate of Return</u>	<u>Long-Term Inflation Expectations</u>	<u>Long-Term Expected Real Rate of Return</u>
US Large Cap Equity	8.30%	2.50%	5.80%
US Mid Cap Equity	9.30%	2.50%	6.80%
US Small Cap Equity	9.30%	2.50%	6.80%
Non-US Developed Large Cap Equity Un	8.40%	2.50%	5.90%
Emerging Markets Equity Unhedged	10.50%	2.50%	8.00%
US Corporate Bonds	4.20%	2.50%	1.70%
US Government Fixed Income	3.20%	2.50%	0.70%
US Cash	3.00%	2.50%	0.50%
Global Real Estate - REITS	8.30%	2.50%	5.80%
Commodities - Long Only	4.90%	2.50%	2.40%

Long-term expected real returns under GASB are expected to reflect the period of time that begins when a plan member begins to provide service to the employer and ends at the point when all benefits to the plan member have been paid. The rates provided above are intended to estimate those figures.



The expected inflation rate is 2.50% and is included in the total long-term rate of return on investments. The inflation rate is from the same source as the long-term real rates of return, and is not necessarily reflective of the inflation measures used for other purposes in the report.

Geometric rates of return are equal to arithmetic rates of return when the annual returns exhibit no volatility over time. When arithmetic returns are volatile on a year-to-year basis, the actual realized geometric returns over time will be lower. The higher the volatility, the greater the difference.

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MUNICIPAL BOND RATE

The municipal bond rate assumption is based on The Bond Buyer 20-Bond GO Index. The rate shown earlier in the Actuarial Assumption section is the April 28, 2016 rate. The 20-Bond GO Index is based on an average of certain general obligation municipal bonds maturing in 20 years and having an average rating equivalent of Moody's Aa2 and Standard & Poor's AA.

The 20-Bond Index consists of 20 general obligation bonds that mature in 20 years. The average rating of the 20 bonds is roughly equivalent to Moody's Investors Service's Aa2 rating and Standard & Poor's Corp.'s AA.

The indexes represent theoretical yields rather than actual price or yield quotations. Municipal bond traders are asked to estimate what a current-coupon bond for each issuer in the indexes would yield if the bond was sold at par value. The indexes are simple averages of the average estimated yields of the bonds.

DISCOUNT RATE

The discount rate used in the determination of the Total Pension Liability is based on a combination of the expected long-term rate of return on plan investments and the municipal bond rate.

Cash flow projections were used to determine the extent which the plan's future net position will be able to cover future benefit payments. To the extent future benefit payments are covered by the plan's projected net position, the expected rate of return on plan investments is used to determine the portion of the net pension liability associated with those payments. To the extent future benefit payments are not covered by the plan's projected net position, the municipal bond rate is used to determine the portion of the net pension liability associated with those payments.

Projected benefit payments are determined during the actuarial process based on the assumptions. More details on the assumptions are in the prior section. The expected contributions are based on the funding policy of the plan. The funding policy is discussed in more detail in a later section.



SENSITIVITY OF THE DISCOUNT RATE

The Net Pension Liability has been determined using the discount rate listed in the assumption section. Below is a table illustrating the sensitivity of the Net Pension Liability to the discount rate assumption.

	1% Decrease (6.00%)	Current Discount Rate (7.00%)	1% Increase (8.00%)
Employer Net Pension Liability	\$44,049,986	\$36,183,056	\$29,772,380

The sensitivity of the Net Pension Liability to the discount rate is based primarily on two factors:

1. The duration of the plan's expected benefit payments. Younger plans with benefit payments further in the future will be more sensitive to changes in the discount rate.
2. The funded percentage of the plan (ratio of the net position to the total pension liability). The higher the funded percentage, the higher the sensitivity to the discount rate.

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PARTICIPANT DATA

Participant Demographic Data
Expected Future Working Lifetime

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PARTICIPANT DEMOGRAPHIC DATA

The chart below summarizes the employee count and payroll as of the Actuarial Valuation Date:

	<u>2016</u>	<u>2015</u>
Inactive Plan Members or Beneficiaries Currently Receiving Benefits	35	35
Inactive Plan Members Entitled to But Not Yet Receiving Benefits	1	1
Active Plan Members	<u>41</u>	<u>41</u>
Total	<u>77</u>	<u>77</u>
Payroll of Active Plan Members	<u>\$3,438,864</u>	<u>\$ 3,376,153</u>

Participant count is shown as of the Actuarial Valuation Date. Pay is the active pensionable pay as of the Actuarial Valuation Date.

Payroll of Active Plan Members for the current year includes as assumed 2.50% COLA increase for all active members, in anticipation of retroactive pay increases upon contract settlement.

EXPECTED FUTURE WORKING LIFETIME

The chart below summarizes the expected future working lifetime of fund members:

	<u>2016</u>	<u>2015</u>
Average Future Working Career (In Years)		
Active Plan Members	14.75	13.80
Inactive Plan Members	0.00	0.00
Total	7.86	7.35

The expected future working lifetime is measured as of the Actuarial Valuation Date and is based on the demographic assumptions used in the preparation of the Actuary's report.



FUNDING POLICY

Formal Funding Policy
Informal Funding Policy

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COMPONENTS OF THE ACTUARIALLY DETERMINED CONTRIBUTION

The Actuarially Determined Contribution (ADC) includes the determination of the Normal Cost contribution for active plan members, as well as provision for the payment of unfunded liability.

The actuarial funding method used in the determination of the normal cost and the actuarial liability is the Entry Age Normal Cost method (level percent of pay). The method allocates normal cost contributions by employee over the working career of the employee as a level percent of their pay.

Unfunded liability is the excess of the actuarial liability over the actuarial value of assets. The actuarially determined contribution includes a payment towards unfunded liability existing at the actuarial valuation date. The payment towards unfunded liability is set up as a level percent of payroll payment that is expected to increase during the payment period. The period of repayment as of the Actuarial Valuation Date is 17 years.

The Actuarial Value of Assets smooths gains and losses on the market value of assets over a 5-year period.

Under no circumstances will the Actuarially Determined Contribution be less than the amount determined as the Statutory Minimum Contribution under Illinois statutes.

FORMAL FUNDING POLICY

There is no Formal Funding Policy that exists between the Pension Board and the City at this time.

INFORMAL FUNDING POLICY

In determining the most appropriate informal funding policy, GASB provides the following guidance in the Statement:

Application of professional judgment should consider the most recent five-year contribution history of the employers and nonemployer contributing entities as a key indicator of future contributions from those sources and should reflect all other known events and conditions.... the amount of projected cash flows for contributions from employers and nonemployer contributing entities should be limited to an average of contributions from those sources over the most recent five-year period and may be modified based on consideration of subsequent events. For this purpose, the basis for the average (for example, percentage of covered payroll contributed or percentage of actuarially determined contributions made) should be a matter of professional judgment.



In our review of informal funding policy, the following factors are considered and described herein:

1. The five-year contribution history of the Employer (with a focus on the average contributions from those sources.)
2. All other known events and conditions
3. Consideration of subsequent events.

Five-Year Contribution History of the Employer

Employer contributions (under the informal policy) should be limited to the average over the most recent five years. In determining the basis for the average we reviewed three possibilities: (a) The average dollar contribution; (b) the average percent of pensionable pay; and (c) The average percent of the actuarial determined contribution. Please see the table below for a summary of these values:

Fiscal Year End	Employer Contributions	Most Applicable ADC	% of ADC	Covered Payroll	% of Payroll
4/30/2016	\$2,439,154	\$2,333,349	105%	\$3,438,864	70.93%
4/30/2015	\$2,214,723	\$2,148,485	103%	\$3,376,153	65.60%
4/30/2014	\$1,973,625	\$1,891,414	104%	\$3,184,560	61.97%
4/30/2013	\$1,716,750	\$1,471,031	117%	\$2,930,511	58.58%
4/30/2012	\$1,774,722	\$1,664,129	107%	\$2,921,239	60.75%

When compared to the other policies reviewed, history suggests that a contribution as a percent of the Actuarially Determined Contribution is the least volatile, and as a result, the most stable contribution method under an informal funding policy.

Other Known Events and Conditions

GASB has a provision for consideration of any other known events or conditions in the most recent five-year history in applying judgement for the informal funding policy. There are no events or conditions that have been considered in the development of the informal funding policy.

Consideration of Subsequent Events

GASB has a provision for modification based on consideration of subsequent events in development of the informal funding policy. This report gives consideration to the fact that the current contributions are greater than 100% of the Actuarially Determined Contribution on an Informal Funding Policy basis. We have projected the impact on the unfunded liability and limited payments towards the unfunded liability to \$0 when the fund is projected to be 100% funded. The limitation on the number of years of payment



of unfunded liability may cause the projected payments to unfunded liability to cease prior to the time stated in the underlying Actuarially Determined Contribution determination. The limitation on the number of years of payments does not impact the determination of the discount rate.

Informal Funding Policy – Selected

The informal funding policy that has been determined for future contributions is 107.06% of the Actuarially Determined Contribution. This represents the full future contributions expected to be made.

FUNDING POLICY – OTHER CONSIDERATIONS

Under GASB, the future contribution amount is not intended to include dollars contributed on behalf of future employees. Contributions are only intended to cover contributions towards the Normal Cost of existing employees as of the Actuarial Valuation Date as well as payment of unfunded liability on behalf of the current existing employees. Contributions under the funding policy have been adjusted as necessary to exclude dollars that would be anticipated to be contributed on behalf of future employees hired after the actuarial valuation date.

The contribution level may not pay off the unfunded liability during the active working lifetimes of current employees. In that case contributions will persist beyond the working lifetimes of current employees. To the extent a portion of the above total contribution is anticipated to pay contributions for future employee normal cost, the amount has been netted out. The remaining amount is anticipated to be paid towards the unfunded liability existing for current employees.

The actuarial determined contribution is determined annually based on the parameters previously discussed. The funding methods and procedures are assumed to continue into the future. The tax levy in the next December is assumed to be the actuarially determined contribution. Funding is assumed to go into the fund during the next full fiscal year.



SCHEDULES OF REQUIRED SUPPLEMENTARY INFORMATION

Schedule of Changes in the Net Pension Liability
Schedule of Total Pension Liability and Related Ratios
Schedule of the Actuarially Determined Contribution

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SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Pension Liability										
Service Cost	\$ 689,917	\$ 734,284								
Interest	3,471,181	3,368,025								
Changes of Benefit Terms	-	-								
Differences Between Expected and Actual Experience	(470,405)	-								
Changes in Assumptions	2,545,778	-								
Benefit Payments and Refunds	(2,721,440)	(2,535,879)								
Net Change In Total Pension Liability	3,515,031	1,566,430								
Total Pension Liability - Beginning	50,949,018	49,382,588								
Total Pension Liability - Ending (A)	\$ 54,464,049	\$ 50,949,018								
Plan Fiduciary Net Position										
Contributions - Employer	\$ 2,439,154	\$ 2,214,723								
Contributions - Member	351,042	334,901								
Net Investment Income	(68,815)	1,196,897								
Benefit Payments and Refunds	(2,721,440)	(2,535,879)								
Administrative Expense	(8,720)	(21,288)								
Other	-	77,450								
Net Change in Plan Fiduciary Net Position	(8,779)	1,266,804								
Plan Fiduciary Net Position - Beginning	18,289,771	17,022,967								
Plan Fiduciary Net Position - Ending (b)	\$ 18,280,993	\$ 18,289,771								
Employer Net Pension Liability - Ending (a) - (b)	\$ 36,183,056	\$ 32,659,247								

The current year information was developed in the completion of this report.



SCHEDULE OF TOTAL PENSION LIABILITY AND RELATED RATIO

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Total Pension Liability - Ending (a)	<u>\$ 54,464,049</u>	<u>\$ 50,949,018</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Plan Fiduciary Net Position - Ending (b)	<u>\$ 18,280,993</u>	<u>\$ 18,289,771</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Employer Net Pension Liability - Ending (a) - (b)	<u>\$ 36,183,056</u>	<u>\$ 32,659,247</u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>	<u> </u>
Plan Fiduciary Net Position as a Percentage of the Total Pension Liability	33.57%	35.90%								
Covered-Employee Payroll	\$ 3,438,864	\$ 3,376,153								
Employer Net Pension Liability as a Percentage of Covered-Employee Payroll	1052.18%	967.35%								

Covered employee payroll shown is the pensionable pay for the fiscal year for all fund members.



SCHEDULE OF CONTRIBUTIONS

	2016	2015	2014	2013	2012	2011	2010	2009	2008	2007
Actuarially Determined Contribution	\$ 2,333,349	\$ 2,148,485								
Contributions in Relation to the Actuarially Determined Contribution	2,439,154	2,214,723								
Contribution Deficiency (excess)	\$ (105,805)	\$ (66,238)								
Covered-Employee Payroll	\$ 3,438,864	\$ 3,376,153								
Contributions as a Percentage of Covered-Employee Payroll	70.9%	65.6%								

NOTES TO SCHEDULE OF CONTRIBUTIONS

The actuarially determined contribution shown for the current year is from the May 1, 2014 actuary's report completed by Timothy W. Sharpe, Enrolled Actuary, for the tax levy recommendation for the December, 2014 tax levy.



GASB METHODS AND PROCEDURES

GASB Methods and Procedures
Methodology for Deferred Outflows and Inflows

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GASB METHODS AND PROCEDURES

	<u>Statement 67</u> <u>Pension Fund Financials</u>	<u>Statement 68</u> <u>Employer Financials</u>
Fiscal Year End for Reporting	April 30, 2016	April 30, 2016
Measurement Date	April 30, 2016	April 30, 2016
Actuarial Valuation Date	May 1, 2016	May 1, 2016
Actuarial Valuation - Data Date	April 30, 2016	April 30, 2016
Asset Valuation Method	Market Value	Market Value
Actuarial Cost Method	Entry Age Normal (Level %)	Entry Age Normal (Level %)
Methodology Used in the Determination of Deferred Inflows and Outflows of Resources		
Amortization Method	Straight Line	Straight Line
Amortization Period		
Actuarial Experience (TPL)	7.86 Years	7.86 Years
Changes in Assumptions	7.86 Years	7.86 Years
Asset Experience	5.00 Years	5.00 Years



SUPPLEMENTARY TABLES

Projection of Contributions
Projection of the Pension Fund's Fiduciary Net Position
Actuarial Present Value of Projected Benefit Payments

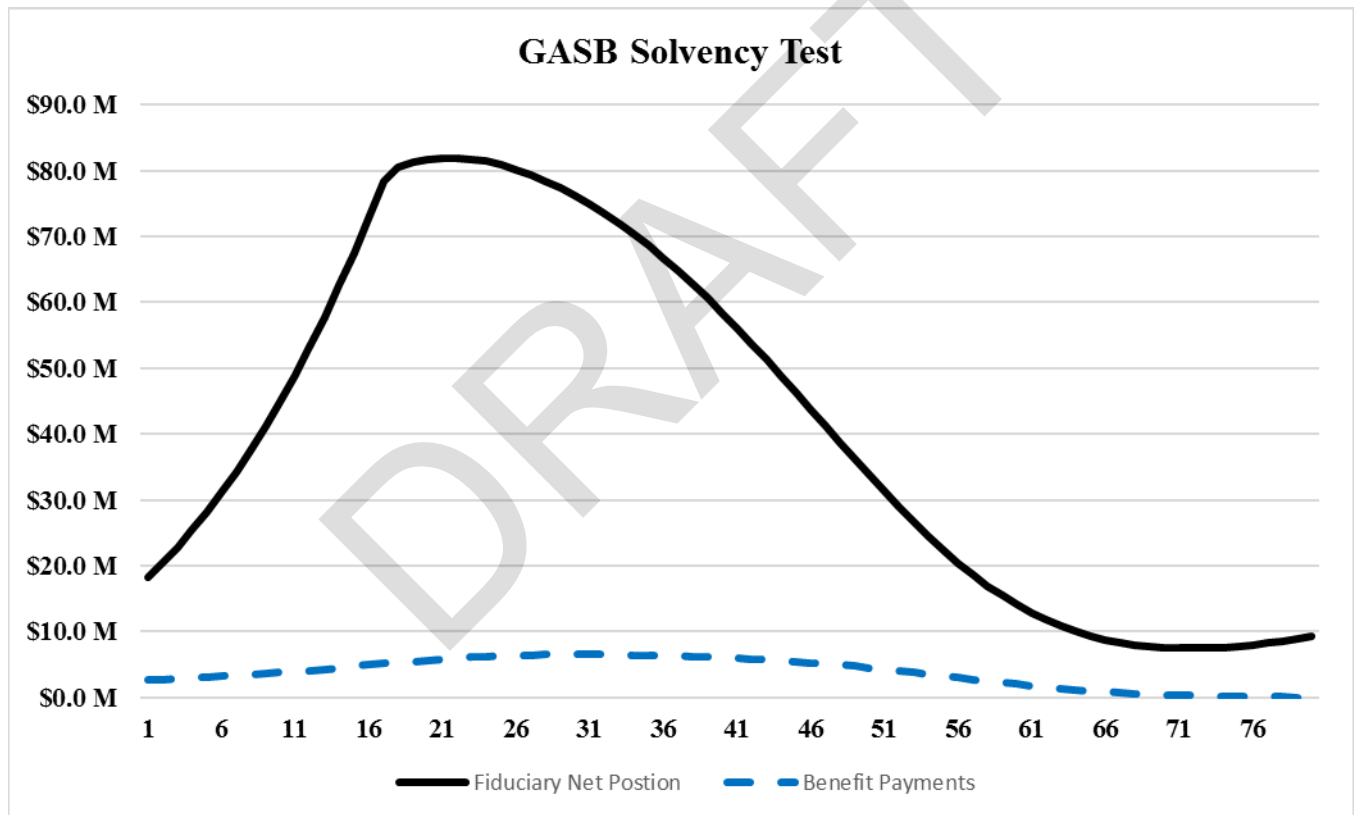
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GASB PROJECTIONS – SUMMARY AND PROCEDURE

GASB requires a solvency test to use in the determination of the discount rate each year. The Fiduciary Net Position of the fund is projected forward. To the extent the Net Position of the Fund is anticipated to be greater than \$0, benefit payments during that time period are discounted based on the expected rate of return on plan assets.

If the Fiduciary Net Position of the fund is anticipated to go to \$0 prior to the payment of future benefit payments for employees who are in the fund as of the Actuarial Valuation Date, then remaining expected future benefit payments are discounted using a high quality Municipal Bond rate as described in the assumption section of the report. Below is a chart with a high level summary of the projections:



The plan's projected net position is expected to cover future benefit payments in full for the current employees.



GASB PROJECTIONS – LIMITATIONS

Projections of any type require assumptions about future events. The projections required for GASB reporting are deterministic in nature. That means that values are projected forward under one set of assumptions which can be thought of as the average result. Actual results could vary, and projections of one deterministic assumption set do not necessarily provide a framework for making risk management or funding policy decisions. Projections that deal with risk management are outside the scope of this report.

In addition, GASB requirements create results that are specific only to financial statement reporting, and should not be used or interpreted for other purposes. For example, GASB cash flow projections do not entail the total expected cash flows of the pension fund, but rather a subset of cash flows specific to members who are in the pension fund as of the Actuarial Valuation date. While the likely expectation may be that new employees are hired to replace the old, cash flows attributable to their benefits are not considered. Under GASB, when the Net Position goes to \$0, that represents only the Net Position for the assets attributable to the current fund members.

GASB also mandates certain assumptions that are made in the projection process. Most notably, future contributions under an informal funding policy. In proposing an informal funding policy, GASB suggests a focus be placed on the average contribution rate over the past 5 years. Assumed contributions noted in this section may be based on the five-year average, unless a formal funding policy is in place.

Contributions reflecting informal funding policy are applied under GASB, whether or not the future results dictate a need for more or less contributions. This would not be the case with other uses for projections. Any events that are taken into account (past or future) in the informal funding policy are discussed in the “Funding Policy” section of this report.

The further you look forward with projections, the more sensitive the results are to assumptions. With projections that run out close to 80 years, a small change in an assumption will have a dramatic impact in the look of the projections on the following pages. If there is no change to the solvency of the fund as determined by GASB, big swings in the projection results may not necessarily lead to big swings in the determination of the Total Pension Liability.

We recommend the projections are not used for any other purposes, other than providing backup information for purposes of the financial statement report.

The following pages provide the detail behind the charts shown on the chart in this section.



PROJECTION OF CONTRIBUTIONS – YEARS 1 TO 30

Year	Projected Covered-Employee Payroll			Projected Contributions			
	Current Employees (a)	Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Pay of Future Employees (f) - Notes	Total Contributions (d) + (e) + (f)
1	\$ 3,438,870	\$ -	\$ 3,438,870	\$ 340,792	\$ 3,202,051	\$ -	\$ 3,542,843
2	3,502,255	48,378	3,550,633	347,073	3,532,094	-	3,879,168
3	3,510,981	155,048	3,666,029	347,938	3,642,942	-	3,990,880
4	3,516,789	268,386	3,785,175	348,514	3,751,568	-	4,100,082
5	3,508,583	399,610	3,908,193	347,701	3,862,512	-	4,210,213
6	3,513,396	521,813	4,035,209	348,178	3,975,752	-	4,323,929
7	3,510,342	656,012	4,166,354	347,875	4,094,066	-	4,441,941
8	3,478,868	822,892	4,301,760	344,756	4,215,061	-	4,559,817
9	3,459,151	982,416	4,441,567	342,802	4,336,569	-	4,679,371
10	3,434,733	1,151,185	4,585,918	340,382	4,463,241	-	4,803,623
11	3,407,883	1,327,078	4,734,961	337,721	4,593,917	-	4,931,638
12	3,358,778	1,530,069	4,888,847	332,855	4,728,759	-	5,061,614
13	3,217,953	1,829,781	5,047,734	318,899	4,866,011	-	5,184,910
14	3,069,350	2,142,436	5,211,786	304,173	4,993,487	-	5,297,660
15	2,876,373	2,504,796	5,381,169	285,049	5,125,322	-	5,410,370
16	2,686,580	2,869,477	5,556,057	266,240	5,255,877	-	5,522,117
17	2,500,860	3,235,768	5,736,628	247,835	1,946,189	-	2,194,025
18	2,329,963	3,593,106	5,923,069	230,899	295,088	-	525,987
19	2,179,241	3,936,328	6,115,569	215,963	273,390	-	489,353
20	2,042,098	4,272,227	6,314,325	202,372	254,444	-	456,816
21	1,896,758	4,622,782	6,519,540	187,969	237,242	-	425,211
22	1,720,021	5,011,404	6,731,425	170,454	218,286	-	388,740
23	1,574,287	5,375,910	6,950,197	156,012	194,638	-	350,650
24	1,433,667	5,742,411	7,176,078	142,076	175,741	-	317,817
25	1,303,841	6,105,459	7,409,300	129,211	156,864	-	286,075
26	1,189,016	6,461,087	7,650,103	117,831	140,745	-	258,576
27	1,058,562	6,840,169	7,898,731	104,903	126,434	-	231,337
28	979,935	7,175,505	8,155,440	97,112	109,559	-	206,671
29	879,567	7,540,925	8,420,492	87,165	99,460	-	186,625
30	814,640	7,879,518	8,694,158	80,731	88,141	-	168,872

Column d – Contributions from employees to the pension fund (employees as of the valuation date)

Column e – Employer contributions to the fund excluding contributions for employees hired after the actuarial valuation date

Column f – Contributions from future employees to the extent they are anticipated to be greater than required to pay their total normal cost



PROJECTION OF CONTRIBUTIONS – YEARS 31 TO 60

Year	Projected Covered-Employee Payroll			Projected Contributions			
	Current Employees (a)	Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Pay of Future Employees (f) - Notes	Total Contributions (d) + (e) + (f)
31	\$ 751,841	\$ 8,224,877	\$ 8,976,718	\$ 74,507	\$ 80,543	\$ -	\$ 155,050
32	645,895	8,622,566	9,268,461	64,008	72,964	-	136,972
33	553,762	9,015,924	9,569,686	54,878	62,672	-	117,550
34	462,044	9,418,657	9,880,701	45,789	53,636	-	99,425
35	362,443	9,839,381	10,201,824	35,918	44,681	-	80,599
36	272,945	10,260,438	10,533,383	27,049	34,510	-	61,559
37	216,704	10,659,014	10,875,718	21,475	25,574	-	47,049
38	159,562	11,069,617	11,229,179	15,813	20,385	-	36,198
39	119,047	11,475,080	11,594,127	11,798	15,447	-	27,245
40	87,041	11,883,895	11,970,936	8,626	11,590	-	20,216
41	37,063	12,322,928	12,359,991	3,673	8,475	-	12,148
42	17,418	12,744,273	12,761,691	1,726	3,915	-	5,641
43	12,260	13,164,186	13,176,446	1,215	1,702	-	2,917
44	-	13,604,681	13,604,681	-	1,198	-	1,198
45	-	14,046,833	14,046,833	-	-	-	-
46	-	14,503,355	14,503,355	-	-	-	-
47	-	14,974,714	14,974,714	-	-	-	-
48	-	15,461,392	15,461,392	-	-	-	-
49	-	15,963,887	15,963,887	-	-	-	-
50	-	16,482,714	16,482,714	-	-	-	-
51	-	17,018,402	17,018,402	-	-	-	-
52	-	17,571,500	17,571,500	-	-	-	-
53	-	18,142,574	18,142,574	-	-	-	-
54	-	18,732,207	18,732,207	-	-	-	-
55	-	19,341,004	19,341,004	-	-	-	-
56	-	19,969,587	19,969,587	-	-	-	-
57	-	20,618,598	20,618,598	-	-	-	-
58	-	21,288,703	21,288,703	-	-	-	-
59	-	21,980,586	21,980,586	-	-	-	-
60	-	22,694,955	22,694,955	-	-	-	-

Column d – Contributions from employees to the pension fund (employees as of the valuation date)

Column e – Employer contributions to the fund excluding contributions for employees hired after the actuarial valuation date

Column f – Contributions from future employees to the extent they are anticipated to be greater than required to pay their total normal cost



PROJECTION OF CONTRIBUTIONS – YEARS 61 TO 80

Year	Projected Covered-Employee Payroll			Projected Contributions			
	Current Employees (a)	Future Employees (b)	Total Employee Payroll (c) = (a) + (b)	Current Employees (d) - Notes	Employer Contributions for Current Employees (e) - Notes	Contributions Related to Pay of Future Employees (f) - Notes	Total Contributions (d) + (e) + (f)
61	\$ -	\$ 23,432,541	\$ 23,432,541	\$ -	\$ -	\$ -	\$ -
62	-	24,194,098	24,194,098	-	-	-	-
63	-	24,980,406	24,980,406	-	-	-	-
64	-	25,792,270	25,792,270	-	-	-	-
65	-	26,630,518	26,630,518	-	-	-	-
66	-	27,496,010	27,496,010	-	-	-	-
67	-	28,389,631	28,389,631	-	-	-	-
68	-	29,312,293	29,312,293	-	-	-	-
69	-	30,264,943	30,264,943	-	-	-	-
70	-	31,248,554	31,248,554	-	-	-	-
71	-	32,264,132	32,264,132	-	-	-	-
72	-	33,312,716	33,312,716	-	-	-	-
73	-	34,395,379	34,395,379	-	-	-	-
74	-	35,513,229	35,513,229	-	-	-	-
75	-	36,667,409	36,667,409	-	-	-	-
76	-	37,859,100	37,859,100	-	-	-	-
77	-	39,089,521	39,089,521	-	-	-	-
78	-	40,359,930	40,359,930	-	-	-	-
79	-	41,671,628	41,671,628	-	-	-	-
80	-	43,025,956	43,025,956	-	-	-	-

NOTES TO PROJECTION OF CONTRIBUTIONS

Total payroll is assumed to increase annually at the assumed payroll increase rate shown in the assumption section of this report. Payroll for current employees (employees active as of the actuarial valuation date) has been projected on an employee by employee basis, using expected pay increases and probability of remaining in active employment for future periods.

Employer contributions are related to current employees in the fund as of the Actuarial Valuation Date. To the extent future contributions under the Employer funding policy are made to cover the Normal Cost of providing benefits for future employees, those contributions have been excluded out for purposes of these projections and this report.

Contributions are based on the Funding Policy described in an earlier section of this report. The contributions do not factor in changes in funding policy based on an assumed Employer decision if the projections were to play out in this fashion. The only future events that have been considered were outlined in the funding policy section of the report. Contributions from future employees have not been included. It is assumed that contributions made by future employees will not exceed the Normal Cost of their participation in the Fund. In addition, contributions by the employer on behalf of service for future employees have not been included per the GASB parameters.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION – YEARS 1 TO 30

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (a)+(b)-(c)-(d)+(e)
1	\$ 18,280,993	\$ 3,542,843	\$ 2,661,041	\$ 28,003	\$ 1,210,353	\$ 20,345,145
2	20,345,145	3,879,168	2,767,324	28,703	1,353,453	22,781,739
3	22,781,739	3,990,880	2,870,765	29,421	1,521,151	25,393,584
4	25,393,584	4,100,082	2,989,409	30,156	1,700,567	28,174,667
5	28,174,667	4,210,213	3,099,231	30,910	1,892,143	31,146,882
6	31,146,882	4,323,929	3,267,895	31,683	2,095,064	34,266,297
7	34,266,297	4,441,941	3,396,607	32,475	2,309,717	37,588,872
8	37,588,872	4,559,817	3,515,931	33,287	2,538,917	41,138,389
9	41,138,389	4,679,371	3,640,062	34,119	2,783,846	44,927,425
10	44,927,425	4,803,623	3,765,066	34,972	3,045,544	48,976,554
11	48,976,554	4,931,638	3,920,211	35,846	3,324,418	53,276,553
12	53,276,553	5,061,614	4,117,305	36,743	3,619,398	57,803,518
13	57,803,518	5,184,910	4,308,646	37,661	3,930,420	62,572,540
14	62,572,540	5,297,660	4,527,347	38,603	4,257,353	67,561,603
15	67,561,603	5,410,370	4,738,667	39,568	4,599,947	72,793,686
16	72,793,686	5,522,117	4,945,797	40,557	4,959,690	78,289,139
17	78,289,139	2,194,025	5,159,880	41,571	5,313,547	80,595,260
18	80,595,260	525,987	5,328,832	42,610	5,457,350	81,207,155
19	81,207,155	489,353	5,506,715	43,675	5,493,663	81,639,780
20	81,639,780	456,816	5,684,734	44,767	5,517,450	81,884,545
21	81,884,545	425,211	5,861,534	45,886	5,528,135	81,930,470
22	81,930,470	388,740	6,033,398	47,034	5,525,039	81,763,817
23	81,763,817	350,650	6,150,487	48,209	5,508,967	81,424,738
24	81,424,738	317,817	6,282,900	49,415	5,480,325	80,890,566
25	80,890,566	286,075	6,352,367	50,650	5,440,237	80,213,860
26	80,213,860	258,576	6,437,547	51,916	5,389,649	79,372,623
27	79,372,623	231,337	6,475,716	53,214	5,329,190	78,404,220
28	78,404,220	206,671	6,496,133	54,545	5,260,468	77,320,682
29	77,320,682	186,625	6,494,931	55,908	5,184,475	76,140,942
30	76,140,942	168,872	6,496,862	57,306	5,101,652	74,857,298

Column b – Contributions on behalf of current employees only as of the Actuarial Valuation Date.

Column d – Based on average administrative expenses in recent years and projected to increase going forward.

Column e – Based on the current expected return on assets. Does not factor in allocation changes.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION – YEARS 31 TO 60

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (a)+(b)-(c)-(d)+(e)
31	\$ 74,857,298	\$ 155,050	\$ 6,519,897	\$ 58,739	\$ 5,010,844	\$ 73,444,557
32	73,444,557	136,972	6,497,895	60,207	4,912,544	71,935,972
33	71,935,972	117,550	6,486,296	61,712	4,807,161	70,312,674
34	70,312,674	99,425	6,458,039	63,255	4,694,338	68,585,142
35	68,585,142	80,599	6,417,048	64,836	4,574,658	66,758,515
36	66,758,515	61,559	6,404,866	66,457	4,447,031	64,795,781
37	64,795,781	47,049	6,355,070	68,119	4,311,222	62,730,864
38	62,730,864	36,198	6,274,795	69,822	4,169,352	60,591,798
39	60,591,798	27,245	6,204,549	71,567	4,021,952	58,364,878
40	58,364,878	20,216	6,123,354	73,356	3,868,798	56,057,182
41	56,057,182	12,148	6,017,222	75,190	3,710,853	53,687,771
42	53,687,771	5,641	5,895,288	77,070	3,549,151	51,270,205
43	51,270,205	2,917	5,770,510	78,997	3,384,202	48,807,817
44	48,807,817	1,198	5,629,254	80,972	3,216,698	46,315,487
45	46,315,487	-	5,478,074	82,996	3,047,447	43,801,864
46	43,801,864	-	5,315,847	85,071	2,877,098	41,278,044
47	41,278,044	-	5,141,435	87,198	2,706,461	38,755,872
48	38,755,872	-	4,953,901	89,378	2,536,396	36,248,990
49	36,248,990	-	4,752,703	91,612	2,367,878	33,772,553
50	33,772,553	-	4,537,802	93,902	2,201,969	31,342,818
51	31,342,818	-	4,309,683	96,250	2,039,790	28,976,675
52	28,976,675	-	4,069,455	98,656	1,882,483	26,691,047
53	26,691,047	-	3,818,825	101,123	1,731,175	24,502,274
54	24,502,274	-	3,560,206	103,651	1,586,924	22,425,342
55	22,425,342	-	3,296,515	106,242	1,450,677	20,473,262
56	20,473,262	-	3,031,041	108,898	1,323,230	18,656,554
57	18,656,554	-	2,767,174	111,620	1,205,201	16,982,960
58	16,982,960	-	2,508,239	114,411	1,097,014	15,457,325
59	15,457,325	-	2,257,288	117,271	998,903	14,081,669
60	14,081,669	-	2,017,056	120,203	910,913	12,855,323

Column b – Contributions on behalf of current employees only as of the Actuarial Valuation Date.

Column d – Based on average administrative expenses in recent years and projected to increase going forward.

Column e – Based on the current expected return on assets. Does not factor in allocation changes.



PROJECTION OF THE PENSION PLAN'S FIDUCIARY NET POSITION – YEARS 61 TO 80

Year	Projected Beginning Fiduciary Net Position (a)	Projected Total Contributions (b)	Projected Benefit Payments (c)	Projected Administrative Expenses (d)	Projected Investment Earnings (e)	Projected Ending Fiduciary Net Position (a)+(b)-(c)-(d)+(e)
61	\$ 12,855,323	\$ -	\$ 1,789,652	\$ 123,208	\$ 832,922	\$ 11,775,385
62	11,775,385	-	1,576,775	126,288	764,670	10,836,991
63	10,836,991	-	1,379,623	129,445	705,772	10,033,695
64	10,033,695	-	1,198,859	132,682	655,755	9,357,909
65	9,357,909	-	1,034,774	135,999	614,077	8,801,213
66	8,801,213	-	887,145	139,399	580,156	8,354,825
67	8,354,825	-	755,386	142,884	553,398	8,009,954
68	8,009,954	-	638,670	146,456	533,217	7,758,046
69	7,758,046	-	536,014	150,117	519,049	7,590,963
70	7,590,963	-	446,319	153,870	510,361	7,501,135
71	7,501,135	-	368,465	157,717	506,663	7,481,616
72	7,481,616	-	301,375	161,660	507,507	7,526,089
73	7,526,089	-	244,017	165,701	512,486	7,628,857
74	7,628,857	-	195,440	169,844	521,235	7,784,808
75	7,784,808	-	154,706	174,090	533,429	7,989,441
76	7,989,441	-	120,908	178,442	548,784	8,238,874
77	8,238,874	-	93,185	182,903	567,058	8,529,844
78	8,529,844	-	70,735	187,476	588,052	8,859,686
79	8,859,686	-	52,818	192,163	611,604	9,226,309
80	9,226,309	-	38,747	196,967	637,592	9,628,187

NOTES TO PROJECTION OF FIDUCIARY NET POSITION

Total contributions are Employee and Employer contributions anticipated to be made under the funding policy on behalf of employees in the fund as of the Actuarial Valuation Date. The amounts shown were detailed earlier in this section.

Projected benefit payments shown represent only employees active as of the Actuarial Valuation Date. The fund will also be paying benefit payments in the future on behalf of employees hired after the Actuarial Valuation Date, but those have not been estimated for this purpose.

Projected investment earnings are based on the current expected rate of return on plan assets. Administrative expenses are not typically charged on a per employee basis. Administrative expenses shown have not been adjusted to distinguish between current employees and future employees.

The projected Net Position represents assets held or projected to be held on behalf of current employees as of the Actuarial Valuation Date. The fund will also hold assets in the future on behalf of new employees that are not shown here.



ACTUARIAL PRESENT VALUES OF PROJECTED BENEFIT PAYMENTS – YEARS 1 TO 30

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Present Value (PV) of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	PV of "Funded" Portion of Benefit Payments (7.00%)	PV of "Unfunded" Portion of Benefit Payments (3.32%)	PV of Total Projected Payments Using the Single Discount Rate (7.00%)
1	\$ 18,280,993	\$ 2,661,041	\$ 2,661,041	\$ -	\$ 2,572,525	\$ -	\$ 2,572,525
2	20,345,145	2,767,324	2,767,324	-	2,500,255	-	2,500,255
3	22,781,739	2,870,765	2,870,765	-	2,424,031	-	2,424,031
4	25,393,584	2,989,409	2,989,409	-	2,359,077	-	2,359,077
5	28,174,667	3,099,231	3,099,231	-	2,285,741	-	2,285,741
6	31,146,882	3,267,895	3,267,895	-	2,252,461	-	2,252,461
7	34,266,297	3,396,607	3,396,607	-	2,188,017	-	2,188,017
8	37,588,872	3,515,931	3,515,931	-	2,116,713	-	2,116,713
9	41,138,389	3,640,062	3,640,062	-	2,048,079	-	2,048,079
10	44,927,425	3,765,066	3,765,066	-	1,979,825	-	1,979,825
11	48,976,554	3,920,211	3,920,211	-	1,926,548	-	1,926,548
12	53,276,553	4,117,305	4,117,305	-	1,891,035	-	1,891,035
13	57,803,518	4,308,646	4,308,646	-	1,849,454	-	1,849,454
14	62,572,540	4,527,347	4,527,347	-	1,816,196	-	1,816,196
15	67,561,603	4,738,667	4,738,667	-	1,776,607	-	1,776,607
16	72,793,686	4,945,797	4,945,797	-	1,732,957	-	1,732,957
17	78,289,139	5,159,880	5,159,880	-	1,689,691	-	1,689,691
18	80,595,260	5,328,832	5,328,832	-	1,630,857	-	1,630,857
19	81,207,155	5,506,715	5,506,715	-	1,575,044	-	1,575,044
20	81,639,780	5,684,734	5,684,734	-	1,519,590	-	1,519,590
21	81,884,545	5,861,534	5,861,534	-	1,464,346	-	1,464,346
22	81,930,470	6,033,398	6,033,398	-	1,408,675	-	1,408,675
23	81,763,817	6,150,487	6,150,487	-	1,342,068	-	1,342,068
24	81,424,738	6,282,900	6,282,900	-	1,281,272	-	1,281,272
25	80,890,566	6,352,367	6,352,367	-	1,210,690	-	1,210,690
26	80,213,860	6,437,547	6,437,547	-	1,146,658	-	1,146,658
27	79,372,623	6,475,716	6,475,716	-	1,077,997	-	1,077,997
28	78,404,220	6,496,133	6,496,133	-	1,010,651	-	1,010,651
29	77,320,682	6,494,931	6,494,931	-	944,358	-	944,358
30	76,140,942	6,496,862	6,496,862	-	882,840	-	882,840

The projected Fiduciary Net Position and the Projected Benefit Payments are based only on the current employee group as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position was shown in more detail earlier in this section.



ACTUARIAL PRESENT VALUES OF PROJECTED BENEFIT PAYMENTS – YEARS 31 TO 60

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Present Value (PV) of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	PV of "Funded" Portion of Benefit Payments (7.00%)	PV of "Unfunded" Portion of Benefit Payments (3.32%)	PV of Total Projected Payments Using the Single Discount Rate (7.00%)
31	\$ 74,857,298	\$ 6,519,897	\$ 6,519,897	\$ -	\$ 828,010	\$ -	\$ 828,010
32	73,444,557	6,497,895	6,497,895	-	771,230	-	771,230
33	71,935,972	6,486,296	6,486,296	-	719,489	-	719,489
34	70,312,674	6,458,039	6,458,039	-	669,490	-	669,490
35	68,585,142	6,417,048	6,417,048	-	621,720	-	621,720
36	66,758,515	6,404,866	6,404,866	-	579,944	-	579,944
37	64,795,781	6,355,070	6,355,070	-	537,790	-	537,790
38	62,730,864	6,274,795	6,274,795	-	496,258	-	496,258
39	60,591,798	6,204,549	6,204,549	-	458,601	-	458,601
40	58,364,878	6,123,354	6,123,354	-	422,990	-	422,990
41	56,057,182	6,017,222	6,017,222	-	388,466	-	388,466
42	53,687,771	5,895,288	5,895,288	-	355,695	-	355,695
43	51,270,205	5,770,510	5,770,510	-	325,390	-	325,390
44	48,807,817	5,629,254	5,629,254	-	296,658	-	296,658
45	46,315,487	5,478,074	5,478,074	-	269,805	-	269,805
46	43,801,864	5,315,847	5,315,847	-	244,687	-	244,687
47	41,278,044	5,141,435	5,141,435	-	221,176	-	221,176
48	38,755,872	4,953,901	4,953,901	-	199,167	-	199,167
49	36,248,990	4,752,703	4,752,703	-	178,578	-	178,578
50	33,772,553	4,537,802	4,537,802	-	159,349	-	159,349
51	31,342,818	4,309,683	4,309,683	-	141,437	-	141,437
52	28,976,675	4,069,455	4,069,455	-	124,816	-	124,816
53	26,691,047	3,818,825	3,818,825	-	109,467	-	109,467
54	24,502,274	3,560,206	3,560,206	-	95,377	-	95,377
55	22,425,342	3,296,515	3,296,515	-	82,535	-	82,535
56	20,473,262	3,031,041	3,031,041	-	70,924	-	70,924
57	18,656,554	2,767,174	2,767,174	-	60,514	-	60,514
58	16,982,960	2,508,239	2,508,239	-	51,263	-	51,263
59	15,457,325	2,257,288	2,257,288	-	43,116	-	43,116
60	14,081,669	2,017,056	2,017,056	-	36,007	-	36,007

The projected Fiduciary Net Position and the Projected Benefit Payments are based only on the current employee group as of the Actuarial Valuation Date. The development of the Projected Fiduciary Net Position was shown in more detail earlier in this section.



ACTUARIAL PRESENT VALUES OF PROJECTED BENEFIT PAYMENTS – YEARS 61 TO 80

Year	Projected Beginning Fiduciary Net Position	Projected Benefit Payments	Projected Benefit Payments		Present Value (PV) of Projected Benefit Payments		
			"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	PV of "Funded" Portion of Benefit Payments (7.00%)	PV of "Unfunded" Portion of Benefit Payments (3.32%)	PV of Total Projected Payments Using the Single Discount Rate (7.00%)
61	\$ 12,855,323	\$ 1,789,652	\$ 1,789,652	\$ -	\$ 29,857	\$ -	\$ 29,857
62	11,775,385	1,576,775	1,576,775	-	24,585	-	24,585
63	10,836,991	1,379,623	1,379,623	-	20,104	-	20,104
64	10,033,695	1,198,859	1,198,859	-	16,327	-	16,327
65	9,357,909	1,034,774	1,034,774	-	13,170	-	13,170
66	8,801,213	887,145	887,145	-	10,553	-	10,553
67	8,354,825	755,386	755,386	-	8,397	-	8,397
68	8,009,954	638,670	638,670	-	6,635	-	6,635
69	7,758,046	536,014	536,014	-	5,205	-	5,205
70	7,590,963	446,319	446,319	-	4,050	-	4,050
71	7,501,135	368,465	368,465	-	3,125	-	3,125
72	7,481,616	301,375	301,375	-	2,389	-	2,389
73	7,526,089	244,017	244,017	-	1,808	-	1,808
74	7,628,857	195,440	195,440	-	1,353	-	1,353
75	7,784,808	154,706	154,706	-	1,001	-	1,001
76	7,989,441	120,908	120,908	-	731	-	731
77	8,238,874	93,185	93,185	-	527	-	527
78	8,529,844	70,735	70,735	-	374	-	374
79	8,859,686	52,818	52,818	-	261	-	261
80	9,226,309	38,747	38,747	-	179	-	179

NOTES TO THE ACTUARIAL PRESENT VALUE OF PROJECTED BENEFIT PAYMENTS

The projected Fiduciary Net Position and the Projected Benefit Payments are based only on the current employee group as of the Actuarial Valuation Date. The development of the Net Position was shown in more detail earlier in this section.

The Funded and Unfunded portion of the Benefit Payments is split based on the time that the Fiduciary Net Position is projected to go to \$0 (based on assets for current fund members).

The Present Value of the Funded portion and Unfunded portion of the benefit payments has been determined separately. The PV of the funded portion of the benefit payments uses the assumption for the expected rate of return on plan assets. The PV of the unfunded portion of the benefit payments has been determined using the high quality Municipal Bond Rate as of the Measurement Date as described in the Actuarial Assumption section of the report.

The discount rate used for GASB purposes is the rate that is when applied to the total Projected Benefit payments results in a present value that equals the sum of the present value of the funded and unfunded payments. The discount rate has been rounded to four decimal places. Therefore, the resulting present value comparisons might show a slight difference due to rounding.