THE POLICE PENSION TRUST FUND OF THE CITY OF STAMFORD

GASB 67 AND GASB 68 DISCLOSURE

REPORTING AS OF JUNE 30, 2017

hooker & holcombe

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All the items listed below are required by GASB 67 and GASB 68 but are not included in this report:

Statement of Changes in Fiduciary Net Position

Statement of Fiduciary Net Position

Investments That Represent 5% or More of the Plan's Fiduciary Net Position

Investment Policy

Pension Board Composition

Authority to Amend Plan

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Certification

This report presents the results of the June 30, 2017 GASB 67 and GASB 68 Disclosure for The Police Pension Trust Fund of the City of Stamford (the Plan). The report is intended to satisfy the requirements of both GASB 67 and GASB 68. This report may not be appropriate for any other purpose.

The report has been performed in accordance with generally accepted actuarial principles and practices. It is intended to comply with the Actuarial Standards Board Standards of Practice.

I certify that the actuarial assumptions and methods that were selected by me and represent my best estimate of anticipated actuarial experience under the Plan.

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to factors such as, but not limited to, the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law. Due to the limited scope of this report, an analysis of the potential range of such future measurements has not been performed.

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

Evan W. Woollacott

Evan W. Woollacott, Jr., FCA, MAAA, EA
Enrolled Actuary 17-04513

January 4, 2018

Money-Weighted Rate of Return
June 30, 2017

Beg. Value 186,944,990 **Ending Value** 202,493,336

	Date	Employer Contributions	Employee Contributions	Benefit Payments	Admin. Expenses	Net External Cash Flows	Period Invested	Period Weight	Net External Cash Flows w/ Interest
Beg. of Yr.	7/1/2016						12	1.000	207,152,597
July	7/31/2016	7,903,000	101,576	(1,126,951)	(12,491)	6,865,134	11	0.917	7,542,423
August	8/31/2016	-	125,358	(1,128,542)	(57,381)	(1,060,565)	10	0.833	(1,155,272)
September	9/30/2016	-	99,870	(1,135,587)	(15,639)	(1,051,356)	9	0.750	(1,135,487)
October	10/31/2016	-	100,116	(1,128,835)	(4,862)	(1,033,581)	8	0.667	(1,106,782)
November	11/30/2016	-	99,436	(1,149,842)	(12,820)	(1,063,226)	7	0.583	(1,128,830)
December	12/31/2016	-	123,506	(1,074,413)	(18,874)	(969,781)	6	0.500	(1,020,850)
January	1/31/2017	-	99,477	(1,172,969)	(5,900)	(1,079,392)	5	0.417	(1,126,556)
February	2/28/2017	-	99,210	(1,166,588)	(23,858)	(1,091,236)	4	0.333	(1,129,217)
March	3/31/2017	-	123,311	(1,166,847)	(20,681)	(1,064,217)	3	0.250	(1,091,879)
April	4/30/2017	-	101,713	(1,169,556)	(4,630)	(1,072,473)	2	0.167	(1,090,977)
May	5/31/2017	-	102,035	(1,164,859)	(10,323)	(1,073,147)	1	0.083	(1,082,365)
June	6/30/2017	-	126,532	(1,197,635)	(62,366)	(1,133,469)	0	0.000	(1,133,469)
End of Yr.	6/30/2017	7,903,000	1,302,140	(13,782,624)	(249,825)				202,493,336

Money-Weighted Rate of Return	**10.81%**

Schedule of Investment Returns
Last 4 Fiscal Years

Year Ended June 30:	Annual Money-Weighted Rate of Return, Net of Investment Expense
2014	15.13%
2015	4.38%
2016	-2.15%
2017	10.81%

Contributions Compared to ADEC and Payroll
Schedule of Contributions Last 4 Fiscal Years

	2017	2016	2015	2014
Actuarially determined employer contribution (ADEC)	$ 7,903,000	$ 7,158,000	$ 6,645,000	$ 6,230,000
Contributions in relation to the ADEC	7,903,000	7,158,000	6,645,000	6,230,000
Contribution deficiency (excess)	$ -	$ -	$ -	$ -
Covered payroll	$ 22,320,912	$ 23,328,220	$ 22,648,757	$ 21,994,000
Contributions as a % of covered payroll	35.41%	30.68%	29.34%	28.33%

Discount Rate Calculation

The long-term expected rate of return on investments may be used to discount liabilities to the extent that the plan's fiduciary net position and future contributions are projected to be sufficient to cover expected benefit payments and administrative expenses for current plan members. Projections of the plan's fiduciary net position incorporate all cash flows for contributions from the employer and employee and administrative expenses. Professional judgment should be applied to the projections of contributions in circumstances where (a) contributions amounts are established by statute or contract or (b) a formal written policy exists. Consideration should also be given to the most recent five-year contribution history as key indicators of future contributions. It should not include cash flows for future plan members.

If the amount of the plan's fiduciary net position is projected to be greater than or equal to the benefit payments and administrative expenses made in that period, the actuarial present value of payments should be discounted using the long-term expected rate of return on those investments. A 20-year, high quality (AA/Aa or higher), tax-exempt municipal bond yield or index rate must be used to discount benefit payments for periods where the fiduciary net position is not projected to cover expected benefit payments and administrative expenses.

Plans that are projected to have sufficient fiduciary net positon indefinitely will use the long-term expected return on investments to determine liabilities but will have to substantiate their projected solvency.

GASB permits alternative methods to evaluate the sufficiency of the plan's net fiduciary position. Based on the plan's current net pension liability and current contribution policy, the plan's projected fiduciary net position will be sufficient to cover projected benefit payments and administrative expenses indefinitely. Therefore, since the fund is not projected to run out of money, we have used the 7.20% interest rate assumption to discount plan liabilities.

Target Allocation and Expected Rate of Return

Actuarial Valuation as of July 1, 2016

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return*	Weighting
US Equity	25.00%	7.00%	1.75%
Non-US Equity	14.00%	7.25%	1.02%
US Fixed Income	20.00%	2.25%	0.45%
Alternatives	25.00%	4.00%	1.00%
Real Estate/REITs	14.00%	7.00%	0.98%
Cash	2.00%	0.00%	0.00%
	100.00%		5.20%
Long-Term Inflation Expectation			2.25%
Long-Term Expected Nominal Return			7.45%

**Long-Term Returns are provided by Clearbrook. The returns are arithmetic means.*

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

The information above is based on arithmetic means. The investment return assumption was selected using the long term asset allocation shown above. An expected rate of return of 7.20% was used.

The July 1, 2016 Actuarial Valuation directly calculated the July 1, 2016 Total Pension Liability (TPL). The July 1, 2016 TPL was increased by service cost and interest and decreased by benefit payments to estimate the TPL as of June 30, 2017.

Schedule of Changes in Net Pension Liability and Related Ratios
Last 5 Fiscal Years

	2017	2016	2015	2014	2013
Total pension liability					
Service cost	$ 4,784,685	$ 4,539,800	$ 4,400,529	$ 4,272,359	$ 4,147,921
Interest	18,693,625	18,039,262	17,449,743	16,709,145	15,999,943
Changes of benefit terms	(17,318)	-	-	-	-
Differences between expected and actual experience	537,450	-	(1,349,423)	-	-
Changes of assumptions	(4,088,924)	3,084,827	2,952,505	-	-
Benefit payments, including refunds of member contributions	(13,782,624)	(12,714,828)	(11,641,732)	(11,468,644)	(10,786,696)
Net change in total pension liability	6,126,894	12,949,061	11,811,622	9,512,860	9,361,168
Total pension liability - beginning	251,230,382	238,281,321	226,469,699	216,956,839	207,595,671
Total pension liability - ending: (a)	$ 257,357,276	$ 251,230,382	$ 238,281,321	$ 226,469,699	$ 216,956,839
Plan fiduciary net position					
Contributions - employer	$ 7,903,000	$ 7,158,000	$ 6,645,000	$ 6,230,000	$ 4,885,000
Contributions - member	1,302,140	1,479,977	1,210,331	1,250,143	1,231,498
Net investment income (loss)	20,375,655	(4,227,286)	8,404,119	25,799,437	19,409,718
Benefit payments, including refunds of member contributions	(13,782,624)	(12,714,828)	(11,641,732)	(11,468,644)	(10,786,696)
Administrative expenses	(249,825)	(325,605)	(228,492)	(82,936)	-
Other	-	-	-	-	-
Net change in plan fiduciary net position	15,548,346	(8,629,742)	4,389,226	21,728,000	14,739,520
Plan fiduciary net position - beginning	186,944,990	195,574,732	191,185,506	169,457,506	154,717,986
Plan fiduciary net position - ending: (b)	202,493,336	186,944,990	195,574,732	191,185,506	169,457,506
Net pension liability - ending: (a) - (b)	$ 54,863,940	$ 64,285,392	$ 42,706,589	$ 35,284,193	$ 47,499,333
Plan fiduciary net position as a % of total pension liability	78.68%	74.41%	82.08%	84.42%	78.11%
Covered payroll	$ 22,320,912	$ 23,328,220	$ 22,648,757	$ 21,994,000	$ 21,353,000
Net pension liability as a % of covered payroll	245.80%	275.57%	188.56%	160.43%	222.45%

Schedule of Net Pension Liability
Last 6 Fiscal Years

	2017	2016	2015	2014	2013
Total pension liability*	$ 257,357,276	$ 251,230,382	$ 238,281,321	$ 226,469,699	$ 216,956,839
Plan fiduciary net position	202,493,336	186,944,990	195,574,732	191,185,506	169,457,506
Net pension liability (asset)	$ 54,863,940	$ 64,285,392	$ 42,706,589	$ 35,284,193	$ 47,499,333
Plan fiduciary net position as a % of total pension liability	78.68%	74.41%	82.08%	84.42%	78.11%
Covered payroll	$ 22,320,912	$ 23,328,220	$ 22,648,757	$ 21,994,000	$ 21,353,000
Net pension liability as a % of covered payroll	245.80%	275.57%	188.56%	160.43%	222.45%

	2012
Total pension liability*	$ 207,595,671
Plan fiduciary net position	154,717,986
Net pension liability (asset)	$ 52,877,685
Plan fiduciary net position as a % of total pension liability	74.53%
Covered payroll	$ 22,340,000
Net pension liability as a % of covered payroll	236.70%

**Total pension liability calculated using the Entry Age Normal Actuarial Cost Method, as required by paragraph 46 of GASB Statement 67.*

Disclosure Overview as of June 30, 2017

	Plan's Funded Status			Deferred Outflows/(Inflows) of Resources				
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	(Gains)/ Losses	Assumption Changes	Projected Net Investment Income	Recognized in Net Pension Liability	Recognized in Total Pension Expense
Balances -- prior year disclosure	(251,230,382)	186,944,990	(64,285,392)	(787,163)	4,089,720	18,936,127	(64,285,392)	
Changes in net pension liability:								
Service cost	(4,784,685)		(4,784,685)					4,784,685
Interest	(18,693,625)		(18,693,625)					18,693,625
Net investment income		20,375,655	20,375,655					(20,375,655)
Contributions - employer		7,903,000	7,903,000				7,903,000	
Contributions - member		1,302,140	1,302,140					(1,302,140)
Changes of benefit terms	17,318		17,318					(17,318)
Benefit payments, including refunds of member contributions	13,782,624	(13,782,624)	-					
Administrative expense		(249,825)	(249,825)					249,825
Other		-	-					-
Recognized in total pension expense								
Differences between expected and actual experience				169,161			(169,161)	(169,161)
Changes of assumptions					(480,648)		480,648	480,648
Differences between projected and actual earnings on pension plan						(3,740,530)	3,740,530	3,740,530
Deferred outflows/inflows of resources								
Differences between expected and actual experience	(537,450)		(537,450)	537,450			(537,450)	
Changes of assumptions	4,088,924		4,088,924		(4,088,924)		4,088,924	
Differences between projected and actual earnings on pension plan						(6,532,533)	6,532,533	6,532,533
Total pension expense							(12,617,572)	12,617,572
Balances -- end of year	(257,357,276)	202,493,336	(54,863,940)	(80,552)	(479,852)	8,663,064	(54,863,940)	

Changes in the Net Pension Liability

	Increase (Decrease)		
	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances as of June 30, 2016	$ 251,230,382	$ 186,944,990	$ 64,285,392
Changes for the year:			
Service cost	4,784,685		4,784,685
Interest	18,693,625		18,693,625
Differences between expected and actual experience	537,450		537,450
Changes of benefit terms	(17,318)		(17,318)
Changes of assumptions	(4,088,924)		(4,088,924)
Contributions - employer		7,903,000	(7,903,000)
Contributions - member		1,302,140	(1,302,140)
Net investment income		20,375,655	(20,375,655)
Benefit payments, including refunds of member contributions	(13,782,624)	(13,782,624)	-
Administrative expense		(249,825)	249,825
Other		-	-
Net changes	6,126,894	15,548,346	(9,421,452)
Balances at June 30, 2017	$ 257,357,276	$ 202,493,336	$ 54,863,940

Components of the Pension Expense for the Fiscal Year Ended June 30, 2017

Description	Amount
Service cost	$ 4,784,685
Interest on the total pension liability	18,693,625
Differences between expected and actual experience	(169,161)
Changes of assumptions	480,648
Changes of benefit terms	(17,318)
Member contributions	(1,302,140)
Projected earnings on pension plan investments	(13,843,122)
Differences between projected and actual earnings on plan investments	3,740,530
Pension plan administrative expense	249,825
Other changes in fiduciary net position	-
Total pension expense	$ 12,617,572

Increase (Decrease) in Pension Expense from the Recognition of the Effects of Differences Between Expected and Actual Experience

Year	Differences between Expected and Actual Experience	Recognition Period (Years)	2017	2018	2019	2020	2021
2015	$ (1,349,423)	4.8	$ (281,130)	$ (281,130)	$ (224,903)		
2016	-	4.3	-	-	-	$ -	
2017	537,450	4.8	111,969	111,969	111,969	111,969	$ 89,574
Net increase (decrease) in pension expense			$ (169,161)	$ (169,161)	$ (112,934)	$ 111,969	$ 89,574

Increase (Decrease) in Pension Expense from the Recognition of the Effects of Changes of Assumptions

Year	Changes of Assumptions	Recognition Period (Years)	2017	2018	2019	2020	2021
2015	$ 2,952,505	4.8	$ 615,105	$ 615,105	$ 492,085		
2016	3,084,827	4.3	717,402	717,402	717,402	$ 215,219	
2017	(4,088,924)	4.8	(851,859)	(851,859)	(851,859)	(851,859)	$ (681,488)
Net increase (decrease) in pension expense			$ 480,648	$ 480,648	$ 357,628	$ (636,640)	$ (681,488)

Increase (Decrease) in Pension Expense from the Recognition of Differences between Projected and Actual Earnings on Pension Plan Investments

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2017	2018	2019	2020	2021
2015	$ 6,260,083	5	$ 1,252,017	$ 1,252,017	$ 1,252,015		
2016	18,975,098	5	3,795,020	3,795,020	3,795,020	$ 3,795,018	
2017	(6,532,533)	5	(1,306,507)	(1,306,507)	(1,306,507)	(1,306,507)	$ (1,306,505)
Net increase (decrease) in pension expense			$ 3,740,530	$ 3,740,530	$ 3,740,528	$ 2,488,511	$ (1,306,505)

Interest on the Total Pension Liability Recognized in Expense

	Amount for Period	Portion of Period	Interest Rate	Interest on the Total Pension Liability
Beginning total pension liability	$ 251,230,382	100%	7.50%	$ 18,842,279
Service cost	4,784,685	100	7.50	358,851
Benefit payments, including refunds of member contributions	(13,782,624)	50	7.50	(507,505)
Total interest on the pension liability				$ 18,693,625

Projected Earnings on Pension Plan Investments Recognized in Expense

	Amount for Period	Portion of Period	Projected Rate of Return	Projected Earnings
Beginning plan fiduciary net position	$ 186,944,990	100%	7.50%	$ 14,020,874
Contributions - employer	7,903,000	50	7.50	291,005
Contributions - member	1,302,140	50	7.50	47,947
Benefit payments, including refunds of member contributions	(13,782,624)	50	7.50	(507,505)
Administrative expense and other	(249,825)	50	7.50	(9,199)
Total projected earnings				$ 13,843,122

Pension Expense and Deferred Outflows and Inflows of Resources Related to Pensions

For the fiscal year ended June 30, 2017, the recognized pension expense is $12,617,572. As of June 30, 2017, deferred outflows and inflows of resources related to pensions are reported as follows:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	$ 425,481	$ (506,033)
Changes of assumptions	2,757,213	(3,237,065)
Net difference between projected and actual earnings on pension plan investments	8,663,064	
Total	$ 11,845,758	$ (3,743,098)

Amounts reported as deferred outflows and inflows of resources related to pensions will be recognized in the pension expense as follows:

Year Ended June 30:	
2018	$ 4,052,017
2019	3,985,222
2020	1,963,840
2021	(1,898,419)
2022	-
Thereafter	-

Deferred Outflows and Inflows of Resources from Differences between Expected and Actual Experience

				Balances at June 30, 2017	
Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense through June 30, 2017 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2015		$ (1,349,423)	$ (843,390)		$ (506,033)
2017	$ 537,450		111,969	$ 425,481	
				$ 425,481	$ (506,033)

Deferred Outflows and Inflows of Resources from Changes of Assumptions

				Balances at June 30, 2017	
Year	Increases in the Total Pension Liability (a)	Decreases in the Total Pension Liability (b)	Amounts Recognized in Pension Expense through June 30, 2017 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2015	$ 2,952,505		$ 1,845,315	$ 1,107,190	
2016	3,084,827		1,434,804	1,650,023	
2017		$ (4,088,924)	(851,859)		$ (3,237,065)
				$ 2,757,213	$ (3,237,065)

Deferred Outflows and Inflows of Resources from Differences between Projected and Actual Earnings on Pension Plan Investments

				Balances at June 30, 2017	
Year	Investment Earnings Less Than Projected (a)	Investment Earnings Greater Than Projected (b)	Amounts Recognized in Pension Expense through June 30, 2017 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2015	$ 6,260,083		$ 3,756,051	$ 2,504,032	
2016	18,975,098		7,590,040	11,385,058	
2017		$ (6,532,533)	(1,306,507)		$ (5,226,026)
				$ 13,889,090	$ (5,226,026)

Sensitivity of the Net Pension Liability to Changes in the Discount Rate

	Current Discount Rate (7.20%)	1% Decrease (6.20%)	1% Increase (8.20%)
Net pension liability as of June 30, 2017	$ 54,863,940	$ 83,894,120	$ 30,538,692

Participant Breakdown as of July 1, 2016

	Participant Count
Inactive plan members or beneficiaries currently receiving benefits	323
Inactive plan members entitled to but not yet receiving benefits	1
Active plan members	272
Total members	596

Description of Significant Changes Prior to Year End

There were no significant plan changes since the last published valuation.

DROP Balances

Although there is a Deferred Retirement Option Plan (DROP), as of June 30, 2017, no members have elected the DROP. Therefore, the DROP balances are $0.

Valuation Date and Roll Forward Process

The Plan Sponsor uses the July 1, 2015 Actuarial Valuation to calculate the ADEC for the fiscal year ending 2017.

The July 1, 2016 Actuarial Valuation directly calculated the July 1, 2016 Total Pension Liability (TPL). The July 1, 2016 TPL was increased by service cost and interest and decreased by benefit payments to estimate the TPL as of June 30, 2017. The TPL as of June 30, 2017 was also adjusted to reflect any material plan changes after the valuation, if applicable.

Funding Policy

The Plan Sponsor uses the Entry Age Normal Actuarial Cost Method to calculate the plan liabilities. The Funding Policy has two parts.

1. Normal Cost
2. Amortization of the Unfunded Actuarial Liability (UAL)

Each year the Plan Sponsor pays the Normal Cost plus an amortization of the plan's UAL. For the July 1, 2016 Actuarial Valuation, an open amortization period of 15 years was used.

Assumption Selection

The selections of all assumptions used in determining the total pension liability were made in conformity with Actuarial Standards of Practice issued by the Actuarial Standards Board.

The actuarial assumptions used in the valuation were based on standard tables modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor. A full actuarial experience study has not been completed.

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Description of Actuarial Methods

Asset Valuation Method

The Actuarial Value of assets used in the development of plan contributions phases in the recognition of differences between the Market Value and Expected Actuarial Value by recognizing 20% of the difference each year. The Actuarial Value is adjusted, if necessary, to be within the range of 70% and 130% of the Market Value of assets.

Actuarial Cost Method

Cost method for determining the GASB liability: Entry Age Normal Actuarial Cost Method (level percentage of salary).

Cost method for determining the ADEC: Projected Unit Credit Actuarial Cost Method

Normal Cost: Under this method, the normal cost equals the total present value of the benefits accruing for all members during the upcoming year, increased to reflect salaries projected to the assumed retirement date.

Unfunded Accrued Liability: The actuarial accrued liability equals the present value of all benefits accrued to date, increased to reflect salaries for all active members. The actuarial accrued liability is reduced by plan assets to develop the unfunded accrued liability. This amount is amortized over 15 years on an open basis.

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

Description of Actuarial Assumptions

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

7.20% (Prior 7.50%)

Rate of compensation increase (including inflation)

Service	Rate
0	15.00%
1	15.00%
2-5	6.00%
6+	2.75%

(Prior:

Age	Rate
20	6.50%
25	6.50%
30	5.85%
35	5.20%
40	4.55%
45	3.90%
50	3.25%
55+	3.00%

)

The actuarial assumption in regards to rate of compensation increases shown above is based on the results of an actuarial experience study for the period 2008-2014. The assumption was updated to better reflect actual experience. The change in assumption decreased liabilities.

Inflation

2.75% (Prior: 3.00%)

This assumption is based on long term historical inflation numbers. While near term averages have been lower, we do not believe this trend will continue indefinitely and expect that there will be a reversion to the long term average.

Mortality

RP-2000 Mortality Table with separate male and female rates with Blue Collar adjustment, separate tables for non-annuitants and annuitants, projected to the valuation date with Scale BB. (Prior: Scale AA)

Mortality Improvement

Projected to date of decrement using Scale BB (generational). (Prior: Scale AA)

We have selected a mortality table commonly used by public pension systems. It is a recently published pension mortality study released by the Society of Actuaries. The plan does not have sufficiently credible data on which to perform a mortality experience study.

We are using Scale BB because it is the most up to date mortality improvement scale which was developed for use with RP-2000.

Retirement age

Service	Rate
20	13%
21	11%
22	8%
23	7%
24	7%
25	7%
26	7%
27	8%
28	8%
29	8%
30	11%
31	13%
32	14%
33	13%
34	19%
35	20%
36	21%
37	17%
38	16%
39	18%
40	24%
41	24%
42	27%
43	21%
44	25%
45	22%
46	35%
47	50%

Additionally, 100% of participants are assumed to retire upon reaching age 65.

(Prior: Sample rates of assumed annual rates of retirement after completion of 25 years are as follows:

Age	Retirement Rate
55	50%
56	50%
57	50%
58	50%
59	50%

An additional 50% is added upon attainment of 20 years of service and 100% of members remaining beyond the earlier of age 60 with 25 years of service or age 65 are assumed to retire.)

Termination prior to retirement

The following sample annual rates of turnover are assumed:

Age	Rate
20	1.81%
25	1.63%
30	1.23%
35	0.78%
40	0.00%
45	0.00%
50	0.00%
55	0.00%
60	0.00%

(Prior:

Age	Probability
20	5.44%
25	4.89%
30	3.70%
35	2.35%
40	0.00%
45	0.00%
50	0.00%
55	0.00%
60	0.00%

)

Disability

The following sample annual rates of disability are assumed:

Age	Rate
20	0.30%
25	0.30%
30	0.30%
35	0.36%
40	0.54%
45	1.08%
50	2.40%
55	5.10%
60	10.44%

Disability (continued)

(Prior:

Age	Probability
20	.05%
25	.05%
30	.05%
35	.06%
40	.09%
45	.18%
50	.40%
55	.85%
60	1.74%

)

The actuarial assumptions in regards to rates of decrement shown above are based on the results of an actuarial experience study for the period 2008-2014. The assumptions were updated to better reflect actual experience. The change in retirement rates decreased liabilities, while the change in termination and disability rates increased liabilities.

Administrative expenses

The estimate is based on the average of the actual expenses paid from the trust in the past 2 years.

Payroll growth

2.75% per year. (Prior: 3.00%)

Percent of active employees married

80%.

Spouse's age

Husbands are assumed to be 4 years older than wives.

Sick Bank and Vacation Bank

34% of retirees are assumed to elect an annuity from the fund. (Prior: 50% of retirees are assumed to elect an annuity from the fund)

Post-Retirement Life Insurance

100% of active and retired employees are assumed to have a $4,000 life insurance policy beginning at retirement.

Medicare Part B Reimbursement

2.75% increase assumption each year. (Prior: 3% increase assumption each year)

Summary of Plan Provisions

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

Plan identification

Single-employer pension plan

Pension Earnings

For those hired before April 11, 2016, Base Salary in Final Year of Employment plus 14 paid holidays.

For those hired after April 11, 2016, average of 3 highest base salaries (including 14 paid holidays).

Normal Retirement

Eligibility: 20 years of service

Benefit (for those hired before April 11, 2016):

Years of Service	% of Pension Earnings
20	50.00%
21	53.00%
22	56.00%
23	59.00%
24	62.00%
25	65.00%
26	67.33%
27	69.66%
28	71.99%
29	74.32%
30	76.65%

For those hired after April 11, 2016, 2.25% per year of service times pension earnings.

Limits on Annual Benefit

Maximum: 76.65% of pension earnings plus a possible 7.5% (from Sick Bank) for a total of 84.15% if hired before April 11, 2016. If hired after April 11, 2016, the maximum benefit is 100% of the average salary.

Minimum: None.

Early Retirement

Eligibility: None.

Minimum: See Termination Benefit.

Disability:

Service Requirement: None.

Benefit: 75% of pay (or 100% of pay depending on extent of disability).

Pre-Retirement Death Benefit – Non Service Connected

Service Requirement: 10 years of service.

Benefit: 50% of salary.

Pre-Retirement Death Benefit – Service Connected

Service Requirement: None.

Benefit: 50% of salary but not less than the accrued benefit.

Post-Retirement Spouse's Benefit

For those hired before April 11, 2016, 100% of pension retiree was receiving.

For those hired after April 11, 2016, the retiree can elect an actuarially reduced joint & survivor annuity at retirement.

Post-Retirement Lump Sum at Death

Lump Sum equal to $4,000.00.

Vesting in Accrued Benefit

Eligibility: 10 years of service.

For those hired before April 11, 2016, 50% of final salary times the ratio of service at termination to 20 years.

For those hired after April 11, 2016, 2.25% times years of service times pension earnings. Benefit is payable when the officer would have had 20 years of service but not earlier than age 48.

Termination Benefit

Accumulated contributions as lump sum, if not vested.

Employee Contributions

7% of salary; no contributions for those with 30 or more years of service (35 or more years for those hired after April 11, 2016).

Additional Retirement Benefits

Employees can trade in 50% of sick leave for additional pension credit. If an officer's sick bank has less than 200 days, unused vacation time may be added, subject to a maximum of 200 sick and unused vacation days combined. Each 20 days grants an additional 1.5% of salary up to a maximum of 7.5%. Employees hired after April 11, 2016 are not eligible to exchange sick time for additional pension credit.

Medicare Part B Reimbursement

The Medicare Part B premium is reimbursed from the pension fund for participants hired before April 11, 2016.