



THE CLASSIFIED EMPLOYEES' RETIREMENT TRUST FUND OF THE CITY OF
STAMFORD

GASB 67 AND GASB 68 DISCLOSURE

REPORTING AS OF JUNE 30, 2017





Table of Contents

Certification	1
Money-Weighted Rate of Return	2
Schedule of Investment Returns	3
Contributions Compared to ADEC and Payroll	4
Discount Rate Calculation.....	5
Target Allocation and Expected Rate of Return	6
Schedule of Changes in Net Pension Liability and Related Ratios.....	7
Schedule of Net Pension Liability	8
Disclosure Overview as of June 30, 2017	9
Changes in the Net Pension Liability	10
Components of the Pension Expense for the Fiscal Year Ended June 30, 2017.....	11
Pension Expense and Deferred Outflows and Inflows of Resources Related to Pensions.....	16
Sensitivity of the Net Pension Liability to Changes in the Discount Rate.....	20
Participant Breakdown as of July 1, 2016.....	20
Description of Significant Changes Prior to Year End.....	21
DROP Balances.....	21
Valuation Date and Roll Forward Process	21
Funding Policy.....	21
Assumption Selection	21
Description of Actuarial Methods	22
Description of Actuarial Assumptions	23
Summary of Plan Provisions	26

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

Report Prepared By:

Evan W. Woollacott
Vice President and Consulting Actuary
860.856.2118
ewoollacott@hhconsultants.com

Yelena Pelletier
Actuary
860.856.2066
ypelletier@hhconsultants.com

Michael Lindberg
Senior Actuarial Associate
860.856.2132
mlindberg@hhconsultants.com



Certification

This report presents the results of the June 30, 2017 GASB 67 and GASB 68 Disclosure for The Classified Employees' Retirement 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, Jr., FCA, MAAA
Enrolled Actuary 17-04513

January 4, 2018



Money-Weighted Rate of Return June 30, 2017

Beg. Value 190,594,323 **Ending Value** 210,354,348

	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	218,467,202
July	7/31/2016	5,923,000	142,214	(1,332,541)	(8,412)	4,724,261	11	0.917	5,353,903
August	8/31/2016	-	179,749	(1,322,889)	(8,412)	(1,151,552)	10	0.833	(1,290,270)
September	9/30/2016	-	150,501	(1,341,263)	(8,412)	(1,199,174)	9	0.750	(1,328,432)
October	10/31/2016	-	150,187	(1,301,911)	(8,412)	(1,160,136)	8	0.667	(1,270,651)
November	11/30/2016	-	190,182	(1,323,327)	(8,412)	(1,141,557)	7	0.583	(1,236,162)
December	12/31/2016	-	201,040	(1,291,303)	(8,412)	(1,098,675)	6	0.500	(1,176,271)
January	1/31/2017	-	155,335	(1,300,474)	(8,412)	(1,153,551)	5	0.417	(1,221,055)
February	2/28/2017	-	156,590	(1,308,344)	(8,412)	(1,160,166)	4	0.333	(1,214,168)
March	3/31/2017	-	201,588	(1,347,904)	(8,412)	(1,154,728)	3	0.250	(1,194,810)
April	4/30/2017	-	158,586	(1,346,882)	(8,412)	(1,196,708)	2	0.167	(1,224,243)
May	5/31/2017	-	158,332	(1,315,424)	(8,412)	(1,165,504)	1	0.083	(1,178,836)
June	6/30/2017	-	204,675	(1,328,122)	(8,412)	(1,131,859)	0	0.000	(1,131,859)
End of Yr.	6/30/2017	5,923,000	2,048,979	(15,860,384)	(100,944)				210,354,348

Money-Weighted Rate of Return

14.62%



Schedule of Investment Returns Last 4 Fiscal Years

Year Ended June 30:	Annual Money-Weighted Rate of Return, Net of Investment Expense
2014	16.60%
2015	1.44%
2016	-4.38%
2017	14.62%



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

	2017	2016	2015	2014
Actuarially determined employer contribution (ADEC)	\$ 5,923,000	\$ 6,387,000	\$ 6,799,000	\$ 6,504,000
Contributions in relation to the ADEC	5,923,000	6,388,000	6,799,000	6,504,000
Contribution deficiency (excess)	\$ -	\$ (1,000)	\$ -	\$ -
Covered payroll	\$ 40,776,678	\$ 39,506,337	\$ 44,213,643	\$ 44,997,000
Contributions as a % of covered payroll	14.53%	16.17%	15.38%	14.45%



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 position 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 7.5% 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
Fixed Income	15.00%	1.95%	0.29%
Domestic Equity	30.00%	5.08%	1.52%
International Equity	20.00%	6.00%	1.20%
Asset Allocation	35.00%	4.06%	1.42%
	100.00%		4.43%
Long-Term Inflation Expectation			2.75%
Long-Term Expected Nominal Return			7.18%

**Long-Term Returns are provided by HHIA & FIA. The returns are geometric means.*

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

The information above is based on geometric means and does not reflect additional returns through investment selection, asset allocation and rebalancing. The results support a rate between 7.0% and 7.5%. An expected rate of return of 7.5% 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	\$ 5,144,203	\$ 5,018,705	\$ 4,566,053	\$ 4,433,061	\$ 4,303,943
Interest	19,364,883	18,876,464	18,755,559	18,090,605	17,452,292
Changes of benefit terms	(215,835)	-	-	-	-
Differences between expected and actual experience	(5,450,130)	(2,027,851)	(8,199,467)	-	-
Changes of assumptions	1,343,336	-	4,836,505	-	-
Benefit payments, including refunds of member contributions	(15,860,384)	(15,324,091)	(14,405,292)	(13,759,945)	(13,542,242)
Net change in total pension liability	4,326,073	6,543,227	5,553,358	8,763,721	8,213,993
Total pension liability - beginning	256,606,003	250,062,776	244,509,418	235,745,697	227,531,704
Total pension liability - ending: (a)	<u>\$ 260,932,076</u>	<u>\$ 256,606,003</u>	<u>\$ 250,062,776</u>	<u>\$ 244,509,418</u>	<u>\$ 235,745,697</u>
Plan fiduciary net position					
Contributions - employer	\$ 5,923,000	\$ 6,388,000	\$ 6,799,000	\$ 6,504,000	\$ 5,897,100
Contributions - member	2,048,979	2,059,606	2,017,452	1,833,677	1,629,143
Net investment income (loss)	27,749,374	(9,080,116)	3,015,465	30,688,329	21,604,798
Benefit payments, including refunds of member contributions	(15,860,384)	(15,324,091)	(14,405,292)	(13,759,945)	(13,542,242)
Administrative expenses	(100,944)	(110,480)	(117,430)	(324,083)	(261,579)
Other	-	39,054	-	8,118	-
Net change in plan fiduciary net position	19,760,025	(16,028,027)	(2,690,805)	24,950,096	15,327,220
Plan fiduciary net position - beginning	190,594,323	206,622,350	209,313,155	184,363,059	169,035,839
Plan fiduciary net position - ending: (b)	<u>210,354,348</u>	<u>190,594,323</u>	<u>206,622,350</u>	<u>209,313,155</u>	<u>184,363,059</u>
Net pension liability - ending: (a) - (b)	<u>\$ 50,577,728</u>	<u>\$ 66,011,680</u>	<u>\$ 43,440,426</u>	<u>\$ 35,196,263</u>	<u>\$ 51,382,638</u>
Plan fiduciary net position as a % of total pension liability	80.62%	74.28%	82.63%	85.61%	78.20%
Covered payroll	\$ 40,776,678	\$ 39,506,337	\$ 44,213,643	\$ 44,997,000	\$ 43,686,000
Net pension liability as a % of covered payroll	124.04%	167.09%	98.25%	78.22%	117.62%



Schedule of Net Pension Liability Last 6 Fiscal Years

	2017	2016	2015	2014	2013
Total pension liability*	\$ 260,932,076	\$ 256,606,003	\$ 250,062,776	\$ 244,509,418	\$ 235,745,697
Plan fiduciary net position	210,354,348	190,594,323	206,622,350	209,313,155	184,363,059
Net pension liability (asset)	\$ 50,577,728	\$ 66,011,680	\$ 43,440,426	\$ 35,196,263	\$ 51,382,638
Plan fiduciary net position as a % of total pension liability	80.62%	74.28%	82.63%	85.61%	78.20%
Covered payroll	\$ 40,776,678	\$ 39,506,337	\$ 44,213,643	\$ 44,997,000	\$ 43,686,000
Net pension liability as a % of covered payroll	124.04%	167.09%	98.25%	78.22%	117.62%

	2012
Total pension liability*	\$ 227,531,704
Plan fiduciary net position	169,035,839
Net pension liability (asset)	\$ 58,495,865
Plan fiduciary net position as a % of total pension liability	74.29%
Covered payroll	\$ 48,396,000
Net pension liability as a % of covered payroll	120.87%

**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			Recognized in Net Pension Liability	Recognized in Total Pension Expense
	Total Pension Liability	Plan Fiduciary Net Position	Net Pension Liability	(Gains)/ Losses	Assumption Changes	Projected Net Investment Income		
Balances -- prior year disclosure	(256,606,003)	190,594,323	(66,011,680)	(5,885,788)	2,638,093	27,453,626	(66,011,680)	
Changes in net pension liability:								
Service cost	(5,144,203)		(5,144,203)					5,144,203
Interest	(19,364,883)		(19,364,883)					19,364,883
Net investment income		27,749,374	27,749,374					(27,749,374)
Contributions - employer		5,923,000	5,923,000				5,923,000	
Contributions - member		2,048,979	2,048,979					(2,048,979)
Changes of benefit terms	215,835		215,835					(215,835)
Benefit payments, including refunds of member contributions	15,860,384	(15,860,384)	-					
Administrative expense		(100,944)	(100,944)					100,944
Other		-	-					-
Recognized in total pension expense								
Differences between expected and actual experience				4,181,181			(4,181,181)	(4,181,181)
Changes of assumptions					(1,518,999)		1,518,999	1,518,999
Differences between projected and actual earnings on pension plan						(4,809,760)	4,809,760	4,809,760
Deferred outflows/inflows of resources								
Differences between expected and actual experience	5,450,130		5,450,130	(5,450,130)			5,450,130	
Changes of assumptions	(1,343,336)		(1,343,336)		1,343,336		(1,343,336)	
Differences between projected and actual earnings on pension plan						(13,515,557)	13,515,557	13,515,557
Total pension expense							(10,258,977)	10,258,977
Balances -- end of year	(260,932,076)	210,354,348	(50,577,728)	(7,154,737)	2,462,430	9,128,309	(50,577,728)	



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	\$ 256,606,003	\$ 190,594,323	\$ 66,011,680
Changes for the year:			
Service cost	5,144,203		5,144,203
Interest	19,364,883		19,364,883
Differences between expected and actual experience	(5,450,130)		(5,450,130)
Changes of benefit terms	(215,835)		(215,835)
Changes of assumptions	1,343,336		1,343,336
Contributions - employer		5,923,000	(5,923,000)
Contributions - member		2,048,979	(2,048,979)
Net investment income		27,749,374	(27,749,374)
Benefit payments, including refunds of member contributions	(15,860,384)	(15,860,384)	-
Administrative expense		(100,944)	100,944
Other		-	-
Net changes	<u>4,326,073</u>	<u>19,760,025</u>	<u>(15,433,952)</u>
Balances at June 30, 2017	<u>\$ 260,932,076</u>	<u>\$ 210,354,348</u>	<u>\$ 50,577,728</u>



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

Description	Amount
Service cost	\$ 5,144,203
Interest on the total pension liability	19,364,883
Differences between expected and actual experience	(4,181,181)
Changes of assumptions	1,518,999
Changes of benefit terms	(215,835)
Member contributions	(2,048,979)
Projected earnings on pension plan investments	(14,233,817)
Differences between projected and actual earnings on plan investments	4,809,760
Pension plan administrative expense	100,944
Other changes in fiduciary net position	-
Total pension expense	\$ 10,258,977



**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
2015	\$ (8,199,467)	4.4	\$ (1,863,515)	\$ (1,863,515)	\$ (745,407)	
2016	(2,027,851)	3.3	(614,500)	(614,500)	(184,351)	
2017	(5,450,130)	3.2	<u>(1,703,166)</u>	<u>(1,703,166)</u>	<u>(1,703,166)</u>	<u>\$ (340,632)</u>
Net increase (decrease) in pension expense			<u>\$ (4,181,181)</u>	<u>\$ (4,181,181)</u>	<u>\$ (2,632,924)</u>	<u>\$ (340,632)</u>



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
2015	\$ 4,836,505	4.4	\$ 1,099,206	\$ 1,099,206	\$ 439,681	
2016	-	3.3	-	-	-	
2017	1,343,336	3.2	419,793	419,793	419,793	\$ 83,957
Net increase (decrease) in pension expense			<u>\$ 1,518,999</u>	<u>\$ 1,518,999</u>	<u>\$ 859,474</u>	<u>\$ 83,957</u>



**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)				
	Investments	Recognition Period (Years)	2017	2018	2019	2020	2021
2015	\$ 12,989,312	5	\$ 2,597,862	\$ 2,597,862	\$ 2,597,864		
2016	24,575,047	5	4,915,009	4,915,009	4,915,009	\$ 4,915,011	
2017	(13,515,557)	5	<u>(2,703,111)</u>	<u>(2,703,111)</u>	<u>(2,703,111)</u>	<u>(2,703,111)</u>	<u>\$ (2,703,113)</u>
Net increase (decrease) in pension expense			<u>\$ 4,809,760</u>	<u>\$ 4,809,760</u>	<u>\$ 4,809,762</u>	<u>\$ 2,211,900</u>	<u>\$ (2,703,113)</u>



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	\$ 256,606,003	100%	7.625%	\$ 19,566,208
Service cost	5,144,203	100	7.625	392,245
Benefit payments, including refunds of member contributions	(15,860,384)	50	7.625	<u>(593,570)</u>
Total interest on the pension liability				\$ 19,364,883

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	\$ 190,594,323	100%	7.625%	\$ 14,532,817
Contributions - employer	5,923,000	50	7.625	221,666
Contributions - member	2,048,979	50	7.625	76,682
Benefit payments, including refunds of member contributions	(15,860,384)	50	7.625	<u>(593,570)</u>
Administrative expense and other	(100,944)	50	7.625	<u>(3,778)</u>
Total projected earnings				\$ 14,233,817



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 \$10,258,977. 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		\$ (7,154,737)
Changes of assumptions	\$ 2,462,430	
Net difference between projected and actual earnings on pension plan investments	9,128,309	
Total	<u>\$ 11,590,739</u>	<u>\$ (7,154,737)</u>

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	\$ 2,147,578
2019	3,036,312
2020	1,955,225
2021	(2,703,113)
2022	-
Thereafter	-



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

Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense through June 30, 2017 (c)	Balances at June 30, 2017	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2015		\$ (8,199,467)	\$ (5,590,545)		\$ (2,608,922)
2016		(2,027,851)	(1,229,000)		(798,851)
2017		(5,450,130)	(1,703,166)		(3,746,964)
				<u>\$ -</u>	<u>\$ (7,154,737)</u>



Deferred Outflows and Inflows of Resources from Changes of Assumptions

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)	Balances at June 30, 2017	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2015	\$ 4,836,505		\$ 3,297,618	\$ 1,538,887	
2017	1,343,336		419,793	923,543	
				<u>\$ 2,462,430</u>	<u>\$ -</u>



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

Year	Investment Earnings Less Than Projected (a)	Investment Earnings Greater Than Projected (b)	Amounts Recognized in Pension Expense through June 30, 2017 (c)	Balances at June 30, 2017	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2015	\$ 12,989,312		\$ 7,793,586	\$ 5,195,726	
2016	24,575,047		9,830,018	14,745,029	
2017		\$ (13,515,557)	(2,703,111)		\$ (10,812,446)
				<u>\$ 19,940,755</u>	<u>\$ (10,812,446)</u>



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

	Current Discount Rate (7.50%)	1% Decrease (6.50%)	1% Increase (8.50%)
Net pension liability as of June 30, 2017	\$ 50,577,728	\$ 76,023,382	\$ 28,847,372

Participant Breakdown as of July 1, 2016

	Participant Count
Inactive plan members or beneficiaries currently receiving benefits	702
Inactive plan members entitled to but not yet receiving benefits	184
Active plan members	587
Total members	<u>1,473</u>



Description of Significant Changes Prior to Year End

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

DROP Balances

Currently, there is no Deferred Retirement Option Plan (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 Projected Unit Credit 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.



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

Changes in Actuarial Assumptions as of «ValDate»

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

- Investment rate of return
- Inflation

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

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

7.5% (Prior: 7.625%)

Salary Scale

Yearly Rates of Increases

	Current Year	Prior Year
Age	Rate	Rate
20	6.25%	6.50%
25	6.25%	6.50%
30	5.60%	5.85%
35	4.95%	5.20%
40	4.30%	4.55%
45	3.65%	3.90%
50	3.00%	3.25%
55+	2.75%	3.00%

The assumption is based on input from the plan sponsor regarding future expectations, as well as knowledge that younger employees generally earn higher annual percentage increases than older employees.

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

50/50 Blend of RP-2000 No Collar Combined Table and RP-2000 Blue Collar Combined Table.

Mortality Improvement

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

We have selected mortality tables commonly used by public pension systems (such as the State of Connecticut). 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

Assumed annual rates of retirement after the earliest of 1) 50 with 25 years of service, 2) 55 with 15 years of service, or 3) 60 with 10 years of service are as follows:

Age	Retirement Rate
50-61	5%
62-65	100%

Termination prior to retirement

The following annual rates of turnover are assumed:

Age	Probability
20	10.6%
25	7.9%
30	5.8%
35	4.2%
40	3.1%
45	2.1%
50	1.3%
55	0.5%
60	0.5%

Disability

The following annual rates of disability are assumed:

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

The actuarial assumptions in regards to rates of decrement shown above are based on standard tables modified for certain plan features such as eligibility for full and early retirement where applicable and input from the plan sponsor.

Administrative expenses

The assumed administrative expense is assumed to be the average of the prior two years of administrative expenses.

Payroll growth

2.75% per year (3.0% prior year).



Percent of active employees married

80%.

Spouse's age

Husbands are assumed to be 4 years older than wives.

Medicare Part B Reimbursement

2.75% per year increase assumption (3.0% prior year).

Pension Service Exchange and Payout Bank

50% of retirees are assumed to elect the maximum exchange (based on their current bank) and 50% of retirees are assumed to elect a lump sum payout.



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

Salary in Final Year of Employment. For UAW and TEA, the average of the highest three years out of the last 10 years.

Normal Retirement

Eligibility: The earlier of 1) age 58 with 15 years of service, or 2) age 60 with 10 years of service, or 3) 25 years of service for MAA only.

For UE participants hired on or after 7/1/2012, the 58 and 15 criteria does not apply. For UAW, the 58 and 15 criteria only applies for a grandfathered group (those age 55 with 25+ year of service on 1/1/2015). For TEA, the 58 and 15 criteria does not apply.

Benefit: 2% of pension earnings per year of service to a maximum of 33 years.

For UE participant hired on or after 7/1/2012, the maximum is 30 years of service.

For UAW and TEA:

- 1.75% for service after 1/1/2015 for those who are not grandfathered (grandfathered if 25+ years of service for UAW or 20+ years of service for TEA, or otherwise eligible to retire on 1/1/2015 for either union.
- 1.5% for new hires after 1/1/2015
- The maximum multiplier is 70% for UAW, 66% for TEA.

Limits on Annual Benefit

Maximum: None.

Minimum: \$1,000 with 25 years of service.

Early Retirement

Eligibility: Age 50 with 25 years of service.

Benefit: Accrued retirement benefit reduced .25% for each of the first 36 months prior to age 58 and .55% for each month in excess of 36. There is no reduction for a member of the MAA who retires with 25 years of service.



Disability – Non-Service Connected

Service Requirement: 10 years of service, except 15 for UAW, Nurses, and Dental.

Benefit: 50% of pension earnings if less than 25 years of service. Accrued retirement benefit if more than 25 years of service.

Disability – Service Connected

Service Requirement: None.

Benefit: 50% of pension earnings.

Pre-Retirement Death Benefit – Non Service Connected

Service Requirement: None.

Benefit: Return of contributions if less than 15 years of service. \$166.67 minus social security with 15 years of service or more and not eligible to retire. 100% Joint & Survivor benefit if eligible to retire.

Pre-Retirement Death Benefit – Service Connected

Service Requirement: None.

Benefit: 50% of pension earnings less workman's compensation, minimum \$83.33.

Post-Retirement Spouse's Benefit

None.

Post-Retirement Death Benefit

Lump sum, excess of accumulated contributions over benefits paid to member or survivors (if not eligible for spouse's benefit).

Post-Retirement Life Insurance

Lump sum equal to \$6,000 for all retirees except for the LAW.

Vesting in Accrued Benefit

Eligibility: 5 years of service (10 years of service for TEA and UE), payable at later of termination date and age 60 (age 58 if 15+ years of vesting service and eligible for Normal Retirement at 58 and 15).

Benefit: Accrued retirement benefit.

Termination Benefit

Accumulated contributions as lump sum, if not vested.

Employee Contributions

Current: 3% of salary for 1199, 6% of salary for UE and 5% of salary for all others. For UAW participants with multiplier less than 2%, 4.5% of salary.

For LAW, those with 33+ years of service on 8/5/13 do not contribute. For MAA, Nurses, Teamsters, UE and Dental Hygienists, those with 33+ years of service on 7/1/2012 do not contribute. For all other unions, no contributions for those with service over the limit for benefit calculation purposes.



Vacation/Sick Leave Banks:

Union	Payout Bank Source	Additional Pension Credits Available		Eligibility Cut off Date for Sick Pay	Eligibility Cut off Date for Vacation Pay
		Vacation	Sick		
1119	Operating Budget	Yes-payout only	Yes-payout only	7/1/1998	-
Dental	CERF	No	Yes	7/1/1997	-
Law	Operating Budget	Yes-payout only	Yes-payout only	-	-
MAA	CERF	Yes	Yes	7/1/1997	-
Nurses	CERF	Yes	Yes	7/1/1997	-
Teamsters	CERF	Yes	Yes	7/1/1997	-
UAW	CERF	Yes	Yes	7/1/1998	1/1/2015
UE	CERF	Yes	Yes	7/1/2012	7/1/2012

UE hires on or after 7/1/2012 not eligible for exchange. UAW hires on or after 1/1/2015 not eligible for exchange.

The amount of the exchange/payout bank is equal to 50% of sick days subject to a 75 day maximum, plus vacation days. Employees can trade in up to 100 days of eligible time for additional pension credit. Each 25 days grants an additional 1% of salary up to a maximum of 4%. The remainder of the bank is paid out in a lump sum.

Additional Provisions

Employees in the MAA, LAW and Dental Hygienists Union can pay 3% of 2011-2012 base salary for one additional year of service credit. The additional benefit will only be paid at age 65+. Payment must be made by 6/30/2013 or 6/30/2014 (depending on Union). Not reflected in prior valuation.