



TOWN OF BRANFORD POLICE RETIREMENT FUND

ACTUARIAL REPORT FOR CASH CONTRIBUTION PURPOSES

AS OF JULY 1, 2015

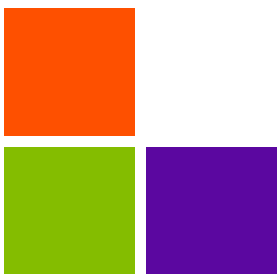




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Report Prepared By:

Timothy A. Ryor
Senior Vice President & Consulting Actuary
860.856.2102
tryor@hhconsultants.com

Jolanta Kolc
Actuarial Analyst
860.856.2124
jkolc@hhconsultants.com



Executive Summary		
	July 1, 2015	July 1, 2013
Status		
Active Employees	38	40
Active – Non-accruing	0	0
Retired Pensioners	45	46
Terminated Vested Employees	<u>1</u>	<u>2</u>
Total	84	88
Total annual plan salaries	\$3,576,246	\$3,462,045
Average plan salary	94,112	86,551
Actuarial present value of future benefits	33,865,074	32,172,297
Actuarial accrued liability	28,755,887	26,425,916
Asset value		
Market	21,598,370	19,814,392
Actuarial	22,410,598	19,663,483
Normal cost – employer	303,827	285,624
Unfunded accrued liability	6,345,289	6,762,433
Fund Ratio	77.93%	74.41%
Actuarially Determined Contribution (ADC)		
Fiscal Year 2014-2015	-	897,106
Fiscal Year 2015-2016	-	897,106
Fiscal Year 2016-2017	911,226	-
Fiscal Year 2017-2018	911,226	-



Section I

Introduction

A. Purposes of the Valuation

The purpose of the valuation is to determine the funded status of the plan as well as the recommended cash contribution for the following two fiscal years. The information found in Section II B and Section II C of the report have been developed for this purpose.

The ultimate cost of a pension plan is based primarily on the level of benefits promised by the plan. The pension fund's investment earnings serve to reduce the cost of plan benefits and expenses. Thus,

<i>Town's</i>	=	<i>benefits</i>	+	<i>expenses</i>	-	<i>investment</i>	-	<i>employee</i>
<i>ultimate cost</i>		<i>paid</i>		<i>incurred</i>		<i>return</i>		<i>contributions</i>

B. Experience During Period Under Review

This report shows an Unfunded Accrued Liability of \$6.34 million. This represents a decrease of approximately \$400,000 compared to the prior valuation. The unfunded liability was expected to fall to \$6.08 million. The \$0.26 million difference between the expected unfunded and the actual is due to mainly to a liability loss related to updated assumptions. As reported in III. B, approximate rates of return for 2013-2014 and 2014-2015 were 8.9% and 7.2% respectively on an actuarial basis (11.5% and 0.2% on a market basis).

C. Changes Since The Last Valuation

We have revised the actuarial assumptions related to mortality, retirement, withdrawal and service connected disability with this year's valuation. See the Description of Actuarial Methods and Assumptions section for a complete description of the changes.

The assumptions were changed to reflect recent updates to mortality tables, to better align with CT MERS assumptions and better reflect actual experience related to retirement and the existence of the DROP. The net impact of the change was an increase in actuarial accrued liability of about 3.4% or roughly \$940,000. The contribution was about \$80,000 higher due to these changes.



D. Certification

This report presents the results of the July 1, 2015 Actuarial Valuation for the Town of Branford Police Retirement Fund (the Plan) for the purpose of estimating the funded status of the Plan and determining the Actuarially Determined Contribution (ADC) for the fiscal years ending June 30, 2017 and June 30, 2018. This report is intended to satisfy the requirements of Connecticut General Statute 7-450a. This report may not be appropriate for any other purpose.

The valuation has been performed in accordance with generally accepted actuarial principles and practices. It is intended to comply with all applicable Actuarial Standards of Practice.

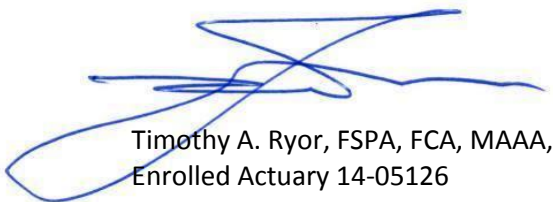
I certify that the actuarial assumptions and methods that were selected by me and represent my best estimate of anticipated actuarial experience under the Plan.

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

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

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as: 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 am a member of the American Academy of Actuaries and meet its Qualification Standards to render the actuarial opinion contained herein.



Timothy A. Ryor, FSPA, FCA, MAAA,
Enrolled Actuary 14-05126

January 21, 2016



Section II Results of the Valuation

A. Actuarial Balance Sheet

The essential elements of the actuarial valuation process are shown by the actuarial balance sheet. The description of the funding method in Section IV defines and explains the terms used in this actuarial balance sheet.

	<u>July 1, 2015</u>	<u>July 1, 2013</u>
Actuarial Liabilities		
Accrued Liability		
Active Employees	\$12,789,528	\$10,937,795
Retired Pensioners	15,942,564	15,129,650
Terminated Vested Employees	<u>23,795</u>	<u>358,471</u>
TOTAL	28,755,887	26,425,916
Source of Funds		
Plan Assets (Actuarial Value)	22,410,598	19,663,483
Unfunded Accrued Liability	<u>6,345,289</u>	<u>6,762,433</u>
TOTAL	28,755,887	26,425,916

B. Development of Unfunded Accrued Liability (Pension Benefit Obligation) and Funded Ratio

	<u>July 1, 2015</u>	<u>July 1, 2013</u>
Inactive Employees:		
Retired Pensioners	\$19,942,564	\$15,129,650
Terminated Vested Employees	<u>23,795</u>	<u>358,471</u>
	19,966,359	15,488,121
Active Employees:	<u>12,789,528</u>	<u>10,937,795</u>
Total Accrued Liability	28,755,887	26,425,916
Plan Assets (Actuarial Value)	<u>22,410,598</u>	<u>19,663,483</u>
Unfunded Accrued Liability	6,345,289	6,762,433
Funded Ratio (Plan Assets Divided by Total Accrued Liability)	77.93%	74.41%



C. Annual Contribution

Based on the employee data and asset information furnished us, the actuarial methods and assumptions shown in Section IV and the plan provisions outlined in Section V, we have developed the Town's cost per active employee shown below:

	<u>July 1, 2015</u>		<u>July 1, 2013</u>	
	<u>Cost</u>	<u>Percent of Payroll</u>	<u>Cost</u>	<u>Percent of Payroll</u>
a) Town's Normal Cost	\$303,827	8.50%	\$285,624	8.25%
b) Amortization of Unfunded Accrued Liability*	<u>607,399</u>	<u>16.98%</u>	<u>611,482</u>	<u>17.66%</u>
d) Town's Annual Recommended Contribution: (a) + (b)	911,226	25.48%	897,106	25.91%
Total Annual Plan Salaries	3,576,246		3,462,045	
Unfunded Accrued Liability	6,345,289		6,762,433	

* Funding of Unfunded over 40 years from 1992, or 17 years from 2015.



D. Town Contribution for 2016-2017 Fiscal Year

Based upon the plan as it currently stands, Participants as of this valuation – projecting their earnings with one year of salary scale, and the Unfunded Past Service Liability without gain or loss assuming payments are made, we have determined the **2016-2017** Pension Plan contribution for budget purposes.

Normal Cost to Town:

Percent of Payroll	8.50%
Dollar Amount	\$303,827

Unfunded Accrued Liability Amortization Payment (40-Year Basis from 1992):

17 years remaining	607,399
Amount Due 7/1/2016	911,226

E. Town Contributions for 2017-2018 Budget Purposes

Based upon the plan as it currently stands, Participants as of this valuation – projecting their earnings with one year of salary scale, and the Unfunded Past Service Liability without gain or loss assuming payments are made, we have determined the **2017-2018** Pension Plan contribution for budget purposes.

Normal Cost to Town:

Percent of Payroll	8.50%
Estimated Amount	\$303,827

Unfunded Accrued Liability Amortization Payment (40-Year Basis from 1992):

16 years remaining	607,399
Amount Due 7/1/2017	911,226



F. Accounting Information

Development of Liabilities and Assets for Vested and Non Vested Benefits

	<u>July 1, 2015</u>	<u>July 1, 2013</u>
Vested Liabilities		
Active Employees	\$ 10,496,729	\$ 9,118,865
Retired Pensioners	15,942,564	15,129,650
Terminated Vested Employees	<u>23,795</u>	<u>358,471</u>
Total	26,463,088	24,606,986
Non-Vested Liabilities		
Active Employees	67,184	26,616
Vested and Non-Vested Liabilities		
Grand Total	26,530,272	24,633,602
Plan Assets (Market Value)	21,598,370	19,814,392
Not yet Funded (Minimum of \$0)	4,931,902	4,819,210



Section III Supporting Exhibits

A. Membership Data

	July 1, 2015	July 1, 2013
Status		
Active Employees	38	40
Active Non-accruing	0	0
Retired Pensioners	45	46
Terminated Vested Employees	<u>1</u>	<u>2</u>
Total	84	88
Average Ages for Active Employees		
Average Hiring Age	30.08	29.85
Average Attained Age	45.64	44.0
Benefits		
Total Annual Retirement Benefits	1,455,382	1,429,036
Average Annual Retirement Benefit	32,342	31,066
Total Annual Vested Benefit for Terminated Vested Employees	4,188	34,755
Average Annual Vested Benefit for Terminated Vested Employees	4,188	17,378
DROP Balances	62,191	0



Age, Service, Salary Information for 2015

TOWN OF BRANFORD POLICE

Attained Age	Completed Years of Credited Service																					
	Under 1		1 to 4		5 to 9		10 to 14		15 to 19		20 to 24		25 to 29		30 to 34		35 to 39		40 and over		All years	
	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.	No.	Avg. Comp.
Under 25																						
25 to 29																						
30 to 34					2	93,961															2	93,961
35 to 39			1	94,165	2	111,675	4	89,917	1	100,997											8	97,272
40 to 44							2	100,102	3	87,413											5	92,489
45 to 49					2	70,242	1	80,119	6	97,954	2	92,533									11	90,309
50 to 54					3	88,136			1	99,747	1	116,131	5	93,782							10	94,920
55 to 59											1	89,844	1	115,268							2	102,556
60 to 64																						
65 to 69																						
70 & over																						
All ages			1	94,165	9	90,685	7	91,427	11	95,519	4	97,760	6	97,363							38	94,112



B. Assets

Summary of Fund Activity		
	Market Value	Actuarial Value
1. Beginning value 7/1/2014		
a. Trust assets	\$ 21,752,856	\$ 21,088,378
b. Accrued contribution	0	0
c. Benefits payable	0	0
d. Administrative expenses payable	0	0
e. Net: (a)+(b)-(c)-(d)	21,752,856	21,088,378
2. Contributions		
a. Contributions during year	1,205,471	1,205,471
b. Change in accrued contribution	0	0
c. Total for plan year	1,205,471	1,205,471
3. Disbursements		
a. Benefit payments during year	1,400,569	1,400,569
b. Administrative expenses during year	0	0
c. Change in benefits payable	0	0
d. Change in administrative expenses payable	0	0
e. Total for plan year	1,400,569	1,400,569
4. Net investment return		
a. Investment income <i>(all sources)</i>	151,554	N/A
b. Change in accrued income	0	N/A
e. Expected return	N/A	1,516,080
f. Recognized gain (loss)	N/A	1,238
g. Required adjustment due to corridor	N/A	0
h. Reversal of prior year required adjustment	N/A	0
i. Investment-related expenses	(110,942)	N/A
j. Total	40,612	1,517,318
5. Ending value 7/1/2015		
a. Trust assets: (1a)+(2a)-(3a)-(3b)+(4j)	21,598,370	22,410,598
b. Accrued contribution	0	0
c. Benefits payable	0	0
d. Administrative expenses payable	0	0
e. Net: (a)+(b)-(c)-(d)	21,598,370	22,410,598
6. Approximate rate of return 2014-2015	0.2%	7.2%



B. Assets (continued)

Summary of Fund Activity		
	Market Value	Actuarial Value
1. Beginning value 7/1/2013		
a. Trust assets	\$ 19,814,392	\$ 19,663,483
b. Accrued contribution	0	0
c. Benefits payable	0	0
d. Administrative expenses payable	0	0
e. Net: (a)+(b)-(c)-(d)	19,814,392	19,663,483
2. Contributions		
a. Contributions during year	1,202,145	1,202,145
b. Change in accrued contribution	0	0
c. Total for plan year	1,202,145	1,202,145
3. Disbursements		
a. Benefit payments during year	1,519,089	1,519,089
b. Administrative expenses during year	0	0
c. Change in benefits payable	0	0
d. Change in administrative expenses payable	0	0
e. Total for plan year	1,519,089	1,519,089
4. Net investment return		
a. Interest and dividends	587,567	N/A
b. Change in accrued income	0	N/A
c. Realized gain (loss)	367,766	N/A
d. Unrealized gain (loss)	1,387,960	N/A
e. Expected return	N/A	1,376,254
f. Recognized gain (loss)	N/A	365,585
g. Required adjustment due to corridor	N/A	0
h. Reversal of prior year required adjustment	N/A	0
i. Investment-related expenses	(87,885)	N/A
j. Total	2,255,408	1,741,839
5. Ending value 7/1/2014		
a. Trust assets: (1a)+(2a)-(3a)-(3b)+(4j)	21,752,856	21,088,378
b. Accrued contribution	0	0
c. Benefits payable	0	0
d. Administrative expenses payable	0	0
e. Net: (a)+(b)-(c)-(d)	21,752,856	21,088,378
6. Approximate rate of return 2013-2014	11.5%	8.9%



B. Assets (continued)

Relationship of Actuarial Value to Market Value		
1. Market value 7/1/2015	\$	21,598,370
2. Gain / (loss) not recognized in actuarial value 7/1/2015		(812,228)
3. Preliminary actuarial value 7/1/2015: (1)-(2)		22,410,598
4. Preliminary actuarial value as a percentage of market value: (3)÷(1)		103.8%
5. Gain / (loss) recognized for corridor min/max		N/A
6. Actuarial value 7/1/2015 after corridor min/max: (3)+(5)		22,410,598
7. Actuarial value as a percentage of market value: (6)÷(1)		103.8%

Development of Market Value Gain / (Loss) for 2014-2015 Plan Year		
1. Market value 7/1/2014	\$	21,752,856
2. Contributions		1,205,471
3. Benefit payments		1,400,569
4. Administrative expenses		0
5. Expected return at 7.00%		1,516,080
6. Expected value 7/1/2015: (1)+(2)-(3)-(4)+(5)		23,073,838
7. Market value 7/1/2015		21,598,370
8. Market value gain / (loss) for -1 Plan Year: (7)-(6)		(1,475,468)

Recognition of Gain / (Loss) in Actuarial Value					
Year	(a) Gain / (loss)	(b) Recognized as of 7/1/2014	(c) Recognized in current year: 20% of (a)	(d) Total recognized as of 7/1/2015: (b)+(c)	(e) Not recognized as of 7/1/2015: (a)-(d)
2010-2011	\$ 1,489,017	\$ 1,191,212	\$ 297,805	\$ 1,489,017	\$ 0
2011-2012	(976,312)	(585,786)	(195,262)	(781,048)	(195,264)
2012-2013	89,792	35,916	17,958	53,874	35,918
2013-2014	879,154	175,831	175,831	351,662	527,492
2014-2015	(1,475,468)	0	<u>(295,094)</u>	(295,094)	<u>(1,180,374)</u>
Total			1,238		(812,228)



Section IV

Description of Actuarial Methods and Actuarial Assumptions

Asset Valuation Method

The Actuarial Value of assets used in the development of plan contributions phases in recognition of the difference between the actual return on Market Value and the expected return on Market Value over a five-year period at 20% per year. The Actuarial Value is adjusted, if necessary, to comply with the IRC Sec. 412 requirement that the Actuarial Value of assets be within the range of 80% to 120% of the Market Value of assets.

Actuarial Cost Method

The actuarial method is the Entry Age Actuarial Cost Method (level percentage of salary).

Under this method, the normal cost is the sum of the individual normal costs for all active participants. For an active participant, the normal cost is the participant's normal cost accrual rate, multiplied by the participant's current compensation. The normal cost accrual rate equals the present value of future benefits for the participant, determined as of the participant's entry age, divided by the present value of the compensation expected to be paid to the participant for each year of the participant's anticipated future service, determined as of the participant's entry age.

The cost of amortizing the Unfunded Accrued liability constitutes the remaining portion of the Annual Funding Percentage for all benefits and is determined as follows:

1. An Accrued Liability for these benefits is developed for the active employee group by multiplying each active employee's annual cost (described in the above paragraph) by his credited service accrued to the current actuarial valuation date. This operation will produce an Accrued Liability for each active employee. These individual Accrued Liabilities are then added together to obtain a total Accrued Liability for the active employee group.
2. An Accrued Liability for these benefits is also developed for those members or their beneficiaries who are currently receiving benefit payments. This Accrued Liability is equal to the present value of these benefit payments currently being made to such members or their beneficiaries.
3. The sum of these Accrued Liabilities is reduced by the plan assets to develop the Unfunded Accrued Liability for these benefits.
4. The Unfunded Accrued Liability is to be amortized over 40 years from 1992.



Description of Actuarial Assumptions

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

7.00%

Inflation

3.0%.

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.

Salary increases

According to the following service-based schedule:

Service	Rate of Increase
0	9.5%
1	8.5%
2	7.5%
3	6.5%
4	5.5%
5	4.5%
6	4.0%
7	4.0%
8	4.0%
9	4.0%
10	4.0%
11	4.0%
12	4.0%
13	4.0%
14	4.0%
15	3.5%

The plan does not have statistically credible data on which to form this assumption. The assumption is based on input from the plan sponsor regarding future expectations and the comparable assumption used in the July 1, 2014 CT MERS Actuarial Valuation.



Mortality

Current: RP-2014 Adjusted to 2006 Total Dataset Mortality Table projected to valuation date with Scale MP-2015

Prior: Pre-65 mortality per table below:

Age	Rate
20	.01%
25	.01%
30	.01%
35	.02%
40	.02%
45	.03%
50	.05%
55	.08%
60	.12%
65	.20%

Post-retirement and Disabled: RP-2000 Mortality Table with separate male and female rates, with no collar adjustment combined table for non-annuitants and annuitants, projected to the valuation date with Scale AA.

Mortality improvement

Current: Projected to date of decrement using Scale MP-2015 (generational mortality).

Prior: Post-retirement and Disabled: Projected to date of decrement using Scale AA (generational mortality).

We have selected this mortality assumption because it is based on the latest published pension mortality study released by the Society of Actuaries. The mortality assumption was changed to better reflect actual experience. The change in assumption increased liabilities by about 0.8%.

Retirement

Current:

Age	Rate of Retirement
25-27	20%
28	25%
29	30%
30	40%
31-34	20%
35-39	10%
40	100%

Prior:

Age	Rate of Retirement
45	25%
50	20%
55	12%
60	20%
65	100%

The retirement rates were changed to better reflect actual experience including the existence of the DROP. The change in assumption increased liabilities.



Pre-Retirement Spouse Benefit and Disability Benefits

Costed explicitly.

Withdrawal rates

Current: Annual rates of withdrawal per table below (shown at sample ages) interpolated.

Prior: Annual rates of withdrawal per table below (shown at sample ages):

Age	Rate of withdrawal
20	7.00%
30	5.00%
40	2.00%
50	0.00%

Service-connected disability

Current: Annual rates of disability per table below (shown at sample ages) interpolated.

Prior: Annual rates of disability per table below (shown at sample ages):

Age	Rate of disability
20	.11%
30	.15%
40	.32%
50	1.11%
60	6.88%

The withdrawal rates and service-connected disability were changed to better reflect actual experience. The change in assumptions increased liabilities. The change in the retirement rates, withdrawal rates and service-connected disability increased liabilities by about 2.5%.

The plan does not have statistically credible data on which to form the retirement, turnover, and disability assumptions. These assumptions are based on input from the plan sponsor regarding future expectations and the comparable assumptions used in the July 1, 2014 CT MERS Actuarial Valuation.

Expenses

None. Expenses are assumed to be paid directly by the Town.

Post-Retirement Death Benefit

Costed explicitly.

Benefits Attributed to Longevity Pay

Costed explicitly.



V. Summary of Plan Provisions

Plan identification

Single-employer pension plan.

Eligibility

Immediately upon commencement of payment of employee contributions. New hires after August 10, 2011 are no longer eligible for this Plan.

Salary

Base salary plus longevity plus station overtime earned by a participant from the Town for a particular year.

Final Average Salary

The average of the three highest fiscal years of salary.

Normal Retirement Age

25 years as a member of the Police Department and contributing to the fund. Maximum retirement age is 65.

Credited Service

Period of time served as a member of the Police Department and contributing to the fund.

Normal Retirement Benefit

2.5% of Final Average Salary times years of credited service to a maximum of 25 years, plus 2.5% times basic salary for each year of service beyond 25, maximum benefit 70% of basic salary at time of retirement. Maximum will be exceeded for service under age 55. Minimum annual benefit is \$2,000.

Early Retirement

Participant, or a participant's spouse upon the participant's death may elect early retirement. The participant must have attained age 50 and have at least 20 years of service. The benefit percent per year shall be reduced as follows:

Years of Service	% Per Year
25	2.50%
24	2.35%
23	2.20%
22	2.05%
21	1.90%
20	1.75%

Disability Retirement

During regular performance of duty and certified as disabled: Immediate annual pension of final average salary at time of disability times the greater of (a) 50% or (b) 2.50% multiplied by completed year of service as of the date of disability.



Vesting

No vesting in employer contributions prior to 5 years' credited service; 100% after 5 years.

Employee Contributions

8.5% of salary.

Death Benefits

Surviving spouse of an active participant qualified to receive retirement benefits, shall, at the time of the participant's death receive, until death or remarriage, a pension equal to one-half of the pension for which the participant had qualified. If the participant is retired at time of death, the surviving spouse will receive one-half of the pension being paid to the participant. If not qualified to receive retirement benefits and death occurs while in active performance of duties, the greater of 50% of monthly salary, or accrued benefit. For officers hired after July 1, 1991, this death benefit is reduced by 10%.

Purchase of Military Service Credit

An active Participant may purchase service credit not to exceed 3 years, for a period of active duty military service in the armed forces of the United States (excluding reserve duty), provided that the Participant is not able to receive a retirement benefit for such service under any other retirement plan.

DROP Plan

During the DROP period, the participant remains in full time service with some limited benefits. No participant shall accrue additional pension benefits after the effective date of the DROP. Upon completion of the DROP period, the participant receives a lump sum payment equal to the retirement benefits during the DROP period.