



HOOKER & HOLCOMBE, INC.  
Benefit Consultants and Actuaries

65 LaSalle Road  
West Hartford, CT 06107-2397

860-521-8400 tel  
860-521-3742 fax  
[www.hhconsultants.com](http://www.hhconsultants.com)

## **The Firefighters' Pension Trust Fund of the City of Stamford**

Actuarial Valuation

July 1, 2011

Evan W. Woollacott, Jr., FCA,  
MAAA, EA  
Consulting Actuary

Yelena Pelletier, ASA  
Pension Analyst

Diane Wasser  
Pension Analyst

October 24, 2012

## Table of Contents

|                                                                 | <b>Page</b> |
|-----------------------------------------------------------------|-------------|
| <b>I. Introduction</b>                                          |             |
| A. Purposes of the Valuation                                    | 1           |
| B. Comments                                                     | 1           |
| C. Certification                                                | 2           |
| <br>                                                            |             |
| <b>II. Results of the Valuation</b>                             |             |
| A. Assets                                                       | 3           |
| B. Development of Projected Accrued Liability and Funded Ratio  | 5           |
| C. Annual Recommended Contribution                              | 6           |
| <br>                                                            |             |
| <b>III. Actuarial Cost Methods and Assumptions</b>              |             |
| A. Actuarial Cost Methods                                       | 7           |
| B. Actuarial Assumptions                                        | 8           |
| <br>                                                            |             |
| <b>IV. Summary of Current Principal Pension Plan Provisions</b> | 10          |

## I. Introduction

### A. Purpose of the Valuation

Liabilities were valued as of July 1, 2010 using data, cost information, and assumptions from the prior actuary. The July 1, 2010 liabilities were then projected to July 1, 2011.

The purpose of the valuation is to report the estimated funded status of the plan as of July 1, 2011 as well as an annual required contribution for the fiscal year ending June 30, 2013.

It is important to note that 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>City's</i><br><i>Ultimate</i><br><i>Cost</i> | = | <i>Benefits</i><br><i>Paid</i> | + | <i>Expenses</i><br><i>Incurred</i> | - | <i>Employee</i><br><i>Contributions</i> | - | <i>Investment</i><br><i>Return</i> |
|-------------------------------------------------|---|--------------------------------|---|------------------------------------|---|-----------------------------------------|---|------------------------------------|

Assets reported are actual (including accruals) through June 30, 2011 and reflect the asset smoothing method. Liabilities have been projected from the last full valuation done as of July 1, 2010.

We have assumed that no changes have been made to the plans since the July 1, 2010 actuarial valuation.

### B. Comments

The market value return was approximately 18% this year. Because we are still smoothing in past asset losses, the actuarial smoothed return was 6.9% this year. Returning less than 8.0% increased the contribution by approximately \$160,000. In total, the contribution increased \$260,000. Of this amount, \$100,000 was expected due to salary increases.

## I. Introduction

continued

### B. Certification

This report presents the results of the July 1, 2011 Actuarial Valuation for The Firefighters' Pension Trust Fund of the City of Stamford (the Plan) for the purpose of estimating the funded status of the Plan and determining the Annual Required Contribution (ARC) for the fiscal year ending June 30, 2013. 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.



\_\_\_\_\_  
Evan W. Woollacott, Jr., FCA, MAAA, EA  
11-04513

October 24, 2012

## II. Results of the Valuation

### A. Assets

#### Development of Market Value

|                                                              |                    |
|--------------------------------------------------------------|--------------------|
| <b>1. Beginning value, 7/01/10</b>                           |                    |
| a. Trust assets                                              | \$113,818,425      |
| b. Accrued contributions - Employee                          | 0                  |
| c. Benefits payable                                          | 0                  |
| d. Administrative expenses payable                           | 0                  |
| e. Net: (a) + (b) - (c) - (d)                                | <u>113,818,425</u> |
| <b>2. Contributions</b>                                      |                    |
| a. Contributions during year - Employer                      | 1,717,000          |
| b. Contributions during year - Employee                      | <u>1,231,719</u>   |
| c. Total for Plan Year                                       | 2,948,719          |
| <b>3. Disbursements</b>                                      |                    |
| a. Benefit payments during year                              | 6,985,483          |
| b. Administrative expenses during year                       | 0                  |
| c. Change in benefits payable                                | 0                  |
| d. Change in administrative expenses payable                 | 0                  |
| e. Total for plan year                                       | <u>6,985,483</u>   |
| <b>4. Net Investment Return</b>                              |                    |
| a. Interest and dividends                                    | 2,503,452          |
| b. Other Income                                              | 0                  |
| c. Realized/unrealized gain (loss)                           | 18,966,974         |
| d. Investment - related expenses                             | <u>(1,518,479)</u> |
| e. Total                                                     | 19,951,947         |
| <b>5. Ending Value, 7/01/11</b>                              |                    |
| a. Trust assets: (1e) + (2c) - (3e) + (4e)                   | 129,733,608        |
| b. Accrued contribution - Employer                           | 0                  |
| c. Accrued contribution - Employee                           | 0                  |
| d. Benefit payable                                           | 0                  |
| e. Administrative expenses payable                           | 0                  |
| f. Net: (a) + (b) + (c) - (d) - (e) or (1) + (2) - (3) + (4) | <u>129,733,068</u> |
| <b>6. Approximate rate of return 2010-2011</b>               | 17.7%              |

## II. Results of the Valuation

continued

### Development of the Actuarial Asset Value

|                                                                                             |               |
|---------------------------------------------------------------------------------------------|---------------|
| 1. Actuarial Asset Value at June 30, 2010                                                   | \$130,795,712 |
| 2. Expected Return                                                                          | 10,378,054    |
| 3. Contributions                                                                            | 2,948,719     |
| 4. Disbursements                                                                            | 6,985,483     |
| 5. Expected Actuarial Asset Value at June 30, 2011<br>(1) + (2) + (3) – (4)                 | 137,137,002   |
| 6. Market Value of Assets                                                                   | 129,733,608   |
| 7. Appreciation (Depreciation) Capitalized .20 x [(6) – (5)]                                | (1,480,679)   |
| 8. Preliminary Actuarial Asset Value at June 30, 2011<br>(5) + (7)                          | 135,656,323   |
| 9. 70% of Market Value .7 x (6)                                                             | 90,813,526    |
| 10. 130% of Market Value 1.3 x (6)                                                          | 168,653,690   |
| 11. Actuarial Asset Value at June 30, 2011, not less than<br>(9); and not greater than (10) | 135,656,323   |
| 12. Round to nearest thousand                                                               | 135,656,000   |
| 13. Actuarial Asset Return                                                                  | 6.9%          |

**II. Results of the Valuation**  
(continued)

**B. Development of Projected Accrued Liability and Funded Ratio**

|                                          | <b>July 1, 2011<br/>Interim Valuation</b> | <b>July 1, 2010<br/>Valuation</b> |
|------------------------------------------|-------------------------------------------|-----------------------------------|
| 1. Projected Accrued Liability           | \$139,939,000                             | \$133,421,000                     |
| 2. Assets (Actuarial Value)              | 135,656,000                               | 130,796,000                       |
| 3. Unfunded Accrued Liability: (1) - (2) | 4,283,000                                 | 2,625,000                         |
| 4. Funded Ratio: (2) ÷ (1)               | 96.9%                                     | 98.0%                             |

## II. Results of the Valuation (continued)

### C. Annual Recommended Contribution

|                                                             | <b>July 1, 2011 for<br/>Fiscal Year<br/>Ending<br/>June 30, 2013</b> | <b>July 1, 2010 for<br/>Fiscal Year<br/>Ending<br/>June 30, 2012</b> |
|-------------------------------------------------------------|----------------------------------------------------------------------|----------------------------------------------------------------------|
| 1. Ongoing Annual Cost                                      | \$3,009,000                                                          | \$2,879,000                                                          |
| 2. Estimated Actuarial Employee Contributions               | 1,132,000                                                            | 1,083,000                                                            |
| 3. City's Ongoing Annual Cost: (1) - (2)                    | 1,877,000                                                            | 1,796,000                                                            |
| 4. Amortization of Unfunded Accrued Liability<br>(15 years) | 463,000                                                              | 284,000                                                              |
| 5. City's Annual Contribution: [(3) + (4)]                  | 2,340,000                                                            | 2,080,000                                                            |

### **III. Actuarial Cost Methods and Assumptions**

#### **A. Actuarial Cost Methods**

##### **Funding Method**

The actuarial method used to develop the Annual Recommended Contribution is the Projected Unit Credit Cost Method.

The Ongoing Annual Cost equals the total present value for all participants of the benefit accruing during the coming year, increased to reflect salaries projected to the assumed retirement date.

The Accrued Liability equals the present value of all benefits accrued to date, increased to reflect salaries for all active participants. The total Accrued Liability is reduced by plan assets to develop the Unfunded Accrued Liability.

The cost of amortizing the Unfunded Accrued Liability constitutes a portion of the Annual Recommended Contribution.

The total Annual Recommended Contribution equals the Ongoing Annual Cost, further increased by any positive amortization of the Unfunded Accrued Liability. The amortization period is 15 years.

##### **Asset Valuation Method**

The Actuarial Value of Assets used in the development of the Annual Recommended Contribution is designed to smooth out fluctuations in the market value. An Expected Actuarial Value of Assets is determined based on the prior year's Actuarial Value of Assets and the assumed interest rate equal to the valuation interest rate. The Actuarial Value of Assets is equal to the Expected Actuarial Asset Value plus 20% of the difference between the Market Value and the Expected Value. The Actuarial Value of Assets is limited to a minimum of 70% or a maximum of 130% of the Market Value.

### III. Actuarial Cost Methods and Assumptions

#### B. Actuarial Assumptions

Mortality: 1983 Group Annuity Mortality Table.

Investment Return: 8.0% per year.

Salary Scale: Average of 4.5% per year over the long term.

Retirement Age: Sample rates of assumed annual rates of retirement after completion of 30 years are as follows:

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

An additional 40% is added upon attainment of age 48 and 20 years of service if hired after January 1, 1981 and 20 years of service if hired before January 1, 1981 and 100% of members remaining beyond the earlier of age 60 with 30 years of service or age 65 are assumed to retire.

Turnover: The following annual rates of turnover are assumed:

| 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%       |

### III. Actuarial Cost Methods and Assumptions

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  | 1.74%       |

Survivorship:

80% of employees assumed to be married, with wives 4 years younger than husbands.

Expenses:

The return is assumed to be net of both administrative expenses and investment expenses. Therefore, a direct expense assumption has not been made.

Vacation Bank:

50% of retirees are assumed to elect an annuity from the fund.

#### IV. Summary of Current Principal Pension Plan Provisions

Pension Earnings: Base Salary in Final Year of Employment excluding bonuses and overtime including differential amounts.

Normal Retirement:

Eligibility: 20 years of service if hired before January 1, 1981; 20 years of service and age 48 if hired after January 1, 1981.

|          |                                |                              |
|----------|--------------------------------|------------------------------|
| Benefit: |                                | <b>% of Pension Earnings</b> |
|          | <b><u>Years of Service</u></b> | <b><u>Earnings</u></b>       |
|          | 20                             | 50.00%                       |
|          | 21                             | 52.00%                       |
|          | 22                             | 54.00%                       |
|          | 23                             | 56.00%                       |
|          | 24                             | 58.00%                       |
|          | 25                             | 60.00%                       |
|          | 26                             | 62.00%                       |
|          | 27                             | 64.00%                       |
|          | 28                             | 66.00%                       |
|          | 29                             | 68.00%                       |
|          | 30                             | 70.00%                       |
|          | 31                             | 72.00%                       |
|          | 32                             | 74.00%                       |

Limits on Annual Benefit:

Maximum: 74.00% of pension earnings.

Minimum: None.

Early Retirement:

Eligibility: None.

Benefit: See Termination Benefit.

Disability – Non-Service Connected:

Service Requirement: 20 years of service.

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

#### IV. Summary of Current Principal Pension Plan Provisions (continued)

Disability – Service Connected:

|                      |                                                                |
|----------------------|----------------------------------------------------------------|
| Service Requirement: | None.                                                          |
| Benefit:             | 100% of pay (or 75% of pay depending on extent of disability). |

Pre-Retirement Death Benefit – Non Service Connected and less than 10 years of service:

|                      |                                                 |
|----------------------|-------------------------------------------------|
| Service Requirement: | None.                                           |
| Benefit:             | Return of employee contributions with interest. |

Pre-Retirement Death Benefit – Service Connected or more than 10 years of service:

|                      |                                                                |
|----------------------|----------------------------------------------------------------|
| Service Requirement: | None, if service connected; 10 years if non service connected. |
| Benefit:             | Greater of 100% of retirement benefit and 50% of salary.       |

Post-Retirement Spouse’s Benefit: 100% of pension retiree was receiving.

Post-Retirement Death Benefit: Lump sum, excess of accumulated contributions over benefits paid to member or survivors (if not eligible for spouse’s benefit).

Vesting in Accrued Benefit:

|              |                                                                                                                                          |
|--------------|------------------------------------------------------------------------------------------------------------------------------------------|
| Eligibility: | 15 years of service.                                                                                                                     |
| Benefit:     | 2.5% of final salary times service. Benefit is payable when the employee 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: 6.25% of salary; no contributions for those with 32 or more years of service.

#### **IV. Summary of Current Principal Pension Plan Provisions (continued)**

Additional Retirement Benefits:

Employees can trade in vacation leave for additional pension credit. Each 20 days grants an additional 1.5% of salary up to a maximum of 7.5%.

G:\Clients\497 Stamford\2011 pyb 0701 fye 0630\Valuation\Pension Fire\Final 2011 Valuation.DOC