

***Town of Lincoln Rhode Island
Retirement Plan***

***Actuarial Valuation Report
January 1, 2016***

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Highlights

Purpose of the Valuation

This report summarizes actuarial information regarding the plan's liabilities and benefit obligations as compared to assets available for benefits on the valuation date. The report was prepared by Nyhart to:

- determine the actuarially determined recommended contribution; and
- determine the plan's funded status

Principal results of actuarial valuations are shown in the following sections.

Plan Year Beginning	01/01/17	01/01/16	01/01/15
Employer Contributions			
Total payroll	\$ 5,296,443	\$ 5,142,178	\$ 5,073,432
Actuarial Recommended Funding Contribution	\$ 1,806,087	\$ 1,608,486	\$ 1,374,183
As percent of payroll	34.1%	31.3%	27.1%
Employer contribution	N/A	N/A	\$ 1,329,639
Total as percent of payroll	N/A	N/A	26.2%

Valuation Date	01/01/16	01/01/15	01/01/14
Plan Assets			
Fair market value	\$ 21,604,114	\$ 21,635,674	\$ 20,272,090
Actuarial value for funding	\$ 22,070,043	\$ 20,871,819	\$ 19,157,225
Funded Status			
Actuarial Accrued Liability	\$ 36,646,784	\$ 35,695,305	\$ 29,350,192
Unfunded Accrued Liability	\$ 14,576,741	\$ 14,823,486	\$ 10,192,967
Funded Ratio			
Market Value Basis	58.9%	60.6%	69.1%
Actuarial Value Basis	60.2%	58.5%	65.3%

Highlights – Continued

Plan Year Beginning	01/01/16	01/01/15	01/01/14
Participants			
Number of participants:			
Active	113	110	111
Inactive with deferred benefits	22	20	20
Inactive receiving benefits	<u>96</u>	<u>95</u>	<u>92</u>
Total in valuation	231	225	223
Active participant averages:			
Age nearest birthday	48.7	48.9	48.8
Years of employment to date	12.1	12.3	12.1
Compensation for benefits	\$ 45,506	\$ 46,122	\$ 46,301

Changes since the Last ValuationMethodology

Historically, the Actuarial Recommended Funding Contribution (ARFC) was determined annually for the plan year beginning on the valuation date. For the plan year beginning January 1, 2016, the method has been changed such that the Actuarial Recommended Funding Contribution is based on the calculated contribution as a percentage of payroll from the prior valuation date. This percentage is applied to projected payroll for the following plan year.

For example, the calculated funding contribution for the plan year beginning January 1, 2016 was 34.1% of total payroll before the adjustment due to phasing in the effect of the interest rate change. Therefore, the Actuarial Recommended Funding Contribution for the plan year beginning January 1, 2017 is 34.1% of payroll projected from the January 1, 2016 valuation to the plan year beginning January 1, 2017. Additional details of these calculations are shown in this report in Section 2.1.

Assumptions

The mortality table for police and fire members has been updated to the RP-2014 Blue Collar Mortality with fully generational improvements from 2006 based on the assumptions from the 2015 Social Security Trustees Report.

The mortality table for all other members and beneficiaries has been updated to the RP-2014 Total Mortality with fully generational improvements from 2006 based on the assumptions from the 2015 Social Security Trustees Report.

The effect of the assumption changes on the calculated annual contribution is being phased in over three years. See Section 2.2 for a detailed calculation of the phase-in.

Actuary's Opinion

This report provides information regarding the actuarial valuation prepared for

Town of Lincoln Rhode Island Retirement Plan

The actuarial valuation was prepared as of January 1, 2016 using information which has been reconciled and reviewed for reasonableness.

- employee census information was provided by the plan administrator; and
- asset information was provided by the plan administrator.

Our review was not performed at the source, and we therefore do not accept responsibility for the accuracy or completeness of the data on which the information is based.

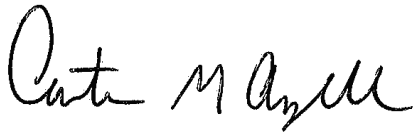
Actuarial values have been prepared in accordance with generally accepted actuarial principles and practice and to the best of our knowledge these values fairly reflect our best estimate of anticipated experience under the plan provisions which are summarized in Section 3.3 of this report.

Information has been prepared in accordance with applicable governmental standards of financial reporting for defined benefit pension plans.

Nyhart

Valuation prepared by:

Valuation reviewed by:



Carter Angell, FSA, EA, MAAA

Tayt V. Odom, FSA, EA, MAAA

April 29, 2016

Date

Section 1 - Assets

1.1 Reconciliation of Plan Assets

Transaction activity is summarized in Section A and market value of assets is reconciled in Section B for the plan year ending 12/31/15 as follows:

A. Net income (loss):

(1) Contributions:			
From town	\$ 1,329,639		
From participants	276,425		
Other	<u>0</u>	\$ 1,606,064	
(2) Interest and Dividends		202,098	
(3) Net appreciation/depreciation in fair market value of investments		(60,426)	
(4) Other income		0	
(5) Disbursements:			
Benefit payments	\$ 1,779,296		
Other	0		
Administrative expenses	<u>0</u>	1,779,296	
(6) Net income (loss) = (1) + (2) + (3) + (4) – (5)		\$ (31,560)	

B. Reconciliation of market value of assets:

(1) Market value of assets as of 12/31/14	\$ 21,635,674
(2) Net income (loss) from A(6)	(31,560)
(3) Market value of assets as of 12/31/15 = (1) + (2)	\$ 21,604,114

Section 1 – Continued

1.2 Summary of Assets

(1) Cash and Cash Equivalents				\$	0
(2) General investments:					
Equity Mutual Funds	\$ 13,370,381	(62%)			
Fixed Income Mutual Funds	1,152,208	(5%)			
Real Estate	1,525,844	(7%)			
Group Annuity Contract	<u>5,555,681</u>	(26%)			
					21,604,114
(3) Receivables:					
Employer contributions	\$	0			
Income	<u>0</u>				0
(4) Prepaid Expenses					0
(5) Liabilities:					
Due to Other Funds	\$	0			
Internal Balances		0			
Accounts Payable & Accrued Expenses	<u>0</u>				0
(6) Total assets = (1) + (2) + (3) + (4) – (5)					\$ 21,604,114

1.3 Actuarial Value of Assets

The market value of plan assets has been adjusted for valuation purposes to smooth the effects of appreciation and/or depreciation in assets over a 5-year period. Determination of the actuarial value of plan assets is detailed below.

(1) Fair market value of assets as of 12/31/2015					\$21,604,114
(2) Five-year smoothing of gains/(losses):					
2015	\$ (1,348,080)	x 80%	=	\$ (1,078,464)	
2014	\$ (123,678)	x 60%	=	\$ (74,207)	
2013	\$ 1,399,442	x 40%	=	\$ 559,777	
2012	\$ 634,826	x 20%	=	\$ 126,965	\$ (465,929)
(3) Actuarial value of assets = (1) – (2)					\$22,070,043

Section 1 – Continued

1.4 Average Rates of Return

Average rates of investment return have been determined using the formula

Two times (I) divided by (A + B - I), where

I is the dollar amount of earnings (including unrealized appreciation or depreciation of plan assets) for the plan year;

A is the value of assets at the beginning of the plan year; and

B is the value of assets at the end of the plan year

Under this formula, all transactions are assumed to occur in the middle of the year, therefore, rates of return determined in this manner are estimates and should be used only for comparison with actuarial assumptions.

Plan Year Ending	12/31/15	12/31/14	12/31/13
Based on average market value:			
Earnings after expenses	0.67%	7.39%	16.04%
Based on actuarial value:			
Earnings after expenses	6.69%	9.67%	11.73%

Section 2 – Contribution Recommendation – All Divisions

2.1 Actuarial Recommended Funding Contribution

Plan Year Ending	12/31/17	12/31/16	12/31/15
Valuation Date	01/01/16	01/01/16	01/01/15
(1) Employer normal cost	\$ 522,792	\$ 522,792	\$ 516,713
(2) Net amortization payment (Exhibit 1)	1,171,175	1,171,175	1,141,361
(3) Interest at valuation rate on (1)+(2)	58,286	58,286	57,051
(4) Adjustment due to limit on individual divisions	1,025	1,025	1,089
(5) Calculated contribution at valuation date (1)+(2)+(3)+(4)	1,753,278	1,753,278	1,716,214
(6) Total payroll	5,142,178	5,142,178	5,073,432
(7) Calculated contribution as a percentage of total payroll (5)/(6)	34.1%	34.1%	33.8%
(8) Projected payroll	5,296,443	N/A	N/A
(9) Preliminary actuarial recommended funding contribution (7)x(8)	1,806,087	1,753,278	1,716,214
(10) Adjustment due to phasing in effect of assumption changes	0	(144,792)	(342,031)
(11) Actuarial recommended funding contribution (9)+(10)	\$ 1,806,087	\$ 1,608,486	\$ 1,374,183

2.2 Phase-In of Assumption Changes

The Actuarial Recommended Funding Contribution (shown above) has been adjusted for valuation purposes to smooth the effects of the assumption changes made effective 1/1/2015. Determination of the Actuarial Recommended Funding Contribution is shown below.

(1) Actuarial recommended funding contribution (prior to assumption changes)	\$1,318,901
(2) Actuarial recommended funding contribution (after assumption changes)	1,753,278
(3) Increase due to assumption changes (2) – (1)	434,377
(4) Adjustment to actuarial recommended funding contribution (3) x 1 / 3	144,792
(5) Actuarial recommended funding contribution (2) – (4)	\$1,608,486

Section 2 – Continued

2.3 Actuarial Recommended Funding Contribution – By Division

Plan Year Ending: December 31, 2016

	Police	School	Lonsdale Firefighters	Saylesville Firefighters	Firefighters	Town Hall	Water	Total
(1) Total Normal Cost	529,850	234,423	0	29,841	0	0	0	794,114
(2) Expected Employee Contributions	<u>167,321</u>	<u>92,777</u>	<u>0</u>	<u>11,224</u>	<u>0</u>	<u>0</u>	<u>0</u>	<u>271,322</u>
(3) Employer Normal Cost (1) – (2)	362,529	141,646	0	18,617	0	0	0	522,792
(4) Net Amortization Payment	856,304	215,276	17,455	46,423	(991)	21,761	14,947	1,171,175
(5) Interest at Valuation rate on (3) + (4)	41,937	12,281	601	2,238	(34)	749	514	58,286
(6) Adjustment due to floor limit of \$0	0	0	0	0	1,025	0	0	1,025
(7) Adjustment due to phasing in effect of assumption changes	<u>(104,119)</u>	<u>(30,490)</u>	<u>(1,491)</u>	<u>(5,556)</u>	<u>0</u>	<u>(1,859)</u>	<u>(1,277)</u>	<u>(144,792)</u>
(8) Actuarial Recommended Funding Contribution (3)+(4)+(5)+(6)+(7)	1,156,651	338,713	16,565	61,722	0	20,651	14,184	1,608,486
(9) Payroll	2,219,738	2,734,118	0	188,322	0	0	0	5,142,178
(10) Actuarial Recommended Funding Contribution as a % of payroll (8) / (9)	52.1%	12.4%	N/A	32.8%	N/A	N/A	N/A	31.3%
Accrued Liability	26,364,079	7,172,827	878,830	1,553,508	10,694	374,054	292,792	36,646,784
Valuation Assets	<u>15,666,683</u>	<u>4,506,923</u>	<u>685,193</u>	<u>974,390</u>	<u>32,890</u>	<u>99,223</u>	<u>104,741</u>	<u>22,070,043</u>
Unfunded Accrued Liability	10,697,396	2,665,904	193,637	579,118	(22,196)	274,831	188,051	14,576,741

Section 3 – Basis for the Valuation

3.1 Plan Participants

Participant information provided by the plan administrator is summarized in the following table.

	Active	Inactive Participants		Total
		Benefits Deferred	Receiving Benefits	
Participants at 12/31/14	110	20	95	225
Retired	(2)	0	2	0
Rehires	0	0	0	0
Deaths without survivor	0	0	(1)	(1)
Deaths with survivor benefits	0	0	0	0
Beneficiary added	0	0	0	0
Vested terminations	(4)	4	0	0
Non-vested terminations	0	0	0	0
Add alternate payees	0	0	0	0
Benefits paid in full	(1)	(2)	0	(3)
Data corrections	0	0	0	0
New participants during the plan year	10	0	0	10
Participants as of 12/31/15	113	22	96	231

Section 3 – Continued

3.1 Plan Participants – Continued

	School	Police	Lonsdale Firefighters	Saylesville Firefighters	Firefighters	Water	Town Hall	Totals
Actives								
Eligible for normal retirement benefits	14	4	0	1	0	0	0	19
Non-vested benefits	32	16	0	2	0	0	0	50
Not yet eligible for retirement benefits	29	15	0	0	0	0	0	44
Total	75	35	0	3	0	0	0	113
Receiving								
Currently receiving benefits	30	48	2	3	1	2	10	96
Terminated Vested								
Entitled to deferred benefit	15	4	2	0	0	0	1	22
Totals	120	87	4	6	1	2	11	231

Section 3 – Continued**3.2 Information about Participants****Active Participants**

Number accruing benefits	113
Average age for valuation	48.7
Average years of employment	12.1
Average pay	\$ 45,506

Inactive Participants with Deferred Retirement Benefits

Number of former participants with deferred benefits	9
Average age for valuation	59.1
Total deferred monthly benefits	\$ 7,335
Average deferred monthly benefit	\$ 815

Inactive Participants Due Return of Contributions

Number of former participants with deferred benefits	13
Average age for valuation	45.9
Total employee contributions (with interest)	\$ 154,124
Average employee contribution amount (with interest)	\$ 11,856

Retired Participants and Beneficiaries

Number of retired pensioners	81
Number of disabled pensioners	0
Number of beneficiaries	12
Number of alternate payees	3
Total monthly benefits	\$ 135,770
Average monthly benefit	\$ 1,414

Section 3 – Continued**3.3 Summary of Plan Provisions****Name of plan**

Town of Lincoln Rhode Island Retirement Plan

Effective date

The plan was originally effective as of September 1, 1970.

Participation

Employees who work 20 or more hours per week and more than five months per year are eligible to participate in the Plan.

Normal retirement benefit

Police (hired on or before July 1, 2013) and Lonsdale Firefighters

A benefit equal to 2.5% of average monthly salary multiplied by credited service up to 20 years, plus 2% of average monthly salary multiplied by up to five additional years of credited service.

Police (hired after July 1, 2013)

A benefit equal to 2.0% of average monthly salary multiplied by credited service up to 30 years.

Saylesville Firefighters

A benefit equal to 2.5% of average monthly salary multiplied by credited service up to 20 years, plus 2% of average monthly salary multiplied by up to ten additional years of credited service.

All other participants

A benefit equal to 1.5% of average monthly salary multiplied by credited service, with maximum benefit of 60% of average monthly salary.

Normal retirement date

Police (hired on or before July 1, 2013)

Police employees hired on or before July 1, 2013 may retire upon the earlier of attainment of age 58 and completion of 10 years of credited service or the completion of 20 years of credited service regardless of age.

Police (hired after July 1, 2013)

Police employees hired after July 1, 2013 may retire upon the earlier of attainment of age 58 and completion of 10 years of credited service or the completion of 25 years of credited service regardless of age.

Section 3 – Continued

3.3 Summary of Plan Provisions – Continued

Normal retirement date

Saylesville Firefighters	Saylesville Firefighters may retire upon the earlier of attainment of age 55 and completion of 10 years of credited service or the completion of 30 years of credited service regardless of age.
Lonsdale Firefighters	Lonsdale Firefighters may retire upon the earlier of attainment of age 60 and completion of 10 years of credited service or the completion of 20 years of credited service regardless of age.
All other participants	All other participants may retire upon the attainment of age 60 and completion of 10 years of credited service.

Average monthly salary

Average compensation during the highest three consecutive years out of the final ten years of employment.

Preretirement death benefit

The beneficiary of a participant who dies prior to retirement receives the participant's accumulated contributions. In lieu of this benefit, the surviving spouse of the participant who dies prior to retirement can elect to receive a monthly benefit equal to 50% of the participant's benefit accrued to the date of death, payable at the participant's normal retirement date.

Termination before 10 years of credited service

Refunded employee contributions with annual interest credited at 5% after 1997 (3.5% before 1998).

Termination after 10 years of credited service

100% vested after 10 years of credited service in accrued benefit deferred to Normal Retirement.

Compensation

Annual base compensation plus holiday pay and longevity pay excluding overtime pay.

Credited service

Contributing employees will receive credit for all service rendered to the Town from date of membership.

Cost of living adjustments

Police Department employees who retire after June 30, 2004 receive an automatic 3% annual compounded Cost of Living Adjustment to their monthly pension benefit.

Section 3 – Continued**3.3 Summary of Plan Provisions** – Continued**Normal form of payment**

For participants other than Police and Firefighters, the normal form of benefit is a monthly life annuity. For Police and Firefighters, the normal form of benefit is a monthly benefit payable for the participant's lifetime with 67.5% of such benefit continued to a surviving contingent annuitant following the participant's death.

Optional forms of payment

A participant may choose to receive distributable benefits in an actuarially equivalent alternative form of benefit as follows.

- a monthly benefit payable for the participant's lifetime;
- a monthly benefit payable for the participant's lifetime with a guarantee that the remainder, if any, of 120 monthly payments will be made to the participant's beneficiary following the participant's death;
- a monthly benefit payable for the participant's lifetime with a percentage, 50%, 66 2/3%, 75%, or 100%, of such benefit continued to a surviving contingent annuitant following the participant's death.

Participant contributions

As a requirement for participation, employees are required to contribute the following to the plan as of January 1, 2016:

Police	8% of compensation
Firefighters	6% of compensation
All other participants	4% of compensation

Section 3 – Continued**3.4 Actuarial Assumptions**

Actuarial assumptions concerning future events are described below. Please see *Highlights* section for comments regarding changes in assumptions since the last valuation.

Retirement age

Police	100% retirement at the completion of 10 years of service and attainment of age 58. 100% retirement at the completion of 20 years of service and attainment of age 55. 20% retirement at the completion of 20 years of service and attainment of ages 40-49, 51-54. 50% retirement at the completion of 20 years of service and attainment of age 50.
School	100% retirement at the completion of 10 years of service and attainment of age 63.
Lonsdale Fire	100% retirement at the completion of 10 years of service and attainment of age 60. 100% retirement at the completion of 20 years of service and attainment of age 55. 20% retirement at the completion of 20 years of service and attainment of ages 40-49, 51-54. 50% retirement at the completion of 20 years of service and attainment of age 50.
Saylesville Fire	100% retirement at the completion of 10 years of service and attainment of age 55.
All other participants	100% retirement at the completion of 10 years of service and attainment of age 63.

Mortality of healthy lives

Police and Fire	RP-2014 Blue Collar Mortality with 2015 Social Security Generational Improvement Scale from 2006
Others and Beneficiaries	RP-2014 Total Mortality with 2015 Social Security Generational Improvement Scale from 2006

Mortality of disabled lives

Police and Fire	RP-2014 Blue Collar Mortality with 2015 Social Security Generational Improvement Scale from 2006
Others and Beneficiaries	RP-2014 Total Mortality with 2015 Social Security Generational Improvement Scale from 2006

Disablement

None assumed

Section 3 – Continued

3.4 Actuarial Assumptions – Continued

Withdrawal (Police/Fire)

Rates below at illustrative ages indicate the withdrawal assumption used for police and fire employees in the valuation:

<u>Age</u>	<u>Rate of Withdrawal</u>	
	<u>Male</u>	<u>Female</u>
25	0.050	0.075
30	0.035	0.050
35	0.025	0.035
40	0.015	0.025
45	0.010	0.015
50	0.005	0.010
55	0.000	0.005
60	0.000	0.000

Withdrawal (all other participants)

Rates below at illustrative ages indicate the withdrawal assumption used for non-police/fire employees in the valuation:

<u>Age</u>	<u>Rate of Withdrawal</u>	
	<u>Male</u>	<u>Female</u>
25	0.100	0.150
30	0.070	0.100
35	0.050	0.070
40	0.030	0.050
45	0.020	0.030
50	0.010	0.020
55	0.000	0.010
60	0.000	0.000

Future salary increases

Salary increase rates used in the valuation are shown below:

<u>Age</u>	<u>Increases</u>
<25	6.00%
25-29	5.00%
30-34	4.00%
35-39	3.50%
40-44	3.50%
45-49	3.50%
50-54	3.50%
55-59	3.50%
60+	3.00%

Valuation interest rate

7.0%

Section 3 – Continued

3.4 Actuarial Assumptions – Continued

Eligible spouse	85% of participants assumed to be married with female spouse 3 years younger
Cost of Living Adjustment	3.0% increase is assumed for Police retiring after June 30, 2004

Section 3 – Continued**3.5 Valuation Procedures****Funding method****Actuarial Recommended Funding Contribution – Entry Age Normal Cost Method**

The actuarial cost method used in determining the Actuarial Recommended Funding Contribution is the entry age normal cost method.

In determining the Actuarial Recommended Funding Contribution, the excess of the entry age actuarial accrued liability over the actuarial value of plan assets is amortized over a closed 20 year period as a level % of pay. For this purpose, pay is assumed to grow at 3.0% annually.

Asset valuation method

The actuarial value of assets is equal to the fair market value of assets on the valuation date adjusted for a 5 year phase in of gains and losses on fair market value of assets.

Other procedures

Benefits projected to assumed retirement age for active participants have been limited so as not to exceed maximum benefit limits imposed by Code Section 415(b) and/or maximum compensation limits of Code Section 401(a)(17).

Exhibit 1 – Unfunded Actuarial Liability**A. Unfunded Entry-Age Actuarial Accrued Liability**

(1)	Active participants	\$ 15,304,742
(2)	Inactive participants with deferred benefits	894,089
(3)	Participants/beneficiaries receiving benefits	20,447,953
(4)	Total entry-age actuarial accrued liability (1) + (2) + (3)	36,646,784
(5)	Actuarial value of assets as of 01/01/16	22,070,043
(6)	Unfunded actuarial liability as of 01/01/16 = (4) – (5), not less than zero	\$ 14,576,741

B. Actuarial Recommended Funding Contribution Amortization Schedule

	First Payment	Remaining Amortization Period (Years)	Outstanding Balance	Annual Payment
Charges:	01/01/2011	15	\$ 5,706,709	\$ 490,064
	01/01/2012	16	\$ 3,332,532	\$ 272,946
	01/01/2013	17	\$ 1,187,853	\$ 93,142
	01/01/2014	18	\$ (283,792)	\$ (21,376)
	01/01/2015	19	\$ 4,696,571	\$ 340,825
	01/01/2016	20	\$ <u>(63,132)</u>	\$ <u>(4,426)</u>
	Total		\$ 14,576,741	\$1,171,175