

November 11, 2016

# Actuarial Valuation Report:

The City of Newport, Rhode Island  
Fire Pension System as of July 1, 2016



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This report presents the results of our actuarial valuation of the City of Newport, Rhode Island Fire Pension System (the Plan) as of July 1, 2016.

The valuation includes a general discussion and comments on the various schedules included in the report. These schedules summarize the underlying calculations, asset information, participant data, plan benefits and actuarial assumptions, and should be considered an integral part of the valuation.

### **Purpose**

The main purposes of this report are to provide to the City of Newport (the City):

- The pension contribution under the City's funding policy for the 2017-2018 plan year;
- The financial condition of the Plan; and
- Information relating to the disclosure and reporting requirements of Statements No. 25, and No. 27 of the Governmental Accounting Standards Board.

### **Certification**

To the best of our knowledge, this report is complete and accurate and all costs and liabilities have been determined in conformance with generally accepted actuarial principles and on the basis of actuarial assumptions and methods which are reasonable (taking into account past experience under the Plan and reasonable expectations) and which in combination represent our best estimate of anticipated experience under the Plan.

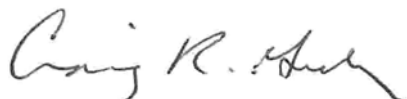
The actuaries certifying to this valuation are members of the Society of Actuaries or other professional actuarial organizations, and meet the General Qualification Standards of the American Academy of Actuaries for purposes of issuing Prescribed Statements of Actuarial Opinion.

Respectfully submitted,

KORN FERRY HAY GROUP, INC.



Brent M. Mowery, FSA, EA, FCA, MAAA  
Enrolled Actuary No. 14-3885



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## Comments on the Valuation

This is Korn Ferry Hay Group's fifth valuation of the Plan. This report includes results for prior years based on methods and assumptions developed by the prior actuary.

### Plan Contribution

The Valuation Highlights exhibit shows the development of the Plan's contribution for the 2017-2018 fiscal year, developed in accordance with the City's funding policy. The total contribution is \$6,142,577. This total cost has increased from \$5,708,437, which was developed for the 2016-2017 fiscal year. The main reasons for the increase were the reduction in the assumed interest rate from 7.50% to 7.25% plus the asset losses during the year.

If the City wishes to pay the contribution on a monthly basis, beginning on July 31, the monthly payment would be \$495,620.

### Funding Policy

The funding requirement is the sum of two components, an annual normal cost and an amortization payment which will change from year to year in response to evolving plan experience. It is our understanding that beginning with the July 1, 2002 valuation, the amortization period was reduced from 30 to 29 years, and that for each year the amortization period decreases by one year. Thus, the amortization period for the July 1, 2016 valuation is 15 years. The normal cost and amortization is then offset by anticipated employee contributions to the Plan, to arrive at the net City contribution.

### Plan Assets

Schedule A contains information about the Plan's assets. As of June 30, 2016, the market value of the Plan's assets is \$46,760,579 and the actuarial value of plan assets is \$50,962,019. The overall rate of return achieved for the 2015-2016 plan year was -3.0 percent on a market value basis.

The asset information used for the valuation was provided by the City. We have not audited such information, but have checked it for reasonableness and consistency.

### Funding Status

Schedule B provides the information on pension plans required by Statement Number 25 of the Governmental Accounting Standards Board.

Schedule C provides the information on pension plans required by Statement Number 27 of the Governmental Accounting Standards Board.

Schedule D discloses estimated City contributions and Plan benefits over the next twenty years. This open group projection suggests that the Plan will emerge from "critical status" (i.e., have a market value funding ratio of greater than 60%) by the year 2024, if the actuarial assumptions are reflective of the actual experience.

### **Participant Data**

Schedule E provides a distribution of the active participants as of July 1, 2016 by age and length of service. It also shows the average salary by age and service brackets. Schedule E also includes a breakdown of the inactive participants, by age and benefit amounts.

Although we have made tests to check for the reasonableness and consistency of the participant data, we have not audited the data but have relied on it as submitted by the City.

### **Actuarial Assumptions and Methods**

Schedule F summarizes the actuarial assumptions and cost methods used for the valuation. Effective with this July 1, 2016 valuation, we lowered the annual investment return assumption from 7.50% to 7.25% and revised the asset valuation method from market value to 5-year smoothed market value. Otherwise, there were no changes in actuarial assumptions or cost methods since the prior valuation.

### **Plan Provisions**

Schedule G contains a summary of the principal provisions of the plan in effect as of July 1, 2016.

## Valuation Highlights

	<u>July 1, 2015</u>		<u>July 1, 2016</u>	
<b>A. Membership Data</b>				
1. Active Members				
a. Number	94		95	
b. Expected covered payroll for fiscal year beginning on the valuation date	\$ 6,205,276		6,585,483	
c. Average pay	\$ 66,014		69,321	
d. Average age	42.5		43.1	
e. Average service	14.0		14.6	
2. Retired members and beneficiaries				
a. Number	121		116	
b. Aggregate annual pension	\$ 5,759,455		5,847,461	
c. Average annual pension	\$ 47,599		50,409	
d. Average age	69.6		69.9	
3. Deferred vested members				
a. Number	1		1	
b. Aggregate annual pension	\$ 18,456		18,456	
c. Average annual pension	\$ 18,456		18,456	
d. Average age	56.0		57.0	
<b>B. Basic Valuation Results</b>				
1. Normal cost <sup>1</sup>	\$ 1,459,460	(23.5%)	1,657,897	(25.2%)
2. Actuarial accrued liability				
a. Active members	\$ 25,699,943		29,144,412	
b. Retirees and beneficiaries	72,196,464		74,246,313	
c. Deferred vested	242,009		269,043	
d. Total	<u>\$ 98,138,416</u>		<u>103,659,768</u>	
3. Valuation assets	\$ 47,436,350		50,962,019	
4. Unfunded actuarial accrued liability	\$ 50,702,066		52,697,749	
	<u>July 1, 2016 to June 30, 2017</u>		<u>July 1, 2017 to June 30, 2018</u>	
<b>C. Development of Contribution</b>				
1. Contribution for fiscal year of valuation				
a. Normal cost with interest	\$ 1,612,065		1,826,992	
b. Amortization of unfunded actuarial accrued liability	4,691,334 <sup>2</sup>		4,946,267 <sup>3</sup>	
c. Anticipated employee contributions with interest	<u>(594,963)</u>		<u>(630,682)</u>	
d. City contribution assumed deposited June 30	\$ 5,708,437		6,142,577	
2. Monthly City contribution beginning July 31				
	\$ 460,094		495,620	

<sup>1</sup> Percentages in parentheses represent amounts as percentages of covered payroll.

<sup>2</sup> Amortized over 16 years from the valuation date, as a level percentage of payroll, assuming long-term salary increases of 3.2% on average.

<sup>3</sup> Amortized over 15 years from the valuation date, as a level percentage of payroll, assuming long-term salary increases of 3.2% on average.

## Schedule A: Analysis of Plan Assets

### A.1. Schedule of Receipts and Disbursements

(1) Market Value at July 1, 2015		<b>\$47,436,350</b>
(2) Receipts		
a. City Contributions	\$ 6,048,094	
b. Member Contributions	602,467	
c. Net Investment Income	(1,531,594)	
d. Total Receipts	<b>\$ 5,118,967</b>	
(3) Disbursements		
a. Benefit Payments	\$ 5,794,738	
b. Total Disbursements	<b>\$ 5,794,738</b>	
(4) Market Value at June 30, 2016 [(1) + (2) - (3)]		<b>\$46,760,579</b>

### A. 2. Trust Investment Yield for 12 Months Ending June 30, 2016

1. Asset Market Value at July 1, 2015	\$47,436,350
2. City Contributions during the year (paid 7/1/15)	6,048,094
3. Member Contributions and Benefits paid during the year	(5,192,271)
4. Asset Market Value at June 30, 2016	46,760,579
5. Investment Increment	(1,531,594)
6. Approximate Average Asset Market Value (1) + (2) + [(3) / 2]	50,888,309
7. Approximate Yield Rate (5) / (6)	-3.0%

**A. 3. Actuarial Value of Assets as of June 30, 2016**

1. Development of June 30, 2016 Expected Actuarial Value of Assets:	
(a) Actuarial value of assets July 1, 2015	\$47,436,350
(b) Contributions for the 2015-16 plan year	
(1) Employee Contribution	602,467
(2) Employer Contributions	6,048,094
(c) Benefit payments and expenses for the 2015-16 plan year	5,891,126
(d) Interest on (a), (b) and (c) at 7.5 percent ((a + b2) x 7.5%) + ((b1 - c) x (1.075 <sup>0.5</sup> - 1))	3,816,594
(e) Expected actuarial value of assets June 30, 2016 (a) + (b) - (c) + (d)	\$52,012,379
2. Development of Amount of Difference to be Amortized	
(a) Difference between expected actuarial value and market value as of June 30, 2012	\$0
(b) Unrecognized amount of June 30, 2012 difference: 20 percent of (2a)	0
(c) Difference between expected actuarial value and market value as of June 30, 2013	0
(d) Unrecognized amount of June 30, 2013 difference: 40 percent of (2c)	0
(e) Difference between expected actuarial value and market value as of June 30, 2014	0
(f) Unrecognized amount of June 30, 2014 difference: 60 percent of (2e)	0
(g) Difference between expected actuarial value and market value June 30, 2015	0
(h) Unrecognized amount of June 30, 2015 difference: 80 percent of (2g)	0
(i) Market value as of June 30, 2016	46,760,579
(j) Difference between expected actuarial value and market value as of June 30, 2016: (2i) - (1e) - (2b) - (2d) - (2f) - (2h)	\$ (5,251,800)
3. Development of Actuarial Value of Assets June 30, 2016	
(a) 20 percent of June 30, 2012 difference: 20 percent of (2a)	0
(b) 20 percent of June 30, 2013 difference: 20 percent of (2c)	0
(c) 20 percent of June 30, 2014 difference: 20 percent of (2e)	0
(d) 20 percent of June 30, 2015 difference: 20 percent of (2g)	0
(e) 20 percent of June 30, 2016 difference: 20 percent of (2j)	(1,050,360)
(f) Actuarial value of assets June 30, 2016: (1e) + (3a) + (3b) + (3c) + (3d) + (3e):	\$50,962,019
4. Unrecognized market value June 30, 2016: (2-i) - (3f)	\$ (4,201,440)
5. Contribution Receivable	\$ 0
6. Actuarial Value of Assets (3f) + (5)	\$50,962,019



## Schedule B: GASB 25 Disclosure Information

### B.1 Actuarial Accounting Date

Date Used to Compute Benefit and Asset Values — July 1, 2016

### B.2. Method and Assumptions

All methods and assumptions used for Plan accounting are summarized in Schedule F.

### B.3. Statement of Plan Net Assets

1. Assets	
a) Cash and Short Term Investments	\$2,050,472
b) Receivables	0
c) Investments at Fair Value	
(1) Fixed Income	8,493,922
(2) Domestic Equities	26,300,611
(3) Foreign Equities	5,112,245
(4) Alternative Investments	<u>4,840,093</u>
d) Total Assets	\$46,797,343
2. Liabilities	
a) Payables for Investments Purchased and Other Payables	36,764
3. Net Assets Held in Trust for Pension Benefits	\$46,760,579

#### B.4. Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets	Actuarial Accrued Liability (AAL)	Unfunded AAL	Funded Ratio	Covered Payroll	UAAL as % of Covered Payroll
6/30/02	15,992,660	57,208,592	(41,215,932)	27.95%	4,639,918	(888.29%)
6/30/03	17,726,942	61,509,869	(43,782,927)	28.82%	4,763,438	(919.15%)
6/30/04	21,427,871	64,260,714	(42,832,843)	33.35%	4,957,989	(863.92%)
6/30/05	24,426,065	66,806,255	(42,380,190)	36.56%	4,922,941	(860.87%)
6/30/06	27,413,402	68,671,042	(41,257,640)	39.92%	4,827,849	(854.58%)
6/30/07	31,256,401	72,036,981	(40,780,580)	43.39%	5,224,518	(780.56%)
6/30/08	29,605,715	74,885,370	(45,279,655)	39.53%	4,967,895	(911.45%)
6/30/09	27,980,459	78,870,565	(50,890,106)	35.48%	4,910,434	(1036.37%)
6/30/10	30,820,663	82,030,956	(51,210,293)	37.57%	4,996,160	(1024.99%)
6/30/11	32,832,334	82,907,130	(50,074,796)	39.60%	4,891,283	(1023.76%)
6/30/12	32,552,813	93,772,470	(61,219,657)	34.71%	5,532,707	(1106.50%)
6/30/13	36,727,924	93,822,904	(57,094,980)	39.15%	5,509,307	(1036.34%)
6/30/14	44,307,114	95,518,160	(51,211,046)	46.39%	5,505,579	(930.17%)
6/30/15	47,436,350	98,138,416	(50,702,066)	48.34%	6,205,276	(817.08%)
6/30/16	50,962,019	103,659,768	(52,697,749)	49.16%	6,585,483	(800.21%)

## B.5. Schedule of Employer Contributions

Actuarial Valuation Date	Annual Required Contribution	Actual Contribution	Percentage Contributed
7/1/93	2,225,668	1,551,116	69.69%
7/1/94	2,576,363	1,736,686	67.41%
7/1/95	2,709,621	1,990,018	73.44%
7/1/96	2,919,663	2,760,163	94.54%
7/1/97	3,065,646	3,032,805	98.93%
7/1/98	2,961,385	3,189,318	107.70%
7/1/99	3,003,673	3,860,777	128.54%
7/1/00	3,281,802	3,567,527	108.71%
7/1/01	3,106,881	3,977,470	128.02%
7/1/02	3,285,527	4,062,000	123.63%
7/1/03	3,317,767	3,317,767	100.00%
7/1/04	4,118,543	5,118,543	124.28%
7/1/05	3,543,234	3,543,235	100.00%
7/1/06	3,352,662	5,543,234	165.34%
7/1/07	3,291,226	3,291,234	100.00%
7/1/08	3,310,557	3,491,226	105.46%
7/1/09	3,781,258	3,981,258	105.29%
7/1/10	4,359,109	4,359,109	100.00%
7/1/11	4,560,741	4,560,741	100.00%
7/1/12	4,822,711	4,822,711	100.00%
7/1/13	5,990,094	5,990,094	100.00%
7/1/14	5,778,428	6,048,094	104.67%
7/1/15	5,436,487	6,048,094	111.25%

## Schedule C: GASB 27 Disclosure Information

### Development of the Net Pension Obligation (Asset)

Fiscal Year Ending	Val. Interest Rate	Amort. Years	Amort. Factor	NPO at Beginning of Year	Annual Required Contribution	Interest on NPO	Adjustment to NPO	Annual Pension Cost	Actual Contribution	Increase in NPO	NPO at End of Year
6/30/93	8.00%	30	22.7490	3,582,745	2,059,946	286,620	(157,490)	2,189,076	1,384,427	804,649	4,387,394
6/30/94	8.00%	30	22.7490	4,387,394	2,225,668	350,992	(192,861)	2,383,799	1,551,116	832,683	5,220,077
6/30/95	8.25%	30	18.4393	5,220,077	2,576,363	430,656	(283,095)	2,723,925	1,736,686	987,239	6,207,316
6/30/96	8.25%	30	18.4393	6,207,316	2,709,621	512,103	(336,635)	2,885,090	1,990,018	895,072	7,102,388
6/30/97	8.25%	30	18.4393	7,102,388	2,919,663	585,947	(385,177)	3,120,434	2,760,163	360,271	7,462,659
6/30/98	8.25%	30	18.4393	7,462,659	3,065,646	615,669	(404,715)	3,276,601	3,032,805	243,796	7,706,455
6/30/99	8.25%	30	18.4393	7,706,455	2,961,385	635,783	(417,936)	3,179,231	3,189,318	(10,087)	7,696,368
6/30/00	8.25%	30	18.4393	7,696,368	3,003,673	634,950	(417,389)	3,221,234	3,860,777	(639,543)	7,056,825
6/30/01	8.25%	30	20.1557	7,056,825	3,281,802	582,188	(350,116)	3,513,874	3,567,527	(53,653)	7,003,172
6/30/02	8.25%	30	20.1557	7,003,172	3,106,881	577,762	(347,454)	3,337,189	3,977,470	(640,281)	6,362,891
6/30/03	8.25%	30	20.1557	6,362,891	3,285,527	524,939	(315,687)	3,494,779	4,062,000	(567,221)	5,795,670
6/30/04	8.25%	29	15.7354	5,795,670	3,317,767	478,143	(368,320)	3,427,590	3,317,767	109,823	5,905,493
6/30/05	8.25%	28	15.4540	5,905,493	4,118,543	487,203	(382,134)	4,223,612	5,118,543	(894,931)	5,010,562
6/30/06	8.25%	27	15.0842	5,010,562	3,543,234	413,371	(332,173)	3,624,432	3,543,235	81,197	5,091,759
6/30/07	8.25%	26	14.7817	5,091,759	3,352,662	420,070	(344,464)	3,428,268	5,543,234	(114,966)	4,976,793
6/30/08	8.25%	25	14.4659	4,976,793	3,291,226	410,585	(344,036)	3,357,775	3,291,234	66,541	5,043,334
6/30/09	8.25%	24	14.1363	5,043,334	3,310,557	416,075	(356,765)	3,369,867	3,491,226	(121,359)	4,921,975
6/30/10	8.25%	23	13.7923	4,921,975	3,781,258	406,063	(356,864)	3,830,457	3,981,258	(150,801)	4,771,174
6/30/11	7.50%	22	13.7826	4,771,174	4,359,109	357,838	(346,174)	4,370,773	4,359,109	11,664	4,782,838
6/30/12	7.50%	21	13.3879	4,782,838	4,560,741	358,713	(357,251)	4,562,203	4,560,741	1,462	4,784,300
6/30/13	7.50%	20	12.6151	4,784,300	4,822,711	358,823	(379,252)	4,802,282	4,822,711	(20,429)	4,763,871
6/30/14	7.50%	19	12.2251	4,763,871	5,990,094	357,290	(389,680)	5,957,704	5,990,094	(32,390)	4,731,481
6/30/15	7.50%	18	11.8170	4,731,481	5,778,428	354,861	(400,396)	5,732,893	6,048,094	(315,201)	4,416,280
6/30/16	7.25%	17	11.6044	4,416,280	5,436,487	320,180	(380,569)	5,376,098	6,048,094	(671,996)	3,744,284

Note: Amortization factors used for periods prior to FY 2001 did not reflect future longevity or promotion pay increases.

## Schedule D: Forecast of Plan Contributions and Benefit Payments

The following table discloses the estimated City contributions and benefits to be paid from the Plan over the next twenty years, under the current set of actuarial assumptions, except that this projection assumes that new entrants will enter the Plan each year. Underlying this so-called “open group” projection is the assumption that the current number of active members will remain constant throughout the projection period.

FY Ending 6/30	Normal Cost	Amortization of Unfunded AL	Estimated Employee Contributions	Annual Required Contribution	Benefit Payments	Funded %
2018	1,826,992	4,946,267	630,682	6,142,577	5,920,244	45.1%
2019	1,841,357	5,206,898	637,678	6,410,576	6,135,291	47.6%
2020	1,847,230	5,473,426	642,549	6,678,108	6,446,327	50.2%
2021	1,816,768	5,746,131	637,830	6,925,069	6,682,065	53.0%
2022	1,813,539	6,025,553	639,854	7,199,237	6,968,304	55.9%
2023	1,798,540	6,178,870	638,681	7,338,729	7,218,247	59.0%
2024	1,786,173	6,362,886	637,881	7,511,178	7,420,977	62.2%
2025	1,796,579	6,551,186	645,726	7,702,039	7,775,884	65.6%
2026	1,805,833	6,743,164	652,443	7,896,554	8,154,161	69.1%
2027	1,780,561	6,936,647	648,156	8,069,053	8,399,038	72.8%
2028	1,801,241	7,132,122	658,620	8,274,743	8,783,012	76.7%
2029	1,776,739	7,326,883	656,027	8,447,595	9,022,064	80.8%
2030	1,783,264	7,517,166	662,507	8,637,924	9,325,310	85.2%
2031	1,795,755	7,691,340	670,846	8,816,249	9,633,098	89.8%
2032	1,788,620	7,804,350	673,192	8,919,778	9,832,330	94.8%
2033	1,822,011	-	688,195	1,133,815	10,199,112	100.1%
2034	1,808,989	-	690,348	1,118,641	10,491,812	100.2%
2035	1,792,777	-	690,957	1,101,820	10,735,826	100.3%
2036	1,798,712	-	698,521	1,100,191	10,922,052	100.4%
2037	1,841,254	-	717,938	1,123,316	11,012,222	100.5%
2038	1,864,198	-	730,084	1,134,114	11,164,388	100.6%

## Schedule E: Profiles of Population

### E.1. Number of Active Participants by Age and Duration

ACTIVES								
MALE (TOTAL)								
Age Group	0- 4	5-9	10-14	15-19	20-24	25-29	30+	Total
0- 19	0	0	0	0	0	0	0	0
20- 24	1	0	0	0	0	0	0	1
25- 29	8	0	0	0	0	0	0	8
30- 34	2	10	2	0	0	0	0	14
35- 39	1	0	7	3	0	0	0	11
40- 44	2	0	5	6	1	0	0	14
45- 49	0	1	4	8	6	0	0	19
50- 54	0	0	3	0	4	6	1	14
55- 59	0	1	0	2	5	3	1	12
60- 64	0	0	0	0	1	1	0	2
65+	0	0	0	0	0	0	0	0
TOTAL:	14	12	21	19	17	10	2	95
			AVG AGE	43.12	AVG DUR	14.56		

Note: No female actives

## E.2. Number of Inactive Participants by Age and Annual Pension

RETIRED						
	MALE		FEMALE		TOTAL	
Age Group	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
35- 39	0	0	0	0	0	0
40- 44	0	0	0	0	0	0
45- 49	1	38,793	0	0	1	38,793
50- 54	2	109,955	0	0	2	109,955
55- 59	8	475,526	0	0	8	475,526
60- 64	18	1,117,619	0	0	18	1,117,619
65- 69	23	1,344,210	0	0	23	1,344,210
70- 74	21	1,146,898	0	0	21	1,146,898
75- 79	4	225,989	0	0	4	225,989
80- 84	4	225,765	0	0	4	225,765
85- 89	4	246,659	0	0	4	246,659
90- 94	1	47,408	0	0	1	47,408
95- 99	0	0	0	0	0	0
100-104	0	0	0	0	0	0
105-109	0	0	0	0	0	0
110-114	0	0	0	0	0	0
115-119	0	0	0	0	0	0
120+	0	0	0	0	0	0
<b>TOTAL</b>	<b>86</b>	<b>4,978,822</b>	<b>0</b>	<b>0</b>	<b>86</b>	<b>4,978,822</b>
	AVG AGE:	68.0	AVG AGE:	0	AVG AGE:	68.0
	AVG PENSION:	57,893	AVG PENSION:	0	AVG PENSION:	57,893

<b>DISABLED</b>						
	<b>MALE</b>		<b>FEMALE</b>		<b>TOTAL</b>	
<b>Age Group</b>	<b>Number</b>	<b>Annual Pension</b>	<b>Number</b>	<b>Annual Pension</b>	<b>Number</b>	<b>Annual Pension</b>
20- 24	0	0	0	0	0	0
25- 29	0	0	0	0	0	0
30- 34	0	0	0	0	0	0
35- 39	0	0	0	0	0	0
40- 44	0	0	0	0	0	0
45- 49	1	45,814	0	0	1	45,814
50- 54	0	0	0	0	0	0
55- 59	1	44,595	0	0	1	44,595
60- 64	1	46,462	0	0	1	46,462
65- 69	2	122,391	0	0	2	122,391
70- 74	2	57,083	0	0	2	57,083
75- 79	0	0	0	0	0	0
80- 84	0	0	0	0	0	0
85- 89	0	0	0	0	0	0
90- 94	0	0	0	0	0	0
95- 99	0	0	0	0	0	0
100-104	0	0	0	0	0	0
105-109	0	0	0	0	0	0
110-114	0	0	0	0	0	0
115-119	0	0	0	0	0	0
120+	0	0	0	0	0	0
<b>TOTAL</b>	<b>7</b>	<b>316,345</b>	<b>0</b>	<b>0</b>	<b>7</b>	<b>316,345</b>
	AVG AGE:	64.0	AVG AGE:	0	AVG AGE:	64.0
	AVG PENSION:	45,192	AVG PENSION:	0	AVG PENSION:	45,192



<b>BENEFICIARY</b>						
	<b>MALE</b>		<b>FEMALE</b>		<b>TOTAL</b>	
<b>Age Group</b>	<b>Number</b>	<b>Annual Pension</b>	<b>Number</b>	<b>Annual Pension</b>	<b>Number</b>	<b>Annual Pension</b>
20- 24	0	0	0	0	0	0
25- 29	0	0	0	0	0	0
30- 34	0	0	0	0	0	0
35- 39	0	0	0	0	0	0
40- 44	0	0	0	0	0	0
45- 49	0	0	1	30,424	1	30,424
50- 54	0	0	0	0	0	0
55- 59	0	0	0	0	0	0
60- 64	0	0	3	81,908	3	81,908
65- 69	0	0	2	50,135	2	50,135
70- 74	0	0	4	88,954	4	88,954
75- 79	0	0	0	0	0	0
80- 84	0	0	1	21,729	1	21,729
85- 89	0	0	7	187,282	7	187,282
90- 94	0	0	4	75,444	4	75,444
95- 99	0	0	1	16,418	1	16,418
100-104	0	0	0	0	0	0
105-109	0	0	0	0	0	0
110-114	0	0	0	0	0	0
115-119	0	0	0	0	0	0
120+	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>23</b>	<b>552,294</b>	<b>23</b>	<b>552,294</b>
	<b>AVG AGE:</b>	<b>0</b>	<b>AVG AGE:</b>	<b>79.0</b>	<b>AVG AGE:</b>	<b>79.0</b>
	<b>AVG PENSION:</b>	<b>0</b>	<b>AVG PENSION:</b>	<b>24,013</b>	<b>AVG PENSION:</b>	<b>24,013</b>

VESTED TERM						
	MALE		FEMALE		TOTAL	
Age Group	Number	Annual Pension	Number	Annual Pension	Number	Annual Pension
20- 24	0	0	0	0	0	0
25- 29	0	0	0	0	0	0
30- 34	0	0	0	0	0	0
35- 39	0	0	0	0	0	0
40- 44	0	0	0	0	0	0
45- 49	0	0	0	0	0	0
50- 54	0	0	0	0	0	0
55- 59	0	0	1	18,456	1	18,456
60- 64	0	0	0	0	0	0
65- 69	0	0	0	0	0	0
70- 74	0	0	0	0	0	0
75- 79	0	0	0	0	0	0
80- 84	0	0	0	0	0	0
85- 89	0	0	0	0	0	0
90- 94	0	0	0	0	0	0
95- 99	0	0	0	0	0	0
100-104	0	0	0	0	0	0
105-109	0	0	0	0	0	0
110-114	0	0	0	0	0	0
115-119	0	0	0	0	0	0
120+	0	0	0	0	0	0
<b>TOTAL</b>	<b>0</b>	<b>0</b>	<b>1</b>	<b>18,456</b>	<b>1</b>	<b>18,456</b>
	AVG AGE:	0	AVG AGE:	57.0	AVG AGE:	57.0
	AVG PENSION:	0	AVG PENSION:	18,456	AVG PENSION:	18,456

## Schedule F: Actuarial Methods and Assumptions

<b>Actuarial Cost Method:</b>	Individual Entry Age Normal Actuarial Cost Method - Under this method, the actuarial present value of the projected benefits of each individual included in the valuation is allocated as a level percentage of the individual's projected compensation between entry age and assumed exit. The normal cost is the portion of the actuarial present value allocated to the valuation year. For inactive members, the actuarial accrued liability is equal to the present value of benefits. Inactive members do not have a normal cost. The portion of this actuarial present value not provided for at the valuation date by the sum of the actuarial value of the assets and actuarial present value of future normal costs is the unfunded actuarial accrued liability. The unfunded actuarial accrued liability represents the excess of the total actuarial accrued liability over the valuation assets.
<b>Asset Valuation Method:</b>	5-year smoothed market value
<b>Actuarial Assumptions:</b>	
1. <i>Interest</i>	7.25% per year, net of investment expenses, effective June 30, 2016.
2. <i>Salary Increases</i>	First 10 years beginning with July 1, 2012: 2.75% per year. Thereafter, 3.00% per year plus longevity increases of 3.00% after seventh year of employment and 0.50% for each year of employment thereafter through the thirty-first year of employment. No longevity increases are assumed after the thirty-first year of employment.
3. <i>Cost of Living Increases</i>	Members retired prior to August 26, 2011: 2.75% for 10 years beginning with July 1, 2012, 3.0% thereafter. Members retired on or after August 26, 2011: Bureau of Labor Statistics CPI for Northeast Urban Wage Earners, not exceeding 3.00% or less than 0.50%, except that for retirees after July 1, 2012, approximated the temporary 10 years of 2.75% salary increases and 3.0% thereafter by assuming cost of living increases of 2.9% in all future years.

4. *Mortality*

- a. Healthy Members                      RP-2000 Combined Healthy Mortality Table, applied on a fully generational basis using Mortality Projection Scale AA. This table contains sufficient margin for improvement in life expectancy.
- b. Disabled Members                      The 1985 Wyatt Pension Disability Table (unisex rates)

5. *Disability*

Rates of disability are based on an employee's age. Selected ages are listed below. 90% of disabilities are assumed to be service related.

<u>Attained Age</u>	<u>Probability of Disability</u>
25	0.17%
35	0.29%
45	0.72%
55	1.21%

6. *Withdrawal*

Rates of withdrawal are based on an employee's length of service, as follows:

<u>Years of Service</u>	<u>Probability of Withdrawal</u>
Less than 1	3.00%
1	2.25%
2	2.00%
3	1.75%
4	1.50%
5	1.25%
6	1.00%
7	0.75%
8	0.50%
9	0.25%
10 or more	0.00%

7. *Retirement*

Rates of retirement are based on an employee's length of service, as follows:

Years of Service	Probability of Retirement
20	10%
21	2%
22	2%
23	2%
24	2%
25	40%
26	10%
27	10%
28	10%
29	10%
30	40%
31	20%
32	20%
33	20%
34	20%
35+	100%

8. *Administrative Expenses*

Assumed to be paid by the Plan Sponsor outside the trust.

9. *Benefit Compensation Limits*

Benefit limits under Section 415 and compensation limits under Section 401(a)(17) of the Internal Revenue Code are assumed to have no impact on benefits earned under this Plan.

10. *Marriage/Dependents*

90% of active firefighters are assumed to be married. For all participants, wives are assumed to be three years younger than their husbands. For the purposes of valuing the death benefit, unmarried members are assumed to have no dependent children at death.

11. *Valuation Date*

July 1, 2016.

## Schedule G: Summary of Plan Provisions as of July 1, 2016

### 1. *Effective Dates*

Most recent amendment August 31, 2011

### 2. *Eligibility*

All firefighters who contribute to the pension fund.

### 3. *Retirement*

#### a. Eligibility

Members retired prior to July 1, 2011: 20 years of service.

Members retired on or after July 1, 2011: earlier of attainment of age 58 or completion of 30 years of service.

#### b. Benefit Formula

The annual benefit at retirement is equal to the percentage of final annual salary specified in the table below, plus \$100 per year for each year of service over 25 (maximum \$1,000). For pension purposes, annual salary includes regular and longevity pay.

<u>Years of Service</u>	<u>Benefit as a Percentage of Final Annual Salary</u>
20	50%
21	52%
22	54%
23	56%
24	58%
25	65%
26	66%
27	67%
28	68%
29	69%
30 or more	70%

#### c. Commencement Date

Retirement benefits commence as of the first payroll period after retirement.

#### d. Form of Payment

The annual benefit calculated in accordance with the formula in (b) above is payable monthly for the remainder of the retired member's life, with 67.5% of the member's benefit payable for the lifetime of the member's surviving spouse.

#### **4. *Vested Termination***

- |                      |  |
|----------------------|--|
| a. Eligibility       | Upon termination of employment after 10 years of service, a member is eligible for a benefit deferred to retirement age. |
| b. Benefit Formula   | 2.5% of final annual salary multiplied by full years of service at termination.  |
| c. Commencement Date | 25th anniversary of employment.  |
| d. Form of Payment   | Same as retirement.  |

#### **5. *Disability Retirement***

- |                         |  |
|-------------------------|--|
| a. Eligibility          | A member who is retired because of mental or physical incapacity is eligible to receive disability retirement benefits.  |
| b. Benefit Formula      |  |
| i. Non-Service Related  | If a member has fewer than 10 years of service, benefit is 25% of final annual salary. If a member has more than 10 years of service, benefit is 25% of final annual salary plus an additional 2.5% of final annual salary for each year over 10, up to a maximum of 62.5% of final annual salary. |
| ii. Service Related     | 66-2/3% of final annual salary.  |
| iii. Regular Retirement | If an employee has 25 or more years of service at disability, his pension will be the greater of the disability or retirement pension.   |
| c. Commencement Date    | Benefits commence as of the first payroll period after disability.   |
| d. Form of Payment      | Same as retirement.  |

#### **6. *Non-Vested Termination of Employment***

A member who leaves employment prior to completing 10 years of service will receive a lump sum payment of accumulated contributions.

#### **7. *Death Before Retirement - Survivor Annuity Benefits***

- |                      |   |
|----------------------|---|
| a. Eligibility       | Death while actively employed.  |
| b. Benefit Formula   | Surviving spouse (or, if none, dependent children) receives benefit of 67.5% of final annual salary, reduced pro rata if the deceased member had less than 20 years of service. |
| c. Commencement Date | Benefits commence as of the first payroll period after death.   |
| d. Form of Payment   | Monthly life annuity.   |

**8. *Retiree Cost of Living Increase***

Members retired prior to August 26, 2011: Pensions for retirees and disabled retirees (but not beneficiaries) are indexed to the negotiated pay increases for active firefighters. Terminated vested members receive 3% annual increases after benefit commencement.

Members retired on or after August 26, 2011: For those entitled to annual increases, they will equal the Bureau of Labor Statistics CPI for Northeast Urban Wage Earners, but will not exceed 3% nor be lower than 0.5%.

**9. *Employee Contributions***

9% of salary.