**PROPOSED CHANGES IN ACTUARIAL
ASSUMPTIONS AND METHODS
USED IN DETERMINING EMPLOYER CONTRIBUTIONS
FOR FISCAL YEARS BEGINNING
ON AND AFTER JULY 1, 2018
FOR THE NEW YORK CITY FIRE PENSION FUND**

prepared by the

New York City
Office of the Actuary
January 23, 2019

OFFICE OF THE ACTUARY

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SHERRY S. CHAN
CHIEF ACTUARY

January 23, 2019

Board of Trustees
New York City Fire Pension Fund
9 Metro Tech Center - Room 6W-8
Brooklyn, NY 11201-3587

Dear Trustees:

This Report presents proposed changes in actuarial assumptions and methods used in determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2018 for the New York City Fire Pension Fund (2019 A&M).

The following appendices and tables are attached to this letter in support of the proposed 2019 A&M:
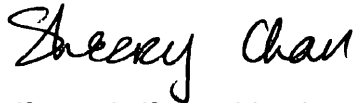
- Appendix A summarizes the proposed changes in assumptions and methods.

- Appendix B presents tables of proposed assumptions to be used in determining the Final 2019 Employer Contribution and subsequent Employer Contributions.

- Appendix C contains a draft Resolution to collectively adopt the proposed 2019 A&M.

I, Sherry S. Chan, am the Chief Actuary for, and independent of, the New York City Retirement Systems and Pension Funds. I am a Fellow of the Society of Actuaries, an Enrolled Actuary under the Employee Retirement Income and Security Act of 1974 (ERISA), a Member of the American Academy of Actuaries, and a Fellow of the Conference of Consulting Actuaries. I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. To the best of my knowledge, the results contained herein have been prepared in accordance with generally accepted actuarial principles and procedures and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

Board of Trustees
New York City Fire Pension Fund
January 23, 2019
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If you have any questions, please contact Mr. Michael J. Samet, or me.

Best Regards,

[signature: Sherry Chan]

Sherry S. Chan, FSA, EA, MAAA, FCA
Chief Actuary

SC/mm

Att.

cc: Mr. Patrick Dunn - New York City Fire Pension Fund
        Mr. Anderson Huynh - New York City Office of the Actuary
        Ms. Marlene Markoe-Boyd - New York City Office of the Actuary
        Mr. Sam Rumley - New York City Office of the Actuary
        Mr. Michael Samet - New York City Office of the Actuary
        Keith Snow, Esq. - New York City Office of the Actuary
        Ms. Lei Tian - New York City Fire Pension Fund

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Appendix A

APPENDIX A

PROPOSED CHANGES IN ACTUARIAL ASSUMPTIONS AND METHODS USED IN DETERMINING EMPLOYER CONTRIBUTIONS FOR FISCAL YEARS BEGINNING ON AND AFTER JULY 1, 2018 FOR THE NEW YORK CITY FIRE PENSION FUND

In accordance with the Administrative Code of the City of New York (ACCNY) and with appropriate practice, the Actuary is to periodically review actuarial assumptions for adoption by the Board of Trustees to use in the determination of employer contributions.

This Report proposes, collectively, changes to certain actuarial assumptions and methods to be used in determining employer contributions payable to the New York City Fire Pension Fund (FIRE) for Fiscal Years beginning on and after July 1, 2018 (i.e. beginning Fiscal Year 2019).

These proposals have been designed to provide for responsible financing of FIRE while being reasonably consistent with the concepts of intergenerational equity. This Report reflects the best judgment of the Actuary regarding the appropriate financing of FIRE and takes into account the most recent actuarial experience study and recommendations prepared by Bolton, Inc. (Bolton) in their 10-year experience study ending on June 30, 2017 (Bolton Experience Study).

The Actuary generally agrees with most of the recommendations made by Bolton on demographic and economic assumptions, but has refined those recommendations where the Actuary desires to smooth some of the recommended values.

The Actuary also generally agrees with the recommended action by Bolton to keep the Actuarial Interest Rate (AIR) and Consumer Price Inflation (CPI) assumptions unchanged. The Actuary continues to monitor market conditions and other factors that may affect these assumed rates to assess whether any future adjustments are warranted.

In summary, the Actuary proposes the following actions with respect to the current actuarial assumptions and methods of FIRE used in determining employer contributions for Fiscal Years beginning on and after July 1, 2018 (i.e. beginning in Fiscal Year 2019).

Demographic Assumptions

- **Termination**: Retain the current probabilities of Termination based on the findings outlined in the Bolton Experience Study and on the experience expected by the Actuary.

- **Active Service Ordinary Mortality**: Decrease the current probabilities of active service Ordinary Mortality based on the findings outlined in the Bolton Experience Study and on the experience expected by the Actuary.

- **Active Service Accidental Mortality**: Decrease the current probabilities of active service Accidental Mortality based on the findings outlined in the Bolton Experience Study and on the experience expected by the Actuary.

- **Active Service Ordinary Disability**: Decrease the current probabilities of active service Ordinary Disability based on the findings outlined in the Bolton Experience Study and on the experience expected by the Actuary.

- **Active Service Accidental Disability**: Retain the current probabilities of active service Accidental Disability for World Trade Center (WTC) eligible members and Tier 3/Tier 3 Modified Non-Enhanced Plan members, but increase the current probabilities of active service Accidental Disability for Tier 2 non-WTC eligible members and Tier 3/Tier 3 Modified Enhanced Plan members based on the findings outlined in the Bolton Experience Study and on the experience expected by the Actuary.

- **Service Retirement**: Revise the current probabilities of Service Retirement in the first year of eligibility and after the first year of eligibility to generally reduce the expected number of such retirements, but retain the current probabilities of Early Service Retirement based on findings outlined in the Bolton Experience Study and on the experience expected by the Actuary.

- **Post-Retirement Mortality**: Revise the existing Base Tables to reflect the findings outlined in the Bolton Experience Study. The Base Tables are adjusted to the Calendar Year 2012 expectations as that represents the midpoint of the 10-year experience study. The Valuation Tables are further adjusted by reflecting the application of Mortality Improvement Scale MP-2018 and the Base Tables recommended by Bolton.

Economic Assumptions

- **CPI Assumption**: Retain the current CPI assumption at 2.5% per year.

- **AIR Assumption**: Retain the current AIR assumption of 7.0% per annum, net of Investment Expenses.

- **Salary Scale Assumption**: Retain the current General Wage Increase components of 3.0% but increase the Merit Increase component of the Salary Scale based on the findings outlined in the Bolton Experience Study and on the experience expected by the Actuary.

- **Overtime Assumptions**: Increase the current Baseline Overtime, Dual Service Overtime, and Dual Disability assumptions based on the findings outlined in the Bolton Experience Study and on the experience expected by the Actuary.

Actuarial Methods

The Actuary is proposing no changes to the Actuarial Cost Method, the periods used to amortize changes in the Unfunded Accrued Liability, or the Actuarial Asset Valuation Method. The only method change is a technical change to the normal cost calculation under the One-Year Lag Methodology as recommended by Bolton.

Financial Impact

All estimates of employer contributions and changes in employer contributions presented herein have been developed using the Preliminary Fiscal Year 2019 Employer Contribution.

The overall impact of implementing the proposed 2019 A&M would increase the Final Fiscal Year 2019 Employer Contribution to FIRE by approximately $150 million from the Preliminary Fiscal Year 2019 Employer Contribution. **Please note that the change in the Final Fiscal Year 2019 Employer Contribution could differ from this amount due to other refinements in actuarial calculations**.

Appendix B

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF TERMINATION

Years of Service	Current & Proposed
0	2.00%
1	0.80%
2	0.40%
3	0.40%
4	0.40%
5	0.40%
6	0.36%
7	0.32%
8	0.28%
9	0.24%
10	0.20%
11	0.18%
12	0.16%
13	0.14%
14	0.12%
15	0.10%
16	0.10%
17	0.10%
18	0.10%
19	0.10%
20	N/A

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF ORDINARY MORTALITY
FOR ACTIVE MEMBERS

Age	Current		Proposed	
	Males	Females	Males	Females
15	0.040%	0.030%	0.020%	0.015%
16	0.040%	0.030%	0.020%	0.015%
17	0.040%	0.030%	0.020%	0.015%
18	0.040%	0.030%	0.020%	0.015%
19	0.040%	0.030%	0.020%	0.015%
20	0.040%	0.030%	0.020%	0.015%
21	0.040%	0.030%	0.020%	0.015%
22	0.040%	0.030%	0.020%	0.015%
23	0.040%	0.030%	0.020%	0.015%
24	0.040%	0.030%	0.020%	0.015%
25	0.040%	0.030%	0.020%	0.015%
26	0.040%	0.030%	0.020%	0.015%
27	0.040%	0.030%	0.020%	0.015%
28	0.040%	0.030%	0.020%	0.015%
29	0.040%	0.030%	0.020%	0.015%
30	0.040%	0.030%	0.020%	0.015%
31	0.040%	0.030%	0.020%	0.015%
32	0.040%	0.030%	0.020%	0.015%
33	0.040%	0.030%	0.020%	0.015%
34	0.040%	0.030%	0.020%	0.015%
35	0.040%	0.030%	0.020%	0.015%
36	0.042%	0.032%	0.021%	0.016%
37	0.044%	0.034%	0.022%	0.017%
38	0.046%	0.036%	0.023%	0.018%
39	0.048%	0.038%	0.024%	0.019%
40	0.050%	0.040%	0.025%	0.020%
41	0.060%	0.046%	0.030%	0.023%
42	0.070%	0.052%	0.035%	0.026%
43	0.080%	0.058%	0.040%	0.029%
44	0.090%	0.064%	0.045%	0.032%
45	0.100%	0.070%	0.050%	0.035%
46	0.110%	0.076%	0.055%	0.038%
47	0.120%	0.082%	0.060%	0.041%
48	0.130%	0.088%	0.065%	0.044%
49	0.140%	0.094%	0.070%	0.047%
50	0.150%	0.100%	0.075%	0.050%
51	0.160%	0.110%	0.080%	0.055%
52	0.170%	0.120%	0.085%	0.060%
53	0.180%	0.130%	0.090%	0.065%
54	0.190%	0.140%	0.095%	0.070%
55	0.200%	0.150%	0.100%	0.075%
56	0.220%	0.160%	0.110%	0.080%
57	0.240%	0.170%	0.120%	0.085%
58	0.260%	0.180%	0.130%	0.090%
59	0.280%	0.190%	0.140%	0.095%
60	0.300%	0.200%	0.150%	0.100%
61	0.320%	0.220%	0.160%	0.110%
62	0.340%	0.240%	0.170%*	0.120%*
63	N/A	N/A	0.180%*	0.130%*
64	N/A	N/A	0.190%*	0.140%*
65	N/A	N/A	N/A	N/A

*Proposed probabilities are N/A for Tier 3 and Tier 3 Modified members.

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF ACCIDENTAL MORTALITY
FOR ACTIVE MEMBERS

Age	Current	Proposed
15	0.020%	0.010%
16	0.020%	0.010%
17	0.020%	0.010%
18	0.020%	0.010%
19	0.020%	0.010%
20	0.020%	0.010%
21	0.020%	0.010%
22	0.020%	0.010%
23	0.020%	0.010%
24	0.020%	0.010%
25	0.020%	0.010%
26	0.020%	0.010%
27	0.020%	0.010%
28	0.020%	0.010%
29	0.020%	0.010%
30	0.020%	0.010%
31	0.020%	0.010%
32	0.020%	0.010%
33	0.020%	0.010%
34	0.020%	0.010%
35	0.020%	0.010%
36	0.020%	0.010%
37	0.020%	0.010%
38	0.020%	0.010%
39	0.020%	0.010%
40	0.020%	0.010%
41	0.026%	0.013%
42	0.032%	0.016%
43	0.038%	0.019%
44	0.044%	0.022%
45	0.050%	0.025%
46	0.060%	0.030%
47	0.070%	0.035%
48	0.080%	0.040%
49	0.090%	0.045%
50	0.100%	0.050%
51	0.120%	0.060%
52	0.140%	0.070%
53	0.160%	0.080%
54	0.180%	0.090%
55	0.200%	0.100%
56	0.220%	0.110%
57	0.240%	0.120%
58	0.260%	0.130%
59	0.280%	0.140%
60	0.300%	0.150%
61	0.400%	0.200%
62	0.500%	0.250%*
63	N/A	0.300%*
64	N/A	0.350%*
65	N/A	N/A

*Proposed probabilities are N/A for Tier 3 and Tier 3 Modified members.

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF ORDINARY DISABILITY
FOR ACTIVE MEMBERS

Age	Current	Proposed
15	0.0100%	0.0025%
16	0.0100%	0.0025%
17	0.0100%	0.0025%
18	0.0100%	0.0025%
19	0.0100%	0.0025%
20	0.0100%	0.0025%
21	0.0100%	0.0025%
22	0.0100%	0.0025%
23	0.0100%	0.0025%
24	0.0100%	0.0025%
25	0.0100%	0.0025%
26	0.0100%	0.0025%
27	0.0200%	0.0050%
28	0.0300%	0.0075%
29	0.0400%	0.0100%
30	0.0500%	0.0125%
31	0.0600%	0.0150%
32	0.0700%	0.0175%
33	0.0800%	0.0200%
34	0.0900%	0.0225%
35	0.1000%	0.0250%
36	0.1100%	0.0275%
37	0.1200%	0.0300%
38	0.1300%	0.0325%
39	0.1400%	0.0350%
40	0.1500%	0.0375%
41	0.1600%	0.0400%
42	0.1700%	0.0425%
43	0.1800%	0.0450%
44	0.1900%	0.0475%
45	0.2000%	0.0500%
46	0.2200%	0.0550%
47	0.2400%	0.0600%
48	0.2600%	0.0650%
49	0.2800%	0.0700%
50	0.3000%	0.0750%
51	0.4400%	0.1100%
52	0.5800%	0.1450%
53	0.7200%	0.1800%
54	0.8600%	0.2150%
55	1.0000%	0.2500%
56	2.0000%	0.5000%
57	3.0000%	0.7500%
58	4.0000%	1.0000%
59	5.0000%	1.2500%
60	6.0000%	1.5000%
61	8.0000%	2.0000%
62	10.0000%	2.5000%*
63	N/A	2.5000%*
64	N/A	2.5000%*
65	N/A	N/A

*N/A for Tier 3 and Tier 3 Modified members.

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF ACCIDENTAL DISABILITY
FOR TIER 1 & 2 ACTIVE MEMBERS
ELIGIBLE FOR WTC BENEFITS

Age	Current	Proposed
15	0.050%	0.050%
16	0.050%	0.050%
17	0.050%	0.050%
18	0.050%	0.050%
19	0.050%	0.050%
20	0.050%	0.050%
21	0.050%	0.050%
22	0.050%	0.050%
23	0.050%	0.050%
24	0.050%	0.050%
25	0.050%	0.050%
26	0.090%	0.090%
27	0.130%	0.130%
28	0.170%	0.170%
29	0.210%	0.210%
30	0.250%	0.250%
31	0.400%	0.400%
32	0.550%	0.550%
33	0.700%	0.700%
34	0.850%	0.850%
35	1.000%	1.000%
36	1.200%	1.200%
37	1.400%	1.400%
38	1.600%	1.600%
39	1.800%	1.800%
40	2.000%	2.000%
41	2.200%	2.200%
42	2.400%	2.400%
43	2.600%	2.600%
44	2.800%	2.800%
45	3.000%	3.000%
46	3.400%	3.400%
47	3.800%	3.800%
48	4.200%	4.200%
49	4.600%	4.600%
50	5.000%	5.000%
51	5.600%	5.600%
52	6.200%	6.200%
53	6.800%	6.800%
54	7.400%	7.400%
55	8.000%	8.000%
56	10.000%	10.000%
57	12.000%	12.000%
58	15.000%	15.000%
59	18.000%	18.000%
60	21.000%	21.000%
61	25.000%	25.000%
62	30.000%	30.000%
63	N/A	30.000%
64	N/A	30.000%
65	N/A	N/A

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF ACCIDENTAL DISABILITY
FOR TIER 1 & 2 ACTIVE MEMBERS
NOT ELIGIBLE FOR WTC BENEFITS
AND
TIER 3 & TIER 3 MODIFIED ENHANCED PLAN
ACTIVE MEMBERS

Age	Current	Proposed
15	0.030%	0.035%
16	0.030%	0.035%
17	0.030%	0.035%
18	0.030%	0.035%
19	0.030%	0.035%
20	0.030%	0.035%
21	0.030%	0.035%
22	0.030%	0.035%
23	0.030%	0.035%
24	0.030%	0.035%
25	0.030%	0.035%
26	0.040%	0.045%
27	0.050%	0.055%
28	0.070%	0.075%
29	0.100%	0.115%
30	0.150%	0.175%
31	0.240%	0.275%
32	0.330%	0.375%
33	0.420%	0.475%
34	0.510%	0.575%
35	0.600%	0.700%
36	0.720%	0.850%
37	0.850%	1.000%
38	0.990%	1.150%
39	1.140%	1.300%
40	1.300%	1.500%
41	1.440%	1.650%
42	1.580%	1.800%
43	1.720%	1.950%
44	1.860%	2.100%
45	2.000%	2.300%
46	2.300%	2.650%
47	2.600%	3.000%
48	2.900%	3.350%
49	3.200%	3.700%
50	3.500%	4.050%
51	3.800%	4.400%
52	4.100%	4.750%
53	4.400%	5.100%
54	4.700%	5.450%
55	5.000%	5.800%
56	7.000%	8.000%
57	9.000%	10.000%
58	11.000%	12.500%
59	13.000%	15.000%
60	15.000%	17.500%
61	17.000%	20.000%
62	19.000%	22.000%*
63	N/A	22.000%*
64	N/A	22.000%*
65	N/A	N/A

*N/A for Tier 3 and Tier 3 Modified members.

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF ACCIDENTAL DISABILITY
FOR TIER 3 & TIER 3 MODIFIED NON-ENHANCED PLAN
ACTIVE MEMBERS

Age	Current	Proposed
15	0.030%	0.030%
16	0.030%	0.030%
17	0.030%	0.030%
18	0.030%	0.030%
19	0.030%	0.030%
20	0.030%	0.030%
21	0.030%	0.030%
22	0.030%	0.030%
23	0.030%	0.030%
24	0.030%	0.030%
25	0.030%	0.030%
26	0.040%	0.040%
27	0.050%	0.050%
28	0.070%	0.070%
29	0.100%	0.100%
30	0.150%	0.150%
31	0.240%	0.240%
32	0.330%	0.330%
33	0.420%	0.420%
34	0.510%	0.510%
35	0.600%	0.600%
36	0.720%	0.720%
37	0.840%	0.840%
38	0.960%	0.960%
39	1.080%	1.080%
40	1.200%	1.200%
41	1.320%	1.320%
42	1.440%	1.440%
43	1.560%	1.560%
44	1.680%	1.680%
45	1.800%	1.800%
46	1.920%	1.920%
47	2.040%	2.040%
48	2.160%	2.160%
49	2.280%	2.280%
50	2.400%	2.400%
51	2.520%	2.520%
52	2.640%	2.640%
53	2.760%	2.760%
54	2.880%	2.880%
55	3.000%	3.000%
56	4.000%	4.000%
57	5.000%	5.000%
58	6.000%	6.000%
59	7.000%	7.000%
60	8.000%	8.000%
61	9.000%	9.000%
62	10.000%	N/A
63	N/A	N/A
64	N/A	N/A
65	N/A	N/A

NEW YORK CITY FIRE PENSION FUND

**PROBABILITIES OF UNREDUCED SERVICE RETIREMENT
FOR THOSE ELIGIBLE FOR FULL COLA/ESCALATION**

	Current			Proposed	
	Years of Service Since First Eligible			**Years of Service Since First Eligible**	
Age	**Year 1**	**Year 2**	**Ultimate**	**Year 1**	**Ultimate**
19	0.00%	0.00%	0.00%	0.00%	0.00%
20	0.00%	0.00%	0.00%	0.00%	0.00%
21	0.00%	0.00%	0.00%	0.00%	0.00%
22	0.00%	0.00%	0.00%	0.00%	0.00%
23	0.00%	0.00%	0.00%	0.00%	0.00%
24	0.00%	0.00%	0.00%	0.00%	0.00%
25	0.00%	0.00%	0.00%	0.00%	0.00%
26	0.00%	0.00%	0.00%	0.00%	0.00%
27	0.00%	0.00%	0.00%	0.00%	0.00%
28	0.00%	0.00%	0.00%	0.00%	0.00%
29	0.00%	0.00%	0.00%	0.00%	0.00%
30	0.00%	0.00%	0.00%	0.00%	0.00%
31	0.00%	0.00%	0.00%	0.00%	0.00%
32	0.00%	0.00%	0.00%	0.00%	0.00%
33	0.00%	0.00%	0.00%	0.00%	0.00%
34	0.00%	0.00%	0.00%	0.00%	0.00%
35	0.00%	0.00%	0.00%	0.00%	0.00%
36	10.00%	0.00%	0.00%	5.00%	0.00%
37	10.00%	2.00%	0.00%	5.00%	0.00%
38	10.00%	2.00%	2.00%	5.00%	1.50%
39	10.00%	2.00%	2.00%	5.00%	1.50%
40	10.00%	2.00%	2.00%	5.00%	1.50%
41	10.00%	2.00%	2.00%	5.00%	1.50%
42	10.00%	2.00%	2.00%	5.00%	1.50%
43	10.00%	2.00%	2.00%	5.00%	1.50%
44	10.00%	2.00%	2.00%	5.00%	1.50%
45	10.00%	2.00%	2.00%	5.00%	1.50%
46	11.00%	2.00%	2.00%	5.50%	1.50%
47	12.00%	2.00%	2.00%	6.00%	1.50%
48	13.00%	2.00%	2.00%	6.50%	1.50%
49	14.00%	2.00%	2.00%	7.00%	1.50%
50	15.00%	2.00%	2.00%	7.50%	1.50%
51	16.00%	2.00%	2.00%	8.00%	1.50%
52	17.00%	3.00%	3.00%	8.50%	2.25%
53	18.00%	4.00%	4.00%	9.00%	3.00%
54	19.00%	5.00%	5.00%	9.50%	3.75%
55	20.00%	6.00%	6.00%	10.00%	4.50%
56	20.00%	7.00%	7.00%	10.00%	5.25%
57	20.00%	8.00%	8.00%	10.00%	6.00%
58	20.00%	9.00%	9.00%	10.00%	6.75%
59	20.00%	10.00%	10.00%	10.00%	7.50%
60	20.00%	12.00%	12.00%	10.00%	9.00%
61	30.00%	15.00%	15.00%	15.00%	11.25%
62	40.00%	20.00%	20.00%	20.00%*	15.00%*
63	100.00%	100.00%	100.00%	25.00%*	25.00%*
64	100.00%	100.00%	100.00%	25.00%*	25.00%*
65	100.00%	100.00%	100.00%	100.00%	100.00%

*100% for Tier 3 and Tier 3 Modified members.

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF EARLY SERVICE RETIREMENT
FOR
TIER 3 AND TIER 3 MODIFIED MEMBERS

Years of Service	Current & Proposed	
	Reduced Service Retirement	Unreduced Before Full Escalation
20	5.00%	N/A
21	2.00%	N/A
22	N/A	5.00%
23	N/A	2.00%
24	N/A	2.00%

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF MORTALITY FOR SERVICE RETIREES
BASE TABLE
MALES

Age	Current	Proposed	Age	Current	Proposed
15	N/A	0.0100%	68	1.4495%	1.2063%
16	N/A	0.0135%	69	1.5266%	1.2653%
17	N/A	0.0181%	70	1.7033%	1.4084%
18	N/A	0.0217%	71	1.9135%	1.5806%
19	0.0306%	0.0240%	72	2.1235%	1.7538%
20	0.0320%	0.0251%	73	2.4008%	1.9842%
21	0.0332%	0.0268%	74	2.6780%	2.2163%
22	0.0341%	0.0284%	75	2.9553%	2.4510%
23	0.0351%	0.0301%	76	3.2326%	2.6879%
24	0.0357%	0.0315%	77	3.5099%	2.9280%
25	0.0361%	0.0327%	78	4.0241%	3.3690%
26	0.0369%	0.0342%	79	4.5383%	3.8155%
27	0.0374%	0.0354%	80	5.0524%	4.2660%
28	0.0385%	0.0371%	81	5.6284%	4.7728%
29	0.0404%	0.0394%	82	6.2159%	5.2958%
30	0.0435%	0.0427%	83	7.2981%	6.2483%
31	0.0512%	0.0503%	84	8.4021%	7.2266%
32	0.0595%	0.0581%	85	9.5280%	8.2335%
33	0.0679%	0.0655%	86	10.6758%	9.2715%
34	0.0764%	0.0725%	87	11.8453%	10.3365%
35	0.0859%	0.0799%	88	12.8125%	11.2397%
36	0.0938%	0.0851%	89	13.7971%	12.1663%
37	0.1020%	0.0901%	90	14.7990%	13.1242%
38	0.1116%	0.0961%	91	16.3849%	14.6163%
39	0.1233%	0.1037%	92	18.1272%	16.2757%
40	0.1381%	0.1138%	93	20.9880%	18.9667%
41	0.1514%	0.1230%	94	23.6300%	21.5036%
42	0.1648%	0.1327%	95	26.0968%	23.9289%
43	0.1780%	0.1430%	96	28.0436%	25.8261%
44	0.1913%	0.1542%	97	29.8187%	27.5777%
45	0.2047%	0.1666%	98	31.5346%	29.2887%
46	0.2179%	0.1798%	99	33.0102%	30.8020%
47	0.2312%	0.1941%	100	34.3180%	32.1584%
48	0.2446%	0.2093%	101	35.8628%	33.7521%
49	0.2578%	0.2250%	102	37.1685%	35.1259%
50	0.2711%	0.2412%	103	38.3040%	36.3671%
51	0.3280%	0.2975%	104	39.2003%	37.3834%
52	0.3804%	0.3514%	105	39.7886%	38.1051%
53	0.4282%	0.4018%	106	40.0000%	38.4698%
54	0.4715%	0.4483%	107	40.0000%	38.6325%
55	0.5102%	0.4895%	108	40.0000%	38.8076%
56	0.5558%	0.5352%	109	40.0000%	38.9794%
57	0.5990%	0.5757%	110	100.0000%	50.0000%
58	0.6400%	0.6104%	111	N/A	50.0000%
59	0.6787%	0.6391%	112	N/A	50.0000%
60	0.7151%	0.6625%	113	N/A	50.0000%
61	0.7833%	0.7126%	114	N/A	50.0000%
62	0.8537%	0.7621%	115	N/A	50.0000%
63	0.9410%	0.8255%	116	N/A	50.0000%
64	1.0511%	0.9079%	117	N/A	50.0000%
65	1.1726%	0.9997%	118	N/A	50.0000%
66	1.2569%	1.0607%	119	N/A	50.0000%
67	1.3509%	1.1308%	120	N/A	100.0000%

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF MORTALITY FOR SERVICE RETIREES
BASE TABLE
FEMALES

Age	Current	Proposed	Age	Current	Proposed
15	N/A	0.0084%	68	0.9082%	0.7604%
16	N/A	0.0103%	69	0.9802%	0.8243%
17	N/A	0.0112%	70	1.0726%	0.9061%
18	N/A	0.0131%	71	1.1726%	0.9954%
19	0.0175%	0.0140%	72	1.2825%	1.0940%
20	0.0177%	0.0142%	73	1.4072%	1.2060%
21	0.0180%	0.0150%	74	1.5420%	1.3283%
22	0.0181%	0.0158%	75	1.6593%	1.4362%
23	0.0185%	0.0168%	76	1.8926%	1.6455%
24	0.0189%	0.0179%	77	2.1262%	1.8563%
25	0.0196%	0.0191%	78	2.3594%	2.0670%
26	0.0204%	0.0204%	79	2.6675%	2.3446%
27	0.0213%	0.0217%	80	2.9756%	2.6218%
28	0.0224%	0.0231%	81	3.2837%	2.8997%
29	0.0237%	0.0247%	82	3.5918%	3.1772%
30	0.0254%	0.0265%	83	3.8999%	3.4554%
31	0.0311%	0.0323%	84	4.4712%	3.9664%
32	0.0362%	0.0372%	85	5.0425%	4.4805%
33	0.0410%	0.0415%	86	5.6138%	4.9967%
34	0.0452%	0.0448%	87	6.1851%	5.5147%
35	0.0494%	0.0478%	88	6.7564%	6.0388%
36	0.0535%	0.0505%	89	7.8474%	7.0317%
37	0.0578%	0.0532%	90	8.9384%	8.0312%
38	0.0624%	0.0561%	91	10.4553%	9.4265%
39	0.0676%	0.0595%	92	12.0112%	10.8698%
40	0.0730%	0.0634%	93	13.6203%	12.3822%
41	0.0800%	0.0688%	94	15.0981%	13.7895%
42	0.0844%	0.0725%	95	16.6162%	15.2575%
43	0.0898%	0.0775%	96	18.1440%	16.7330%
44	0.0966%	0.0843%	97	19.7187%	18.2626%
45	0.1049%	0.0931%	98	21.1728%	19.6947%
46	0.1150%	0.1041%	99	22.6368%	21.1460%
47	0.1262%	0.1166%	100	23.6519%	22.1859%
48	0.1373%	0.1295%	101	24.4834%	23.0680%
49	0.1483%	0.1425%	102	25.4498%	24.0803%
50	0.1594%	0.1555%	103	26.6044%	25.2770%
51	0.1706%	0.1681%	104	27.9055%	26.6309%
52	0.1816%	0.1797%	105	29.3116%	28.0912%
53	0.1927%	0.1902%	106	30.7811%	29.6244%
54	0.2038%	0.1996%	107	32.2725%	31.1943%
55	0.2148%	0.2075%	108	33.7441%	32.7579%
56	0.2259%	0.2144%	109	35.1544%	34.2712%
57	0.2828%	0.2629%	110	100.0000%	50.0000%
58	0.3396%	0.3090%	111	N/A	50.0000%
59	0.3965%	0.3530%	112	N/A	50.0000%
60	0.4534%	0.3957%	113	N/A	50.0000%
61	0.5102%	0.4377%	114	N/A	50.0000%
62	0.5671%	0.4800%	115	N/A	50.0000%
63	0.6239%	0.5231%	116	N/A	50.0000%
64	0.6808%	0.5675%	117	N/A	50.0000%
65	0.7377%	0.6138%	118	N/A	50.0000%
66	0.7945%	0.6613%	119	N/A	50.0000%
67	0.8514%	0.7103%	120	N/A	100.0000%

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF MORTALITY FOR DISABLED RETIREES
BASE TABLE
MALES

Age	Current	Proposed	Age	Current	Proposed
15	N/A	0.0238%	68	1.9116%	1.5909%
16	N/A	0.0321%	69	2.1261%	1.7622%
17	N/A	0.0433%	70	2.3123%	1.9120%
18	N/A	0.0517%	71	2.5608%	2.1153%
19	0.0730%	0.0573%	72	2.7971%	2.3101%
20	0.0775%	0.0608%	73	3.0210%	2.4968%
21	0.0817%	0.0660%	74	3.2326%	2.6752%
22	0.0861%	0.0716%	75	3.4709%	2.8786%
23	0.0901%	0.0772%	76	3.9347%	3.2717%
24	0.0942%	0.0831%	77	4.3870%	3.6597%
25	0.0978%	0.0886%	78	4.8279%	4.0420%
26	0.1009%	0.0936%	79	5.2573%	4.4200%
27	0.1064%	0.1008%	80	5.7429%	4.8490%
28	0.1130%	0.1089%	81	6.6703%	5.6563%
29	0.1200%	0.1170%	82	7.5976%	6.4729%
30	0.1278%	0.1254%	83	8.5251%	7.2988%
31	0.1366%	0.1342%	84	9.4525%	8.1300%
32	0.1460%	0.1426%	85	10.3799%	8.9696%
33	0.1600%	0.1544%	86	11.2436%	9.7646%
34	0.1688%	0.1602%	87	12.1248%	10.5803%
35	0.1796%	0.1670%	88	13.0231%	11.4245%
36	0.1870%	0.1696%	89	13.9792%	12.3269%
37	0.1947%	0.1721%	90	14.9785%	13.2834%
38	0.2037%	0.1754%	91	17.6575%	15.7515%
39	0.2131%	0.1792%	92	20.2047%	18.1410%
40	0.2228%	0.1836%	93	22.6007%	20.4240%
41	0.2328%	0.1891%	94	24.8019%	22.5700%
42	0.2431%	0.1957%	95	26.8989%	24.6643%
43	0.2538%	0.2038%	96	28.7892%	26.5127%
44	0.2648%	0.2134%	97	30.4947%	28.2029%
45	0.2762%	0.2247%	98	31.8095%	29.5441%
46	0.2878%	0.2374%	99	33.1932%	30.9728%
47	0.2999%	0.2518%	100	34.3180%	32.1584%
48	0.3123%	0.2672%	101	35.8628%	33.7521%
49	0.3251%	0.2837%	102	37.1685%	35.1259%
50	0.3396%	0.3022%	103	38.3040%	36.3671%
51	0.3965%	0.3597%	104	39.2003%	37.3834%
52	0.4534%	0.4188%	105	39.7886%	38.1051%
53	0.5102%	0.4788%	106	40.0000%	38.4698%
54	0.5671%	0.5392%	107	40.0000%	38.6325%
55	0.6239%	0.5986%	108	40.0000%	38.8076%
56	0.6808%	0.6556%	109	40.0000%	38.9794%
57	0.7377%	0.7090%	110	100.0000%	50.0000%
58	0.7945%	0.7577%	111	N/A	50.0000%
59	0.8514%	0.8017%	112	N/A	50.0000%
60	0.9173%	0.8498%	113	N/A	50.0000%
61	0.9998%	0.9095%	114	N/A	50.0000%
62	1.1048%	0.9862%	115	N/A	50.0000%
63	1.2195%	1.0698%	116	N/A	50.0000%
64	1.3466%	1.1631%	117	N/A	50.0000%
65	1.4635%	1.2477%	118	N/A	50.0000%
66	1.5883%	1.3403%	119	N/A	50.0000%
67	1.6925%	1.4168%	120	N/A	100.0000%

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF MORTALITY FOR DISABLED RETIREES
BASE TABLE
FEMALES

Age	Current	Proposed	Age	Current	Proposed
15	N/A	0.0098%	68	1.4949%	1.2517%
16	N/A	0.0120%	69	1.7053%	1.4342%
17	N/A	0.0131%	70	1.9327%	1.6327%
18	N/A	0.0153%	71	2.1676%	1.8400%
19	0.0205%	0.0164%	72	2.4104%	2.0561%
20	0.0216%	0.0173%	73	2.6774%	2.2946%
21	0.0229%	0.0191%	74	2.9776%	2.5649%
22	0.0243%	0.0211%	75	3.3072%	2.8625%
23	0.0258%	0.0234%	76	3.6503%	3.1737%
24	0.0273%	0.0259%	77	3.9587%	3.4562%
25	0.0289%	0.0282%	78	4.3248%	3.7889%
26	0.0307%	0.0307%	79	4.9022%	4.3087%
27	0.0326%	0.0332%	80	5.5029%	4.8485%
28	0.0348%	0.0359%	81	6.1272%	5.4107%
29	0.0371%	0.0386%	82	6.6646%	5.8954%
30	0.0395%	0.0412%	83	7.2080%	6.3864%
31	0.0422%	0.0438%	84	8.1476%	7.2278%
32	0.0451%	0.0464%	85	9.0871%	8.0743%
33	0.0485%	0.0491%	86	9.9662%	8.8707%
34	0.0511%	0.0506%	87	10.8343%	9.6600%
35	0.0546%	0.0528%	88	11.8337%	10.5768%
36	0.0584%	0.0551%	89	13.3393%	11.9527%
37	0.0630%	0.0580%	90	14.8446%	13.2782%
38	0.0677%	0.0608%	91	16.3606%	14.7506%
39	0.0736%	0.0648%	92	17.5097%	15.8458%
40	0.0817%	0.0709%	93	18.6970%	16.9974%
41	0.0918%	0.0790%	94	19.9353%	18.2075%
42	0.1039%	0.0892%	95	21.0632%	19.3408%
43	0.1185%	0.1023%	96	22.0663%	20.3502%
44	0.1356%	0.1184%	97	22.9669%	21.2709%
45	0.1544%	0.1371%	98	23.5709%	21.9254%
46	0.1752%	0.1586%	99	23.8964%	22.3227%
47	0.1973%	0.1824%	100	23.9165%	22.4341%
48	0.2205%	0.2079%	101	24.4834%	23.0680%
49	0.2486%	0.2388%	102	25.4498%	24.0803%
50	0.2788%	0.2719%	103	26.6044%	25.2770%
51	0.3003%	0.2959%	104	27.9055%	26.6309%
52	0.3463%	0.3426%	105	29.3116%	28.0912%
53	0.3840%	0.3791%	106	30.7811%	29.6244%
54	0.4418%	0.4326%	107	32.2725%	31.1943%
55	0.5040%	0.4868%	108	33.7441%	32.7579%
56	0.5578%	0.5294%	109	35.1544%	34.2712%
57	0.5831%	0.5421%	110	100.0000%	50.0000%
58	0.6179%	0.5621%	111	N/A	50.0000%
59	0.6743%	0.6003%	112	N/A	50.0000%
60	0.7268%	0.6343%	113	N/A	50.0000%
61	0.7795%	0.6687%	114	N/A	50.0000%
62	0.8732%	0.7391%	115	N/A	50.0000%
63	0.9653%	0.8094%	116	N/A	50.0000%
64	1.0673%	0.8897%	117	N/A	50.0000%
65	1.1669%	0.9710%	118	N/A	50.0000%
66	1.2698%	1.0569%	119	N/A	50.0000%
67	1.3845%	1.1551%	120	N/A	100.0000%

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF MORTALITY FOR BENEFICIARIES
BASE TABLE
MALES

Age	Current	Proposed	Age	Current	Proposed
15	N/A	0.0105%	68	2.1936%	1.8256%
16	N/A	0.0142%	69	2.3389%	1.9386%
17	N/A	0.0191%	70	2.4842%	2.0542%
18	N/A	0.0222%	71	2.7068%	2.2359%
19	0.0306%	0.0240%	72	2.9339%	2.4230%
20	0.0320%	0.0251%	73	3.1659%	2.6165%
21	0.0332%	0.0268%	74	3.4024%	2.8157%
22	0.0341%	0.0284%	75	3.6438%	3.0220%
23	0.0351%	0.0301%	76	4.2007%	3.4928%
24	0.0357%	0.0315%	77	4.7694%	3.9787%
25	0.0361%	0.0327%	78	5.3501%	4.4792%
26	0.0369%	0.0342%	79	5.9428%	4.9963%
27	0.0374%	0.0354%	80	6.5473%	5.5282%
28	0.0385%	0.0371%	81	7.1996%	6.1051%
29	0.0404%	0.0394%	82	7.8517%	6.6894%
30	0.0435%	0.0427%	83	8.5037%	7.2805%
31	0.0504%	0.0495%	84	9.1559%	7.8749%
32	0.0575%	0.0562%	85	9.8079%	8.4753%
33	0.0648%	0.0625%	86	11.0698%	9.6136%
34	0.0719%	0.0682%	87	12.3771%	10.8005%
35	0.0799%	0.0743%	88	13.7297%	12.0443%
36	0.0860%	0.0780%	89	15.1278%	13.3397%
37	0.0926%	0.0818%	90	16.5712%	14.6958%
38	0.1000%	0.0861%	91	18.4052%	16.4185%
39	0.1091%	0.0917%	92	20.2054%	18.1416%
40	0.1209%	0.0997%	93	21.9737%	19.8574%
41	0.1717%	0.1394%	94	23.7565%	21.6187%
42	0.2203%	0.1774%	95	25.7255%	23.5884%
43	0.2668%	0.2143%	96	27.6098%	25.4266%
44	0.3111%	0.2507%	97	29.4231%	27.2119%
45	0.3533%	0.2875%	98	31.2455%	29.0202%
46	0.3887%	0.3207%	99	32.8638%	30.6654%
47	0.4209%	0.3534%	100	34.3180%	32.1584%
48	0.4499%	0.3849%	101	35.8628%	33.7521%
49	0.4756%	0.4150%	102	37.1685%	35.1259%
50	0.4980%	0.4431%	103	38.3040%	36.3671%
51	0.5684%	0.5156%	104	39.2003%	37.3834%
52	0.6418%	0.5928%	105	39.7886%	38.1051%
53	0.7182%	0.6740%	106	40.0000%	38.4698%
54	0.7975%	0.7583%	107	40.0000%	38.6325%
55	0.8797%	0.8440%	108	40.0000%	38.8076%
56	0.9396%	0.9048%	109	40.0000%	38.9794%
57	0.9993%	0.9604%	110	100.0000%	50.0000%
58	1.0591%	1.0101%	111	N/A	50.0000%
59	1.1189%	1.0536%	112	N/A	50.0000%
60	1.1786%	1.0919%	113	N/A	50.0000%
61	1.3009%	1.1835%	114	N/A	50.0000%
62	1.4200%	1.2676%	115	N/A	50.0000%
63	1.5358%	1.3473%	116	N/A	50.0000%
64	1.6484%	1.4238%	117	N/A	50.0000%
65	1.7577%	1.4985%	118	N/A	50.0000%
66	1.9030%	1.6059%	119	N/A	50.0000%
67	2.0483%	1.7146%	120	N/A	100.0000%

NEW YORK CITY FIRE PENSION FUND

PROBABILITIES OF MORTALITY FOR BENEFICIARIES
BASE TABLE
FEMALES

Age	Current	Proposed	Age	Current	Proposed
15	N/A	0.0092%	68	1.5930%	1.3605%
16	N/A	0.0112%	69	1.6707%	1.4332%
17	N/A	0.0122%	70	1.7416%	1.5007%
18	N/A	0.0133%	71	1.9340%	1.6745%
19	0.0175%	0.0143%	72	2.1220%	1.8463%
20	0.0177%	0.0145%	73	2.3059%	2.0157%
21	0.0180%	0.0153%	74	2.4854%	2.1838%
22	0.0181%	0.0161%	75	2.6609%	2.3492%
23	0.0185%	0.0171%	76	3.0053%	2.6652%
24	0.0189%	0.0183%	77	3.3498%	2.9831%
25	0.0196%	0.0195%	78	3.6942%	3.3011%
26	0.0204%	0.0208%	79	4.0386%	3.6207%
27	0.0213%	0.0221%	80	4.3831%	3.9391%
28	0.0224%	0.0236%	81	4.9279%	4.4386%
29	0.0237%	0.0252%	82	5.4831%	4.9473%
30	0.0254%	0.0270%	83	6.0487%	5.4665%
31	0.0312%	0.0330%	84	6.6246%	5.9942%
32	0.0366%	0.0384%	85	7.2110%	6.5354%
33	0.0418%	0.0431%	86	8.2234%	7.4659%
34	0.0466%	0.0471%	87	9.2358%	8.3995%
35	0.0518%	0.0511%	88	10.2481%	9.3428%
36	0.0563%	0.0542%	89	11.2605%	10.2918%
37	0.0617%	0.0579%	90	12.2729%	11.2477%
38	0.0674%	0.0618%	91	14.0131%	12.8868%
39	0.0741%	0.0666%	92	15.6962%	14.4887%
40	0.0812%	0.0719%	93	17.3412%	16.0801%
41	0.0883%	0.0775%	94	18.8767%	17.5854%
42	0.0980%	0.0859%	95	20.3531%	19.0626%
43	0.1100%	0.0968%	96	21.5243%	20.2474%
44	0.1247%	0.1111%	97	22.5407%	21.2937%
45	0.1422%	0.1287%	98	23.2572%	22.0663%
46	0.1626%	0.1501%	99	23.6605%	22.5443%
47	0.1854%	0.1748%	100	23.6704%	22.6473%
48	0.2102%	0.2022%	101	24.4834%	23.5294%
49	0.2367%	0.2319%	102	25.4498%	24.5619%
50	0.2646%	0.2633%	103	26.6044%	25.7825%
51	0.2983%	0.2999%	104	27.9055%	27.1635%
52	0.3346%	0.3376%	105	29.3116%	28.6530%
53	0.3736%	0.3762%	106	30.7811%	30.2169%
54	0.4156%	0.4151%	107	32.2725%	31.8182%
55	0.4608%	0.4540%	108	33.7441%	33.4131%
56	0.5300%	0.5132%	109	35.1544%	34.9566%
57	0.6048%	0.5735%	110	100.0000%	50.0000%
58	0.6846%	0.6353%	111	N/A	50.0000%
59	0.7688%	0.6981%	112	N/A	50.0000%
60	0.8572%	0.7631%	113	N/A	50.0000%
61	0.9519%	0.8329%	114	N/A	50.0000%
62	1.0318%	0.8908%	115	N/A	50.0000%
63	1.1100%	0.9493%	116	N/A	50.0000%
64	1.1932%	1.0146%	117	N/A	50.0000%
65	1.2814%	1.0876%	118	N/A	50.0000%
66	1.3758%	1.1681%	119	N/A	50.0000%
67	1.4817%	1.2609%	120	N/A	100.0000%

NEW YORK CITY FIRE PENSION FUND

ANNUAL RATES OF MERIT AND SALARY INCREASE

Years of Service	Current		Proposed	
	Merit Increase	Salary Increase*	Merit Increase	Salary Increase*
0	5.00%	8.00%	20.00%	23.00%
1	9.00%	12.00%	12.00%	15.00%
2	10.00%	13.00%	12.00%	15.00%
3	10.00%	13.00%	12.00%	15.00%
4	46.00%	49.00%	27.00%	30.00%
5	1.00%	4.00%	16.00%	19.00%
6	1.10%	4.10%	1.65%	4.65%
7	1.20%	4.20%	1.80%	4.80%
8	1.30%	4.30%	1.95%	4.95%
9	2.70%	5.70%	4.05%	7.05%
10	1.50%	4.50%	2.25%	5.25%
11	1.60%	4.60%	2.40%	5.40%
12	1.70%	4.70%	2.55%	5.55%
13	1.80%	4.80%	2.70%	5.70%
14	3.10%	6.10%	4.65%	7.65%
15	2.00%	5.00%	3.00%	6.00%
16	1.90%	4.90%	2.85%	5.85%
17	1.80%	4.80%	2.70%	5.70%
18	1.70%	4.70%	2.55%	5.55%
19	2.80%	5.80%	4.20%	7.20%
20	1.50%	4.50%	2.25%	5.25%
21	1.40%	4.40%	2.10%	5.10%
22	1.30%	4.30%	1.95%	4.95%
23	1.20%	4.20%	1.80%	4.80%
24	1.10%	4.10%	1.65%	4.65%
25	1.00%	4.00%	1.50%	4.50%
26	0.90%	3.90%	1.35%	4.35%
27	0.80%	3.80%	1.20%	4.20%
28	0.70%	3.70%	1.05%	4.05%
29	0.60%	3.60%	0.90%	3.90%
30+	0.50%	3.50%	0.75%	3.75%

*Salary Increase is the General Wage Increase of 3.00% plus the Merit Increase.

NEW YORK CITY FIRE PENSION FUND

BASELINE OVERTIME ASSUMPTIONS

Years of Service	Current	Proposed
0-17	15.00%	20.00%
18	16.00%	21.00%
19	17.00%	22.00%
20	18.00%	24.00%
21	17.00%	22.00%
22	16.00%	21.00%
23	15.00%	20.00%
24	14.00%	19.00%
25	13.00%	17.00%
26	12.00%	16.00%
27	11.00%	15.00%
28	10.00%	13.00%
29	9.00%	12.00%
30	8.00%	11.00%
31	7.00%	9.00%
32	6.00%	8.00%
33	5.00%	7.00%

NEW YORK CITY FIRE PENSION FUND

DUAL SERVICE OVERTIME ASSUMPTIONS

Years of Service	Tier 1 & Tier 2		Tier 3 & Tier 3 Modified	
	Current	Proposed	Current	Proposed
0-13	16.00%	21.00%	16.00%	21.00%
14	17.00%	22.00%	16.00%	21.00%
15	18.00%	24.00%	16.00%	21.00%
16	19.00%	25.00%	17.00%	22.00%
17	20.00%	26.00%	18.00%	24.00%
18	21.00%	28.00%	19.00%	25.00%
19	22.00%	29.00%	20.00%	26.00%
20	23.00%	30.00%	21.00%	28.00%
21	22.00%	29.00%	20.00%	26.00%
22	21.00%	28.00%	19.00%	25.00%
23	20.00%	26.00%	18.00%	24.00%
24	19.00%	25.00%	17.00%	22.00%
25	18.00%	24.00%	16.00%	21.00%
26	16.00%	21.00%	14.00%	19.00%
27	14.00%	19.00%	13.00%	18.00%
28	12.00%	16.00%	11.00%	15.00%
29	11.00%	15.00%	10.00%	13.00%
30	10.00%	13.00%	9.00%	12.00%
31	9.00%	12.00%	8.00%	11.00%
32	8.00%	11.00%	7.00%	9.00%
33	7.00%	9.00%	6.00%	8.00%
34+	6.00%	8.00%	6.00%	8.00%

NEW YORK CITY FIRE PENSION FUND

DUAL DISABILITY OVERTIME ASSUMPTIONS

Years of Service	All Tiers	
	Current	Proposed
0-15	15.00%	20.00%
16	16.00%	21.00%
17	17.00%	22.00%
18	18.00%	24.00%
19	19.00%	25.00%
20	20.00%	26.00%
21	19.00%	25.00%
22	18.00%	24.00%
23	17.00%	22.00%
24	16.00%	21.00%
25	15.00%	20.00%
26	13.00%	17.00%
27	11.00%	15.00%
28	10.00%	13.00%
29	9.00%	12.00%
30	8.00%	11.00%
31	7.00%	10.00%
32	6.00%	8.00%
33+	5.00%	7.00%

Appendix C

APPENDIX C

DRAFT RESOLUTION

PROPOSED CHANGES IN
ACTUARIAL ASSUMPTIONS AND METHODS

The following Resolution is presented to the Board of Trustees of the New York City Fire Pension Fund (FIRE) for consideration and adoption:

WHEREAS, Bolton, Inc. (Bolton) has recommended updating certain assumptions and methods based on a study of actuarial experience of the five actuarially-funded New York City Pension Fund and Retirement Systems; and

WHEREAS, The Actuary has reviewed the recommendations made by Bolton and has proposed changes in certain actuarial assumptions and methods as presented in a Report dated January 23, 2019 entitled "Proposed Changes in Actuarial Assumptions and Methods used in Determining Employer Contributions for Fiscal Years Beginning on and After July 1, 2018 for the New York City Fire Pension Fund" (2019 A&M); and

WHEREAS, Certain components of the Actuary's proposed changes require action by the Retirement Board; and

WHEREAS, The Board has reviewed the Actuary's proposed changes in actuarial assumptions and methods; now therefore, be it

RESOLVED, That the Board accepts the Actuary's January 23, 2019 Report and supports the proposed changes in actuarial assumptions and methods; and be it further

RESOLVED, That the Board adopts those actuarial assumptions requiring Board approval (i.e. the demographic and economic assumptions presented as Appendix B of the January 23, 2019 Report); and be it further

RESOLVED, That the Board requests that the Corporation Counsel develop, with the review and assistance of the Actuary, and that the New York State Legislature and Governor enact, legislation to continue components of the Actuary's proposed changes in actuarial assumptions and methods that require legislation (e.g. Actuarial Interest Rate).

Respectfully Submitted:

_____

Patrick Dunn
Executive Director