



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

State Employees Retirement Rates, Plan 2 and Hybrid Female																			
Age	Years of Service																		
	0-4	5	6-24	25	26	27	28	29	30	31	32	33	34	35	36	37	38	39	≥40
<=49	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000
50	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080
51	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080
52	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080
53	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080
54	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080
55	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080
56	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
57	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
58	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
59	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
60	0.000	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080	0.080
61	0.000	0.080	0.075	0.075	0.075	0.075	0.080	0.080	0.080	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075	0.075
62	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
63	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
64	0.000	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100	0.100
65	0.000	0.200	0.200	0.200	0.200	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250	0.250
66	0.000	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
67	0.000	0.230	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
68	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
69	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
70	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
71	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
72	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
73	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
74	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
75	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
76	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
77	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
78	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
79	0.000	0.250	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200	0.200
≥80	0.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000	1.000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

DISABILITY RATES: As shown below for selected ages.

State Employees Disability Rates		
Age	Male	Female
20	0.00039	0.00033
25	0.00072	0.00100
30	0.00091	0.00211
35	0.00129	0.00281
40	0.00212	0.00354
45	0.00343	0.00474
50	0.00497	0.00629
55	0.00629	0.00742
60	0.00690	0.00735
65	0.00657	0.00653
70	0.00572	0.00841



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

TERMINATION RATES: The following are sample withdrawal rates based on age and years of service (for causes other than death, disability, or retirement).

State Termination Rates, Male											
Age	Years of Service										
	0	1	2	3	4	5	6	7	8	9	>=10
20	0.27455	0.24436	0.21876	0.19618	0.17376	0.15141	0.13019	0.11442	0.10694	0.11166	0.13006
25	0.23974	0.21579	0.19409	0.17424	0.15524	0.13693	0.11975	0.10595	0.09746	0.09732	0.10701
30	0.19848	0.17836	0.15985	0.14343	0.12952	0.11720	0.10578	0.09487	0.08505	0.07808	0.07539
35	0.17716	0.15218	0.13247	0.11805	0.10829	0.10087	0.09383	0.08541	0.07535	0.06447	0.05388
40	0.16592	0.13267	0.10974	0.09619	0.08963	0.08644	0.08292	0.07677	0.06737	0.05473	0.03929
45	0.15975	0.11918	0.09302	0.07949	0.07467	0.07461	0.07339	0.06905	0.06126	0.04945	0.03331
50	0.15528	0.11158	0.08401	0.07030	0.06578	0.06661	0.06592	0.06272	0.05733	0.04934	0.03819
55	0.15197	0.11087	0.08483	0.07159	0.06658	0.06381	0.06149	0.05872	0.05613	0.05509	0.05439
60	0.15091	0.11838	0.09735	0.08612	0.08094	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.15304	0.13450	0.12193	0.11472	0.11037	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.16014	0.16414	0.16565	0.16590	0.16406	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

State Termination Rates, Female											
Age	Years of Service										
	0	1	2	3	4	5	6	7	8	9	>=10
20	0.31051	0.30337	0.28078	0.24487	0.20381	0.16715	0.14191	0.11957	0.10836	0.11872	0.15981
25	0.27376	0.26249	0.24118	0.21199	0.18029	0.15160	0.13004	0.11112	0.09997	0.10375	0.12876
30	0.23050	0.21033	0.18887	0.16746	0.14755	0.12956	0.11392	0.10015	0.08933	0.08403	0.08671
35	0.20766	0.17777	0.15365	0.13514	0.12123	0.10996	0.09994	0.09070	0.08104	0.07066	0.05980
40	0.19406	0.15556	0.12786	0.10975	0.09881	0.09213	0.08715	0.08194	0.07420	0.06178	0.04364
45	0.18340	0.13974	0.10951	0.09110	0.08142	0.07776	0.07634	0.07404	0.06888	0.05803	0.04010
50	0.17198	0.12790	0.09781	0.08001	0.07116	0.06882	0.06860	0.06763	0.06550	0.06030	0.05125
55	0.16001	0.12044	0.09383	0.07856	0.07120	0.06731	0.06491	0.06383	0.06463	0.06942	0.07765
60	0.14937	0.11902	0.09937	0.08896	0.08486	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.14142	0.12453	0.11513	0.11187	0.11326	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.13651	0.14019	0.14662	0.15441	0.16495	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

SALARY INCREASE RATES: The following total salary increase rates are used. The total salary increase rate consists of an inflation rate of 2.50%, a productivity component of 1.00%, and a variable merit component that is dependent on years of service.

Pay Increase Assumption	
Years of Service	Total Increase (Next Year)
1	5.35%
2	5.35
3	4.75
4	4.45
5	4.45
6	4.45
7	4.35
8	4.25
9	4.00
10	4.00
11-19	3.65
20 or more	3.50



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

STATE POLICE

Plan Specific Assumptions and Methods

MORTALITY RATES:

Pre-Retirement:

Pub-2010 Amount Weighted Safety Employee Rates projected generationally; 95% of rates for males; 105% of rates for females set forward 2 years

Post-Retirement:

Pub-2010 Amount Weighted Safety Healthy Retiree Rates projected generationally; 110% of rates for males; 105% of rates for females set forward 3 years

Post-Disablement:

Pub-2010 Amount Weighted General Disabled Rates projected generationally; 95% of rates for males set back 3 years; 90% of rates for females set back 3 years

Beneficiaries and Survivors:

Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally; 110% of rates for males and females set forward 2 years

Mortality Improvement:

Rates projected generationally with a Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates

SPORS Mortality Base Rates								
Age	Male				Female			
	Pre Retirement	Post Retirement	Post Disablement	Beneficiary & Survivor	Pre Retirement	Post Retirement	Post Disablement	Beneficiary & Survivor
20	0.00039	0.00045	0.00030	0.00044	0.00018	0.00019	0.00011	0.00019
25	0.00035	0.00041	0.00334	0.00043	0.00023	0.00025	0.00175	0.00024
30	0.00039	0.00045	0.00291	0.00047	0.00032	0.00034	0.00176	0.00033
35	0.00045	0.00052	0.00372	0.00055	0.00043	0.00045	0.00276	0.00045
40	0.00056	0.00065	0.00492	0.00074	0.00059	0.00062	0.00431	0.00062
45	0.00078	0.00134	0.00725	0.00656	0.00080	0.00126	0.00679	0.00312
50	0.00114	0.00211	0.01160	0.00822	0.00108	0.00217	0.01050	0.00403
55	0.00166	0.00337	0.01727	0.00976	0.00147	0.00376	0.01428	0.00559
60	0.00251	0.00559	0.02166	0.01243	0.00200	0.00649	0.01650	0.00789
65	0.00390	0.00969	0.02543	0.01791	0.00315	0.01121	0.01846	0.01158
70	0.00728	0.01725	0.03185	0.02818	0.00628	0.01936	0.02205	0.01781
75	0.01360	0.03109	0.04127	0.04466	0.01249	0.03344	0.02915	0.02881
80	0.02541	0.05613	0.05625	0.07148	0.05177	0.05774	0.04210	0.04901
85		0.10049	0.08137	0.11732		0.09971	0.06435	0.08833
90		0.17446	0.11975	0.19311		0.16715	0.09913	0.15347

Mortality improvement is anticipated with a modified MP-2020 Improvement Scale.



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire.

SPORS Retirement Rates				
Age	Years of Service			
	0-4	5-24	25	≥26
≤49	0.000	0.000	0.000	0.000
50	0.000	0.100	0.100	0.100
51	0.000	0.030	0.100	0.100
52	0.000	0.030	0.100	0.100
53	0.000	0.030	0.100	0.100
54	0.000	0.030	0.100	0.100
55	0.000	0.060	0.100	0.200
56	0.000	0.060	0.100	0.130
57	0.000	0.060	0.100	0.130
58	0.000	0.100	0.100	0.130
59	0.000	0.100	0.100	0.130
60	0.000	0.100	0.100	0.130
61	0.000	0.100	0.100	0.130
62	0.000	0.200	0.200	0.200
63	0.000	0.200	0.200	0.300
64	0.000	0.200	0.200	0.300
65	0.000	0.200	0.200	0.500
66	0.000	0.200	0.200	0.500
67	0.000	0.200	0.200	0.500
68	0.000	0.200	0.200	0.500
69	0.000	0.200	0.200	0.500
≥70	0.000	1.000	1.000	1.000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

DISABILITY RATES: As shown below for selected ages.

SPORS Disability Rates	
Age	Unisex
<=44	0.00194
45	0.00233
50	0.00481
55	0.00770
60	0.00897
65	0.01108
70	0.01368

TERMINATION RATES: The following are sample withdrawal rates based on years of service (for causes other than death, disability, or retirement).

SPORS Termination Rates	
Service	Unisex
0	0.08000
1	0.06000
2	0.06000
3	0.06000
4	0.06000
5	0.06000
6	0.06000
7	0.03000
8	0.03000
9	0.03000
>=10	0.01750



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

SALARY INCREASE RATES: The following salary increase rates are used. Inflation rate of 2.50% plus productivity component of 1.00% plus step-rate/promotional component as shown:

Pay Increase Assumption	
Years of Service	Total Increase (Next Year)
1	4.75%
2	4.75
3	4.75
4	4.75
5	4.65
6	4.40
7	4.40
8	4.40
9	4.40
10 - 19	4.00
20 or more	3.50



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

**VIRGINIA LAW OFFICERS
Plan Specific Assumptions and Methods**

MORTALITY RATES:

Pre-Retirement:

Pub-2010 Amount Weighted Safety Employee Rates projected generationally; 95% of rates for males; 105% of rates for females set forward 2 years

Post-Retirement:

Pub-2010 Amount Weighted Safety Healthy Retiree Rates projected generationally; 110% of rates for males; 105% of rates for females set forward 3 years

Post-Disablement:

Pub-2010 Amount Weighted General Disabled Rates projected generationally; 95% of rates for males set back 3 years; 90% of rates for females set back 3 years

Beneficiaries and Survivors:

Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally; 110% of rates for males and females set forward 2 years

Mortality Improvement:

Rates projected generationally with a Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates

VaLORS Mortality Base Rates								
Age	Male				Female			
	Pre Retirement	Post Retirement	Post Disablement	Beneficiary & Survivor	Pre Retirement	Post Retirement	Post Disablement	Beneficiary & Survivor
20	0.00039	0.00045	0.00030	0.00044	0.00018	0.00019	0.00011	0.00019
25	0.00035	0.00041	0.00334	0.00043	0.00023	0.00025	0.00175	0.00024
30	0.00039	0.00045	0.00291	0.00047	0.00032	0.00034	0.00176	0.00033
35	0.00045	0.00052	0.00372	0.00055	0.00043	0.00045	0.00276	0.00045
40	0.00056	0.00065	0.00492	0.00074	0.00059	0.00062	0.00431	0.00062
45	0.00078	0.00134	0.00725	0.00656	0.00080	0.00126	0.00679	0.00312
50	0.00114	0.00211	0.01160	0.00822	0.00108	0.00217	0.01050	0.00403
55	0.00166	0.00337	0.01727	0.00976	0.00147	0.00376	0.01428	0.00559
60	0.00251	0.00559	0.02166	0.01243	0.00200	0.00649	0.01650	0.00789
65	0.00390	0.00969	0.02543	0.01791	0.00315	0.01121	0.01846	0.01158
70	0.00728	0.01725	0.03185	0.02818	0.00628	0.01936	0.02205	0.01781
75	0.01360	0.03109	0.04127	0.04466	0.01249	0.03344	0.02915	0.02881
80	0.02541	0.05613	0.05625	0.07148	0.05177	0.05774	0.04210	0.04901
85		0.10049	0.08137	0.11732		0.09971	0.06435	0.08833
90		0.17446	0.11975	0.19311		0.16715	0.09913	0.15347

Mortality improvement is anticipated with a modified MP-2020 Improvement Scale.



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire.

VaLORS Retirement Rates, Male					
Age	Years of Service				
	0-4	5	6-24	25	≥26
≤49	0.000	0.000	0.000	0.000	0.000
50	0.000	0.150	0.150	0.450	0.450
51	0.000	0.100	0.080	0.300	0.300
52	0.000	0.100	0.080	0.300	0.300
53	0.000	0.100	0.080	0.300	0.250
54	0.000	0.100	0.080	0.240	0.250
55	0.000	0.100	0.080	0.180	0.250
56	0.000	0.100	0.090	0.180	0.250
57	0.000	0.100	0.100	0.180	0.200
58	0.000	0.100	0.100	0.180	0.200
59	0.000	0.100	0.120	0.180	0.200
60	0.000	0.180	0.180	0.180	0.300
61	0.000	0.180	0.200	0.200	0.200
62	0.000	0.180	0.300	0.300	0.300
63	0.000	0.400	0.250	0.250	0.250
64	0.000	0.150	0.250	0.250	0.250
65	0.000	0.150	0.300	0.300	0.300
66	0.000	0.150	0.300	0.300	0.300
67	0.000	0.150	0.300	0.300	0.300
68	0.000	0.150	0.300	0.300	0.300
69	0.000	0.150	0.300	0.300	0.300
≥70	0.000	1.000	1.000	1.000	1.000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

VaLORS Retirement Rates, Female					
Age	Years of Service				
	0-4	5	6-24	25	>=26
<=49	0.000	0.000	0.000	0.000	0.000
50	0.000	0.150	0.150	0.375	0.375
51	0.000	0.100	0.100	0.250	0.200
52	0.000	0.100	0.090	0.250	0.200
53	0.000	0.100	0.090	0.250	0.225
54	0.000	0.100	0.090	0.250	0.300
55	0.000	0.100	0.090	0.250	0.300
56	0.000	0.100	0.100	0.250	0.300
57	0.000	0.100	0.130	0.250	0.180
58	0.000	0.100	0.130	0.400	0.180
59	0.000	0.100	0.130	0.300	0.200
60	0.000	0.200	0.200	0.200	0.200
61	0.000	0.200	0.200	0.200	0.200
62	0.000	0.200	0.350	0.350	0.350
63	0.000	0.200	0.250	0.250	0.250
64	0.000	0.200	0.250	0.250	0.250
65	0.000	0.200	0.500	0.500	0.500
66	0.000	0.200	0.300	0.300	0.300
67	0.000	0.200	0.300	0.300	0.300
68	0.000	0.200	0.300	0.300	0.300
69	0.000	0.200	0.300	0.300	0.300
>=70	0.000	1.000	1.000	1.000	1.000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

DISABILITY RATES: As shown below for selected ages.

VaLORS Disability Rates		
Age	Male	Female
20	0.00143	0.00543
25	0.00322	0.00581
30	0.00584	0.00659
35	0.00720	0.00769
40	0.00793	0.01001
45	0.00913	0.01381
50	0.01165	0.01821
55	0.01501	0.02277
60	0.01782	0.02901
65	0.01916	0.03865
70	0.01920	0.05499



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

TERMINATION RATES: The following are sample withdrawal rates based on age and years of service (for causes other than death, disability, or retirement).

VaLORS Termination Rates, Male											
Age	Years of Service										
	0	1	2	3	4	5	6	7	8	9	>=10
20	0.39130	0.29901	0.23922	0.21072	0.20801	0.21063	0.20749	0.19800	0.19643	0.19065	0.21396
25	0.36285	0.28479	0.23294	0.20555	0.19714	0.19438	0.18892	0.17882	0.17232	0.16314	0.17288
30	0.32624	0.26656	0.22474	0.19872	0.18316	0.17349	0.16486	0.15375	0.14058	0.12618	0.11671
35	0.29590	0.24719	0.21139	0.18685	0.16890	0.15650	0.14654	0.13513	0.11884	0.10094	0.07962
40	0.26990	0.22715	0.19453	0.17109	0.15383	0.14157	0.13160	0.12059	0.10400	0.08381	0.05579
45	0.24947	0.20776	0.17527	0.15163	0.13800	0.12852	0.11960	0.10962	0.09617	0.07511	0.04653
50	0.23564	0.19022	0.15449	0.12845	0.12136	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
55	0.22917	0.17523	0.13271	0.10157	0.10390	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
60	0.23045	0.16307	0.11015	0.07107	0.08562	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.23923	0.15385	0.08724	0.03755	0.06679	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.25880	0.14725	0.06100	0.00455	0.04490	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000

VaLORS Termination Rates, Female											
Age	Years of Service										
	0	1	2	3	4	5	6	7	8	9	>=10
20	0.47177	0.35733	0.28556	0.25386	0.26029	0.28130	0.30657	0.32166	0.31215	0.30524	0.22840
25	0.43786	0.33985	0.27627	0.24458	0.24051	0.24937	0.26238	0.26963	0.25996	0.24867	0.18991
30	0.39363	0.31781	0.26502	0.23302	0.21502	0.20767	0.20420	0.20042	0.18976	0.17234	0.13686
35	0.35591	0.29532	0.25008	0.21852	0.19421	0.17876	0.16674	0.15620	0.14391	0.12349	0.09981
40	0.32307	0.27240	0.23204	0.20097	0.17622	0.15870	0.14410	0.12972	0.11499	0.09385	0.07347
45	0.29713	0.25007	0.21104	0.17970	0.16112	0.14777	0.13695	0.12161	0.10324	0.08381	0.04500
50	0.27965	0.22915	0.18712	0.15384	0.14876	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
55	0.27168	0.21009	0.16023	0.12279	0.13911	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
60	0.27367	0.19304	0.13033	0.08631	0.13217	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
65	0.28529	0.17815	0.09796	0.04508	0.12790	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000
70	0.31084	0.16417	0.05830	0.00350	0.12656	0.00000	0.00000	0.00000	0.00000	0.00000	0.00000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

SALARY INCREASE RATES: The following salary increase rates are used. Inflation rate of 2.50% plus productivity component of 1.00% plus step-rate/promotional component as shown:

Pay Increase Assumption	
Years of Service	Total Increase (Next Year)
1	4.75%
2	4.75
3	4.75
4	4.75
5	4.65
6	4.40
7	4.40
8	4.40
9	4.40
10 - 19	4.00
20 or more	3.50



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

LOCALS – TOP 10, HAZARDOUS DUTY

Plan Specific Assumptions and Methods

MORTALITY RATES:

Pre-Retirement:

Pub-2010 Amount Weighted Safety Employee Rates projected generationally; 95% of rates for males; 105% of rates for females set forward 2 years

Post-Retirement:

Pub-2010 Amount Weighted Safety Healthy Retiree Rates projected generationally; 110% of rates for males; 105% of rates for females set forward 3 years

Post-Disablement:

Pub-2010 Amount Weighted General Disabled Rates projected generationally; 95% of rates for males set back 3 years; 90% of rates for females set back 3 years

Beneficiaries and Survivors:

Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally; 110% of rates for males and females set forward 2 years

Mortality Improvement:

Rates projected generationally with a Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates

Top 10 Hazardous Duty Mortality Base Rates								
Age	Male				Female			
	Pre Retirement	Post Retirement	Post Disablement	Beneficiary & Survivor	Pre Retirement	Post Retirement	Post Disablement	Beneficiary & Survivor
20	0.00039	0.00045	0.00030	0.00044	0.00018	0.00019	0.00011	0.00019
25	0.00035	0.00041	0.00334	0.00043	0.00023	0.00025	0.00175	0.00024
30	0.00039	0.00045	0.00291	0.00047	0.00032	0.00034	0.00176	0.00033
35	0.00045	0.00052	0.00372	0.00055	0.00043	0.00045	0.00276	0.00045
40	0.00056	0.00065	0.00492	0.00074	0.00059	0.00062	0.00431	0.00062
45	0.00078	0.00134	0.00725	0.00656	0.00080	0.00126	0.00679	0.00312
50	0.00114	0.00211	0.01160	0.00822	0.00108	0.00217	0.01050	0.00403
55	0.00166	0.00337	0.01727	0.00976	0.00147	0.00376	0.01428	0.00559
60	0.00251	0.00559	0.02166	0.01243	0.00200	0.00649	0.01650	0.00789
65	0.00390	0.00969	0.02543	0.01791	0.00315	0.01121	0.01846	0.01158
70	0.00728	0.01725	0.03185	0.02818	0.00628	0.01936	0.02205	0.01781
75	0.01360	0.03109	0.04127	0.04466	0.01249	0.03344	0.02915	0.02881
80	0.02541	0.05613	0.05625	0.07148	0.05177	0.05774	0.04210	0.04901
85		0.10049	0.08137	0.11732		0.09971	0.06435	0.08833
90		0.17446	0.11975	0.19311		0.16715	0.09913	0.15347

Mortality improvement is anticipated with a modified MP-2020 Improvement Scale.



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire.

Top 10 Hazardous Duty Retirement Rates, Male					
Age	Years of Service				
	0-4	5	6-24	25	≥26
≤49	0.0000	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0650	0.0650	0.2000	0.2000
51	0.0000	0.0650	0.0600	0.2500	0.2000
52	0.0000	0.0650	0.0600	0.2500	0.2000
53	0.0000	0.0650	0.0600	0.2500	0.2400
54	0.0000	0.0650	0.0600	0.2500	0.2400
55	0.0000	0.0650	0.0600	0.2500	0.2400
56	0.0000	0.0650	0.0600	0.2100	0.2000
57	0.0000	0.0650	0.0600	0.2100	0.2000
58	0.0000	0.0650	0.0600	0.2100	0.2000
59	0.0000	0.0650	0.1000	0.2100	0.2000
60	0.0000	0.2100	0.2100	0.2100	0.2300
61	0.0000	0.3750	0.2300	0.2300	0.2300
62	0.0000	0.3750	0.2700	0.2700	0.2700
63	0.0000	0.3750	0.2700	0.2700	0.2700
64	0.0000	0.3750	0.2700	0.2700	0.2700
65	0.0000	0.3750	0.3500	0.3500	0.3500
66	0.0000	0.3750	0.3500	0.3500	0.3500
67	0.0000	0.3750	0.3500	0.3500	0.3500
68	0.0000	0.3750	0.3500	0.3500	0.3500
69	0.0000	0.3750	0.3500	0.3500	0.3500
≥70	0.0000	1.0000	1.0000	1.0000	1.0000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

Top 10 Hazardous Duty Retirement Rates, Female					
Age	Years of Service				
	0-4	5	6-24	25	≥26
≤49	0.0000	0.0000	0.0000	0.0000	0.0000
50	0.0000	0.0600	0.0600	0.2500	0.2500
51	0.0000	0.0600	0.0875	0.2500	0.3000
52	0.0000	0.0600	0.0750	0.2500	0.3000
53	0.0000	0.0600	0.0750	0.2500	0.3000
54	0.0000	0.0600	0.0750	0.2500	0.3000
55	0.0000	0.0600	0.0750	0.2500	0.4000
56	0.0000	0.0600	0.1400	0.2500	0.4000
57	0.0000	0.0600	0.1400	0.2500	0.2500
58	0.0000	0.0600	0.1400	0.2500	0.2500
59	0.0000	0.0600	0.1400	0.2500	0.2500
60	0.0000	0.1500	0.1500	0.1500	0.2500
61	0.0000	0.1500	0.1500	0.1500	0.1500
62	0.0000	0.1500	0.1500	0.1500	0.1500
63	0.0000	0.1500	0.1500	0.1500	0.1500
64	0.0000	0.1500	0.3000	0.3000	0.3000
65	0.0000	0.1500	0.3000	0.3000	0.3000
66	0.0000	0.1500	0.3000	0.3000	0.3000
67	0.0000	0.1500	0.3000	0.3000	0.3000
68	0.0000	0.1500	0.3000	0.3000	0.3000
69	0.0000	0.1500	0.3000	0.3000	0.3000
≥70	0.0000	1.0000	1.0000	1.0000	1.0000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

DISABILITY RATES: As shown below for selected ages.

Top 10 Hazardous Duty Disability Rates		
Age	Male	Female
20	0.00019	0.00012
25	0.00022	0.00248
30	0.00052	0.00558
35	0.00133	0.00705
40	0.00267	0.00794
45	0.00405	0.00906
50	0.00500	0.01090
55	0.00657	0.01376
60	0.01055	0.01788
65	0.01786	0.02327
70	0.03085	0.03105

TERMINATION RATES: The following are sample withdrawal rates based on years of service (for causes other than death, disability, or retirement).

Top 10 Hazardous Duty Termination Rates		
Service	Male	Female
0	0.05500	0.07000
1	0.04000	0.07000
2	0.04000	0.07000
3	0.04000	0.05000
4	0.04000	0.05000
5	0.03000	0.05000
6	0.02500	0.03000
7	0.02500	0.03000
8	0.02500	0.03500
9	0.01500	0.01500
10	0.01000	0.01500
11	0.01000	0.01500
12	0.01000	0.01500
13	0.01000	0.01500
>=14	0.00800	0.01500



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

SALARY INCREASE RATES: The following salary increase rates are used. Inflation rate of 2.50% plus productivity component of 1.00% plus step-rate/promotional component as shown:

Pay Increase Assumption	
Years of Service	Total Increase (Next Year)
1	4.75%
2	4.75
3	4.75
4	4.75
5	4.65
6	4.40
7	4.40
8	4.40
9	4.40
10 - 19	4.00
20 or more	3.50

As Top 10 includes volunteers, the Entry Age Normal (Level Percent of Pay) actuarial cost method assumes an initial pay of \$1 for volunteers that increases annually by the assumed rate of inflation, 2.50%.



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

LOCALS – NON-TOP 10, HAZARDOUS DUTY

Plan Specific Assumptions and Methods

MORTALITY RATES:

Pre-Retirement:

Pub-2010 Amount Weighted Safety Employee Rates projected generationally; 95% of rates for males; 105% of rates for females set forward 2 years

Post-Retirement:

Pub-2010 Amount Weighted Safety Healthy Retiree Rates projected generationally; 110% of rates for males; 105% of rates for females set forward 3 years

Post-Disablement:

Pub-2010 Amount Weighted General Disabled Rates projected generationally; 95% of rates for males set back 3 years; 90% of rates for females set back 3 years

Beneficiaries and Survivors:

Pub-2010 Amount Weighted Safety Contingent Annuitant Rates projected generationally; 110% of rates for males and females set forward 2 years

Mortality Improvement:

Rates projected generationally with a Modified MP-2020 Improvement Scale that is 75% of the MP-2020 rates

Non-Top 10 Hazardous Duty Mortality Base Rates								
Age	Male				Female			
	Pre Retirement	Post Retirement	Post Disablement	Beneficiary & Survivor	Pre Retirement	Post Retirement	Post Disablement	Beneficiary & Survivor
20	0.00039	0.00045	0.00030	0.00044	0.00018	0.00019	0.00011	0.00019
25	0.00035	0.00041	0.00334	0.00043	0.00023	0.00025	0.00175	0.00024
30	0.00039	0.00045	0.00291	0.00047	0.00032	0.00034	0.00176	0.00033
35	0.00045	0.00052	0.00372	0.00055	0.00043	0.00045	0.00276	0.00045
40	0.00056	0.00065	0.00492	0.00074	0.00059	0.00062	0.00431	0.00062
45	0.00078	0.00134	0.00725	0.00656	0.00080	0.00126	0.00679	0.00312
50	0.00114	0.00211	0.01160	0.00822	0.00108	0.00217	0.01050	0.00403
55	0.00166	0.00337	0.01727	0.00976	0.00147	0.00376	0.01428	0.00559
60	0.00251	0.00559	0.02166	0.01243	0.00200	0.00649	0.01650	0.00789
65	0.00390	0.00969	0.02543	0.01791	0.00315	0.01121	0.01846	0.01158
70	0.00728	0.01725	0.03185	0.02818	0.00628	0.01936	0.02205	0.01781
75	0.01360	0.03109	0.04127	0.04466	0.01249	0.03344	0.02915	0.02881
80	0.02541	0.05613	0.05625	0.07148	0.05177	0.05774	0.04210	0.04901
85		0.10049	0.08137	0.11732		0.09971	0.06435	0.08833
90		0.17446	0.11975	0.19311		0.16715	0.09913	0.15347

Mortality improvement is anticipated with a modified MP-2020 Improvement Scale.



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

RETIREMENT RATES: The following rates of retirement are assumed for members eligible to retire.

Non-Top 10 Hazardous Duty Retirement Rates, Male					
Age	Years of Service				
	0-4	5	6-24	25	≥26
≤49	0.000	0.000	0.000	0.000	0.000
50	0.000	0.090	0.090	0.275	0.275
51	0.000	0.070	0.075	0.200	0.200
52	0.000	0.070	0.075	0.200	0.200
53	0.000	0.070	0.075	0.200	0.200
54	0.000	0.070	0.075	0.200	0.200
55	0.000	0.070	0.075	0.200	0.200
56	0.000	0.070	0.075	0.200	0.200
57	0.000	0.070	0.075	0.200	0.200
58	0.000	0.070	0.080	0.200	0.165
59	0.000	0.070	0.120	0.200	0.240
60	0.000	0.150	0.150	0.150	0.240
61	0.000	0.200	0.240	0.240	0.240
62	0.000	0.200	0.275	0.275	0.275
63	0.000	0.200	0.275	0.275	0.275
64	0.000	0.200	0.275	0.275	0.275
65	0.000	0.500	0.275	0.275	0.275
66	0.000	0.500	0.500	0.500	0.500
67	0.000	0.500	0.500	0.500	0.500
68	0.000	0.500	0.500	0.500	0.500
69	0.000	0.500	0.500	0.500	0.500
≥70	0.000	1.000	1.000	1.000	1.000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

Non-Top 10 Hazardous Duty Retirement Rates, Female					
Age	Years of Service				
	0-4	5	6-24	25	≥26
≤49	0.000	0.000	0.000	0.000	0.000
50	0.000	0.060	0.060	0.300	0.300
51	0.000	0.100	0.090	0.200	0.200
52	0.000	0.100	0.090	0.200	0.200
53	0.000	0.100	0.090	0.200	0.200
54	0.000	0.100	0.090	0.200	0.300
55	0.000	0.100	0.090	0.200	0.300
56	0.000	0.100	0.120	0.200	0.300
57	0.000	0.100	0.120	0.200	0.250
58	0.000	0.100	0.120	0.200	0.250
59	0.000	0.100	0.120	0.200	0.250
60	0.000	0.150	0.150	0.150	0.250
61	0.000	0.150	0.250	0.250	0.250
62	0.000	0.150	0.250	0.250	0.250
63	0.000	0.150	0.250	0.250	0.250
64	0.000	0.150	0.250	0.250	0.250
65	0.000	0.150	0.400	0.400	0.400
66	0.000	0.150	0.400	0.400	0.400
67	0.000	0.150	0.400	0.400	0.400
68	0.000	0.150	0.400	0.400	0.400
69	0.000	0.150	0.400	0.400	0.400
≥70	0.000	1.000	1.000	1.000	1.000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

DISABILITY RATES: As shown below for selected ages.

Non-Top 10 Hazardous Duty Disability Rates		
Age	Male	Female
20	0.00001	0.00005
25	0.00016	0.00067
30	0.00058	0.00157
35	0.00121	0.00189
40	0.00218	0.00201
45	0.00330	0.00244
50	0.00416	0.00413
55	0.00496	0.00831
60	0.00575	0.01605
65	0.00630	0.02747
70	0.00659	0.04509



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

TERMINATION RATES: The following are sample withdrawal rates based on years of service (for causes other than death, disability, or retirement).

Non-Top 10 Hazardous Duty Termination Rates		
Service	Males	Females
0	0.11000	0.20000
1	0.11000	0.15000
2	0.09500	0.10000
3	0.08500	0.08500
4	0.07500	0.07000
5	0.06500	0.07000
6	0.06500	0.07000
7	0.04000	0.07000
8	0.04000	0.07000
9	0.04000	0.06000
10	0.02500	0.03500
11	0.02500	0.03500
12	0.02500	0.03500
13	0.02500	0.03500
14	0.02500	0.03500
15	0.02000	0.03500
≥16	0.02000	0.02000



Schedule B – Outline of Actuarial Assumptions and Methods (continued)

SALARY INCREASE RATES: The following salary increase rates are used. Inflation rate of 2.50% plus productivity component of 1.00% plus step-rate/promotional component as shown:

Pay Increase Assumption	
Years of Service	Total Increase (Next Year)
1	4.75%
2	4.75
3	4.75
4	4.75
5	4.65
6	4.40
7	4.40
8	4.40
9	4.40
10 - 19	4.00
20 or more	3.50

As Non-Top 10 includes volunteers, the Entry Age Normal (Level Percent of Pay) actuarial cost method assumes an initial pay of \$1 for volunteers that increases annually by the assumed rate of inflation, 2.50%.



Schedule C – Actuarial Cost Method

The Plan's valuation is prepared on the projected benefit basis, which is used to determine the present value of each member's expected benefit payable at disability or death. The calculations are based on the member's age, years of service, gender, and an assumed future interest earnings rate (currently 6.75%). The calculations consider the probability of a member's death, retirement, or termination of employment prior to becoming eligible for a benefit. The present value of the expected benefits payable to active members is added to the present value of the expected future payments to current benefit recipients to obtain the present value of all expected benefits payable to the present group of members.

The employer contributions required to support the benefits of the Line of Duty Act Fund consist of a normal contribution and an accrued liability contribution.

The normal contribution is determined using the "entry age normal" method (EAN). Under this method, a calculation is made for postemployment benefits to determine the uniform and constant percentage rate of employer contribution that, if applied to the compensation of the average new member during the entire period of his anticipated covered service, would be required to meet the cost of all benefits payable on a member's behalf. As the valuation includes volunteers, the cost method assumes an initial pay of \$1 for volunteers that increases annually by the assumed rate of inflation, 2.50%. Additionally, the normal contribution includes annual administrative expenses and the annual cost of benefits incurred and reported to the administrator but awaiting processing.

The unfunded accrued liability for the Plan is determined by subtracting the current assets from the liability of active employees and current recipients. The accrued liability contribution amortizes the balance of the unfunded accrued liability over a period of 30 years from the valuation date.



Schedule D – Summary of Main Plan Provisions as Interpreted for Valuation Purposes

Participating Employers

Any employer that is a state agency (i.e., employs a State Employee) participates in the Plan. Participating political subdivision employer groups with participants in the LODA Program were required to make an irrevocable election to participate in the Plan on or before July 1, 2012. Political subdivision employer groups who elected to opt-out of the Plan and self-fund LODA Program benefits assume responsibility for all benefit payments made after the election. This includes amounts paid to current beneficiaries for whom the political subdivision employer group is the employer of record.

Eligibility

Hazardous duty state and local government employees of the following groups, including volunteers, are eligible for the LODA Program benefits.

- Law-enforcement officers of the Commonwealth or any of its political subdivisions
- Correctional officers
- Jail officers
- Regional jail or jail farm superintendents
- Sheriff, deputy sheriff, city sergeant, or deputy city sergeant of the City of Richmond
- Police chaplains
- Members of fire companies or departments or rescue squads recognized by any county, city, or town of the Commonwealth as an integral part of an official safety program
- Virginia National Guard or the Virginia State Defense Force members, including fire companies or departments providing their fire protection services
- Special agents of the Virginia Alcoholic Beverage Control Board
- Full-time sworn members of the enforcement division of the Department of Motor Vehicles
- Conservation officers of the Department of Conservation and Recreation.
- Commissioned forest wardens
- Members or employees of the Virginia Marine Resources Commission granted the power of arrest
- Department of Emergency Management hazardous materials officers
- Other employees of the Department of Emergency Management if performing duties related to a major disaster or emergency
- Employees of any county, city, or town performing official emergency management or emergency services duties in cooperation with the Department of Emergency Management
- Non-firefighter regional hazardous materials emergency response team members

Some of those covered by the Plan may not be able to be identified in a census (e.g., volunteers) or, if they can be specifically identified, may not have a level of exposure that is on par with other participants (e.g., those serving in a major disaster or emergency versus a full-time firefighter). Experience, if and when available, would be the best method to determine the appropriate "load" to the seriatim liability. The results presented assume no additional margin for unidentifiable employees.



Schedule D – Summary of Main Plan Provisions as Interpreted for Valuation Purposes (continued)

The results presented were determined based upon the demographic assumptions (e.g., mortality, disability, retirement, termination) of state employee and law enforcement/fire personnel covered by VRS, and, as such, may not reflect the experience of all participants. If credible experience materializes, the Plan may want to consider developing rates based upon segmented risk pools or other divisions.

Death Benefit

A \$100,000 death benefit payment for death occurring as a direct or proximate result of the performance of duty, or a \$25,000 death benefit payment for death by presumptive clause or within five years of retirement. In determining the average death benefit payment, the LODA Program's experience was used to develop an average benefit payment assumption, reflecting the benefit's varying amount based upon the cause of death, and applied to a percentage of active mortality. Presumptive death benefit payments require additional investigation to determine employee status at the time of death.

Health Care Coverage Period

For disabilities and deaths occurring prior to July 1, 2017, that result in health care coverage under the Plan, disabled employees, their spouses, and surviving spouses receive lifetime health care benefits. For disabilities and deaths occurring after June 30, 2017, that result in health care coverage under the Plan, disabled employees (except those eligible for Medicare due to disability under Social Security Disability Insurance or a Railroad Retirement Board Disability Annuity), their spouses, and surviving spouses receive health care benefits until becoming eligible for Medicare due to age (age 65). Disabled employees eligible for Medicare due to disability under Social Security Disability Insurance or a Railroad Retirement Board Disability Annuity receive lifetime health care benefits.

Health Care Benefit (Effective July 1, 2017)

The health care benefit for the LODA Program is provided through the LODA Health Benefits Plans, administered by the Department of Human Resource Management, and modeled upon the state employee health benefits program plans (COVA Care). As the cost of the LODA Health Benefits Plans is to be pooled across all beneficiaries of the LODA Program, the cost to the Plan may be higher or lower than the actual health care costs incurred by the Plan's health care beneficiaries. LODA health care premiums for fiscal years 2021 and 2022 are shown on the following page.

Per capita costs were based upon the adjusted experience of those members currently receiving health care benefits from the Plan using high-level assumptions and estimates. This includes the demographic adjustments made for the Plan's covered population, the mix of health care plan and coverage elections made by LODA members, the level of benefits to be provided and the health care trend assumption. As such, future experience may differ significantly from the cost estimates presented in this report, and the valuation's results should be viewed as having a likely range of variability.

Beyond the first projection year, all assumed health care costs not related to covered dependent children were age-adjusted to reflect the full, age-specific cost of providing benefits.



Schedule D – Summary of Main Plan Provisions as Interpreted for Valuation Purposes (continued)

Premiums for Fiscal Years 2021 and 2022

FY 2022				
Membership Level	LODA Plan Current LODA Employment	LODA Plan Former LODA Employment	Medicare Primary	Medicare Part B Premium
Single	\$1,016	\$1,049	\$293	\$170.10
Two Person	\$1,733	\$1,764	N/A	N/A
Family (3 or more family members)	\$2,458	\$2,486	N/A	N/A

FY 2021				
Membership Level	LODA Plan Current LODA Employment	LODA Plan Former LODA Employment	Medicare Primary	Medicare Part B Premium
Single	\$948	\$979	\$283	\$148.50
Two Person	\$1,618	\$1,647	N/A	N/A
Family (3 or more family members)	\$2,295	\$2,321	N/A	N/A

Cost Offsets

To the extent the Plan’s benefits are paid or reimbursed by other programs such as the VRS Health Insurance Credit Program (HIC), or applicable retirement plans, benefit offsets should be considered in developing the Plan’s rate structure. The results provided include estimated HIC receipts and assume the estimated reimbursements from the HIC program are used to decrease costs for all Plan participants.

Affordable Care Act

The impact of the Affordable Care Act (ACA) was addressed in this valuation. Review of the information currently available did not identify any specific provisions of the ACA that are anticipated to significantly impact results other than plan design features and fees currently mandated by the ACA and incorporated in the plan designs, which are included in the current baseline claims costs. Continued monitoring of the ACA’s impact on the Plan’s liability will be required.

COVID-19

The impact of the COVID-19 pandemic was considered in this valuation; however, no explicit changes were incorporated at this time other than the inclusion of COVID-19 as a presumption for certain members due to House Bills 1985 and 2207 (HB 1985, HB 2207). Given the uncertainty regarding COVID-19 (e.g., the impact of routine care being deferred, direct COVID-19 treatment and prevention costs, changes in contribution and budget projections), continued monitoring of the impact on the Plan’s liability will be required.



Schedule D – Summary of Main Plan Provisions as Interpreted for Valuation Purposes (continued)

Presumptions

"Deceased person" or "Disabled person" means any individual whose death or incapacity occurs in the line of duty as the direct or proximate result of the performance of his duty, including the presumptions under §§ 27-40.1, 27-40.2, 51.1-813, 65.2-402, and 65.2-402.1, as summarized below. Complete descriptions of the presumptions can be found at <https://law.lis.virginia.gov/vacodepopularnames/line-of-duty-act>:

27-40.1. and 27-40.2.

Presumption as to death or disability from respiratory diseases, hypertension, or heart disease for of salaried or volunteer fire fighters, or death of all fire fighters employed by the City of Portsmouth when death occurs subsequent to July 1, 1972, shall be presumed to be occupational diseases, suffered in the line of government duty, that are covered by this title unless such presumption is overcome by a preponderance of competent evidence to the contrary.

§ 51.1-813. Disability resulting from activities in discharge of official duties.

Any member of a county, city, or town police department or any sheriff or deputy sheriff who dies or is totally or partially disabled as a result of hypertension or heart disease shall be presumed to have died or become disabled in the line of duty, unless the contrary is shown by a preponderance of competent evidence.

§ 65.2-402. Presumption as to death or disability from respiratory disease, hypertension or heart disease, cancer.

A. Respiratory diseases for certain firefighters or Department of Emergency Management hazardous materials officers.

B. Hypertension or heart disease causing the death of, or any health condition or impairment resulting in total or partial disability for certain job titles who have completed five years of service in their position.

C. Leukemia or pancreatic, prostate, rectal, throat, ovarian, breast, colon, brain, or testicular cancer causing the death of, or any health condition or impairment resulting in total or partial disability of, any volunteer or salaried firefighter, Department of Emergency Management hazardous materials officer, commercial vehicle enforcement officer or motor carrier safety trooper employed by the Department of State Police, or full-time sworn member of the enforcement division of the Department of Motor Vehicles having completed five years of service. For colon, brain, or testicular cancer, the presumption shall not apply for any individual who was diagnosed with such a condition before July 1, 2020.

§ 65.2-402.1. Presumption as to death or disability from infectious disease.

A. Hepatitis, meningococcal meningitis, tuberculosis, or HIV causing the death of, or any health condition or impairment resulting in total or partial disability of certain job titles shall be presumed to be occupational diseases, suffered in the line of government duty, that are covered by this title unless such presumption is overcome by a preponderance of competent evidence to the contrary.

B. 1. COVID-19 causing the death of, or any health condition or impairment resulting in total or partial disability of, any health care provider, who as part of the provider's employment is directly involved in diagnosing or treating persons known or suspected to have COVID-19, shall be presumed to be an occupational disease that is covered by this title unless such presumptions are overcome by a preponderance of competent evidence to the contrary. For the purposes of this section, the COVID-19 virus shall be established by a positive diagnostic test for COVID-19 and signs and symptoms of COVID-19 that require medical treatment.



Schedule D – Summary of Main Plan Provisions as Interpreted for Valuation Purposes (continued)

2. COVID-19 causing the death of, or any health condition or impairment resulting in total or partial disability of, any (i) firefighter, (ii) law-enforcement officer; (iii) correctional officer; or (iv) regional jail officer shall be presumed to be an occupational disease, suffered in the line of duty, as applicable, that is covered by this title unless such presumption is overcome by a preponderance of competent evidence to the contrary. For the purposes of this section, the COVID-19 virus shall be established by a positive diagnostic test for COVID-19, an incubation period consistent with COVID-19, and signs and symptoms of COVID-19 that require medical treatment.

In addition, § 65.2-107 covers post-traumatic stress disorder incurred by law-enforcement officers and firefighters for an incident or exposure occurring in the line of duty on or after July 1, 2020.



Schedule E – Schedule of Active Member Data

**SCHEDULE OF FULL TIME ACTIVE MEMBER DATA
AS OF JUNE 30, 2021**

Attained Age	Years of Service to Valuation Date									Total
	Less than 1 Year	1-4	5-9	10-14	15 - 19	20 - 24	25 - 29	30 - 34	35 or More	
Under 25	584	562	0	5	0	0	0	0	0	1,151
25 - 29	508	1,739	0	298	0	0	0	0	0	2,545
30 - 34	364	1,094	0	1,144	209	0	0	0	0	2,811
35 - 39	232	549	0	708	955	1	0	0	0	2,445
40 - 44	159	385	0	293	1,288	165	1	0	0	2,291
45 - 49	126	298	0	220	914	566	125	2	0	2,251
50 - 54	156	274	0	184	777	356	239	44	1	2,031
55 - 59	98	144	0	118	509	147	123	118	36	1,293
60 - 64	46	81	0	57	211	137	50	45	69	696
65 - 69	12	13	0	14	42	34	19	9	31	174
70 & Up	5	2	0	0	10	10	7	3	2	39
Total	2,290	5,141	0	3,041	4,915	1,416	564	221	139	17,727