



**METROPOLITAN GOVERNMENT OF
NASHVILLE AND DAVIDSON COUNTY TENNESSEE
PENSION PLAN**

Valuation and Report as of June 30, 2022

ACTUARIAL VALUATION REPORT

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A. INTRODUCTION

An actuarial valuation of the disability and pension benefits provided under Chapters 3.28, 3.29, 3.32, 3.33, 3.36, and 3.37 of the Metropolitan Code, pursuant to Article 13 of the Metro Charter, was performed as of June 30, 2022. The purpose of the valuation was to determine the funding requirements of the various components of the Metropolitan Employee Benefit System, with the intention that funding requirements indicated by the valuation be used as the basis for contributions to the System for the fiscal year commencing July 1, 2023.

The Metropolitan Employee Benefit System was established as of April 1, 1963. The disability and pension provisions for the System serve as successors to the following superseded retirement systems:

Davidson County Employee Pension System (Divisions A and B)

Civil Service Employee's Pension Fund of the City of Nashville

Policemen's and Firemen's Pension Fund of the City of Nashville

As of the date of establishment, all members of the superseded systems were given the opportunity to transfer to the new System. Any member who did not so elect remained in his old system. Employees hired by the Metropolitan Government since the establishment of the new System automatically become members of the System for pension purposes upon completion of six months of service.

During 1995, a new "Division B" of the Metro pension plan was established. Active participants in the existing Metro plan (which was renamed "Division A"), as well as active participants in the superseded plans, were given the opportunity to transfer to Division B effective January 1, 1996. New participants hired on or after July 1, 1995 automatically become members of Division B when they become eligible for pension benefits.

This section of the report deals only with Divisions A and B of the Metro pension plan. Reports on the superseded plans are prepared separately. The valuation was based on information obtained from the staff of the Metropolitan Employee Benefit Board, the Metro Information Systems Division, the Metropolitan Airport Authority, and the Data Processing Division of the Board of Education.

The following table shows the number of employees and annual compensation of active members included in the June 30, 2022 valuation. ("General Government" figures include the Board of Education, since both groups are covered by the provisions of Chapters 3.32 and 3.33.)

Group	<u>Number</u>	<u>Compensation</u>
General Government	8,676	\$ 448,563,594
Firemen and Policemen	<u>3,183</u>	<u>257,485,736</u>
Total	11,859	\$ 706,049,330

Metropolitan Government of Nashville and Davidson County Tennessee Pension Plan

This table includes 30 General Government employees with compensation of \$1,807,779 and 7 Firemen and Policemen with compensation of \$543,170 who did not elect to transfer from Division A to Division B.

The following table shows the number of retired individuals as of the valuation date, together with their annualized base benefits and current benefits (including cost of living increases):

Type Retirement	Annual Retirement Allowances		
	Number	Basic	Current
Division A			
Disabled	93	\$ 1,038,640	\$ 1,038,640
General Government	518	4,584,190	6,062,775
Fire and Police	180	3,332,569	4,205,228
Total	791	\$ 8,955,399	\$ 11,306,643
Division B			
Disabled	490	\$ 8,347,995	\$ 8,347,995
General Government	6,838	104,448,148	114,561,637
Fire and Police	1,879	53,937,058	59,793,640
Total	9,207	\$ 166,733,201	\$ 182,703,272
Total			
Disabled	583	\$ 9,386,635	\$ 9,386,635
General Government	7,356	109,032,338	120,624,413
Fire and Police	2,059	57,269,626	63,998,868
Total	9,998	\$ 175,688,599	\$ 194,009,916

In addition, another 3,824 individuals have terminated employment but have vested benefits as outlined on the following page.

Metropolitan Government of Nashville and Davidson County Tennessee Pension Plan

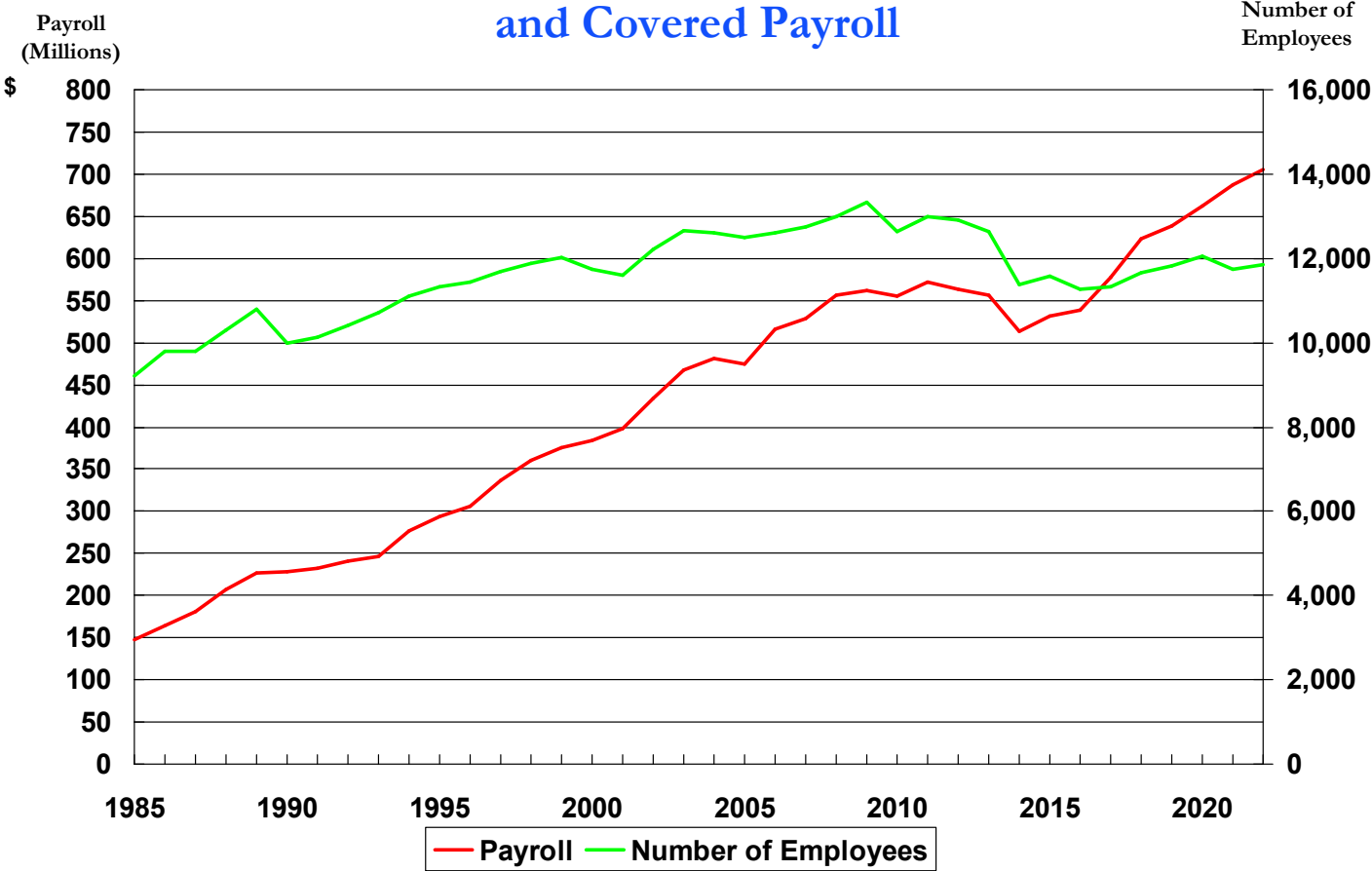
The table below shows how the figures given above compare with equivalent figures in the June 30, 2021 valuation.

	June 30, 2021	June 30, 2022	Increase	Percent Increase
Number of Active Participants	11,754	11,859	105	0.9%
Payroll	\$687,540,370	\$706,049,330	\$18,508,960	2.7%
Average Salary	\$58,494	\$59,537	\$1,043	1.8%
Number of Retired Participants	9,643	9,998	355	3.7%
Annual Benefits	\$180,923,005	\$194,009,916	\$13,086,911	7.2%

The table below shows how the estimated number of deferred vested participants compared with equivalent figures in the June 30, 2021 valuation.

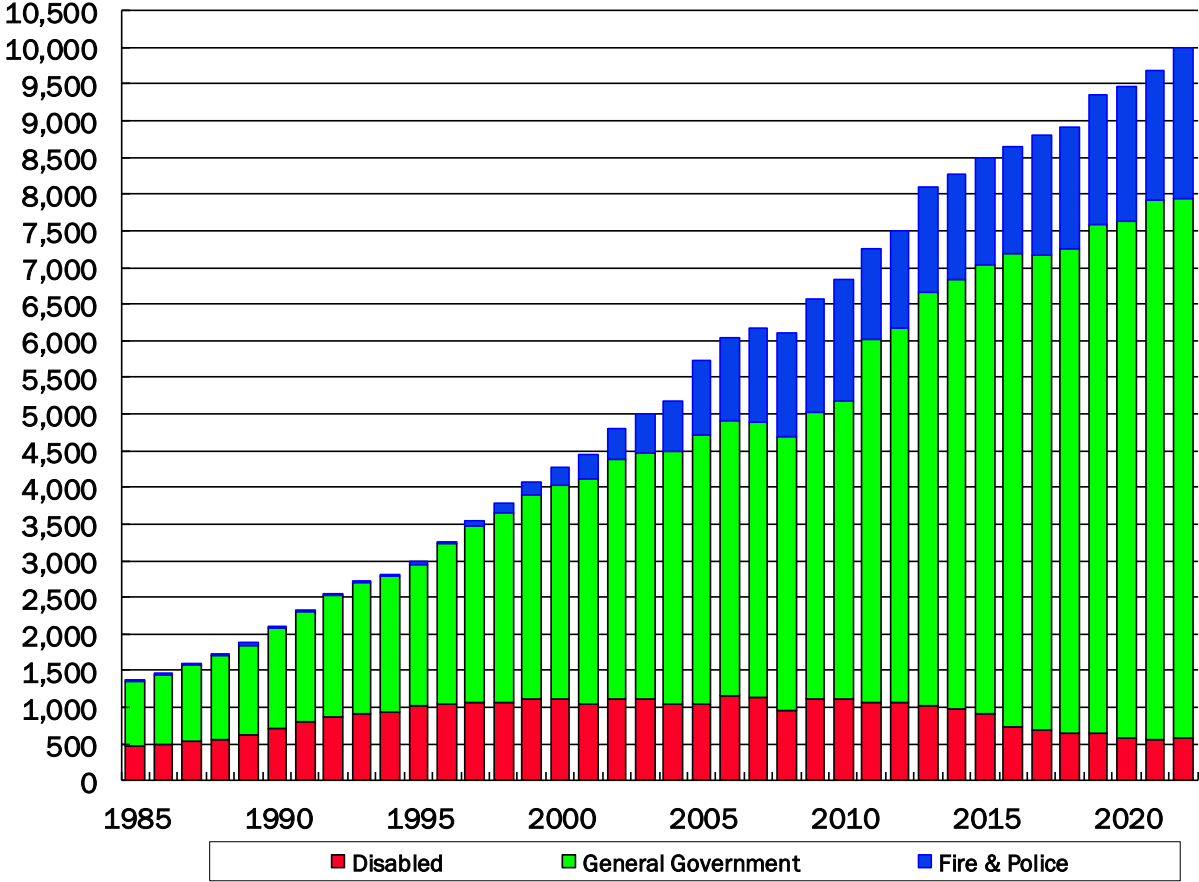
	June 30, 2021	June 30, 2022	Increase	Percent Increase
Number of Deferred Vested Participants	3,854	3,824	(30)	(0.8%)
Annual Benefits	\$33,367,572	\$31,467,037	(\$1,900,535)	(5.74%)

Metro Pension Plan Number of Employees and Covered Payroll



Metro Pension Plan

Number of Retirees



B. DETERMINATION OF FUNDING LEVELS

The governing statute for the plan specifies that there will be three trust funds. Trust Fund A is intended to finance all disability benefits provided by Chapter 3.28; Trust Fund B finances all retirement benefits provided for general government employees under Chapter 3.32; and Trust Fund C finances retirement benefits for firemen and policemen provided under Chapter 3.36. A separate rate is established for each of the three categories and the required contributions are combined to arrive at an overall "Metro" rate. Actual contributions are assigned to the separate trust funds in proportion to the ratio of each trust fund's required contribution to the aggregate required contribution.

The table on the following page sets out the results of the June 30, 2022 valuation with respect to each of the three categories. The costs shown represent the total required annual contributions for the plan if all Metro departments were contributing at the same rate. These numbers are developed in more detail in Tables X and XI of the Appendix.

In this table, the "Statutory Minimum" is taken as being the Normal Cost plus interest on the Unfunded Past Service Liability, with no amortization of the latter. Chapter 3.16.050 of the Code apparently sets this as the minimum funding level, although the Board is given the authority to specify a higher level. It should be noted that the "Statutory Minimum" would not meet the Governmental Accounting Standards Board standards for funding.

"Forty years from 1976" would be the minimum amortization period if the plan were covered by the funding provisions of the Employee Retirement Income Security Act of 1974, but as a public plan it is not so covered. Nevertheless, the Board historically has adopted a contribution rate sufficient to amortize the unfunded supplemental liability over the 40-year period commencing in 1978. Beginning with the plan year ended June 30, 2006, the Board has adopted a level amortization period of 15 years. The level amortization period is designed to reduce contribution volatility compared with a continuing decline in the amortization period. The table shows the contribution rates necessary to continue both the "no amortization" and the "15-year amortization" funding patterns.

State Mandated Minimum Funding Level

As a result of the Public Employee Defined Benefit Financial Security Act of 2014 (Tenn. Code Ann. §9-3-501) all political subdivisions within the State of Tennessee that provide defined benefit plans not administered by the Tennessee Consolidated Retirement System (TCRS) must adopt a written funding policy and contribute an actuarially determined contribution that meets minimum standards specified by Tenn. Code Ann. §9-3-501. A written funding policy has been approved by both the Board and the Metro Council. While the funding policy preserves the 15-year amortization contribution described above, the policy provides that the actuarially determined contribution may not be less than the minimum provided by Tenn. Code Ann. §9-3-501. As such, this report now summarizes the minimum required contribution as specified by Tenn. Code Ann. §9-3-501 effective for the plan year beginning July 1, 2016. (See Page 82)

ANNUAL FUNDING LEVELS

	Trust Fund A (Disability)	Trust Fund B (Gen. Gov.)	Trust Fund C (Fire & Police)	Total
<u>Statutory Minimum (No Amortization of Unfunded Past Service Liability)</u>				
Contribution	-521,329	32,316,631	51,034,191	82,829,493
% of Payroll*	-0.074%	7.204%	19.820%	11.731%

15-Year Amortization of Unfunded Past Service Liability

Contribution	-2,136,758	29,307,878	59,944,615	87,115,735
% of Payroll*	-0.303%	6.534%	23.281%	12.338%

*"Disability" and "Total" costs are expressed as a percentage of total eligible payroll of \$706,049,330. "General Government" and "Fire and Police" costs are expressed as percentages of the eligible payrolls of those groups -- \$448,563,594 and \$257,485,736 respectively.

The table on the following page comprises a valuation balance sheet showing the assets and liabilities of the Metro pension plan as of June 30, 2022. The present assets shown are the valuation assets, as described in Table IX of the Appendix, and include the present value of benefits which are expected to be received from the annuities purchased on behalf of service retirees.

**VALUATION BALANCE SHEET
METRO PENSION PLAN
June 30, 2022
DIVISIONS A AND B COMBINED**

	Trust Fund A (Disability)	Trust Fund B (Gen. Gov.)	Trust Fund C (Fire & Police)	Total
<u>ASSETS</u>				
Present assets:	\$158,174,866	\$2,468,865,460	\$1,248,675,140	\$3,875,715,466
Present value of prospective contributions payable by Metro:				
Metro:				
Normal Cost	\$22,253,891	\$313,431,031	\$361,517,144	\$697,202,066
Past Service	<u>-41,966,906</u>	<u>-78,163,790</u>	<u>231,482,102</u>	<u>111,351,406</u>
Total	-\$19,713,015	\$235,267,241	\$592,999,246	\$808,553,472
Members	<u>0</u>	<u>0</u>	<u>0</u>	<u>0</u>
Total Prospective Contributions	<u>-19,713,015</u>	<u>235,267,241</u>	<u>592,999,246</u>	<u>808,553,472</u>
Total Assets	\$138,461,851	\$2,704,132,701	\$1,841,674,386	\$4,684,268,938
<u>LIABILITIES</u>				
Present value of prospective benefits payable on account of:				
Present retired members and contingent annuitants	101,053,955	1,396,237,529	783,170,605	\$2,280,462,089
Present active members	<u>37,407,896</u>	<u>1,307,895,172</u>	<u>1,058,503,781</u>	<u>2,403,806,849</u>
Total Liabilities	\$138,461,851	\$2,704,132,701	\$1,841,674,386	\$4,684,268,938

For the 2022-2023 fiscal year, Metro is contributing to the plan at the rate of 12.455% of covered payroll. This rate was recommended and adopted by the Board following the presentation of the June 30, 2021 valuation report.

Actuarial Experience

The baseline recommended rate of 12.338% developed in this valuation represents a decline of 0.117% from last year's baseline rate of 12.455%. The key factors in the rate change are outlined as follows:

1. **Investments** – The market value dollar weighted investment return for the prior year was a loss of 0.98%. The return was less than the actuarially assumed return rate of 7.00%. The full measure of the current year losses (versus expected) is not recognized in contribution calculations due to the smoothing process used in determining valuation assets. Partial recognition of current year losses in combination with the portion of gains and losses from prior years recognized in the current year produced an effective rate of return on the valuation asset basis of a gain of 10.42%. This growth in the actuarial value of assets was more than the 7.00% assumed rate and resulted in a contribution rate decrease of 2.02% of compensation.
2. **Compensation** – Compensation increase rates for continuing active participants during the year averaged 5.72% and were higher than the actuarially assumed average increase of 3.84%. The net effect of salary adjustments is that liability increases were slightly higher than expected. Compensation increases greater than expected are responsible for an increase in the recommended contribution of approximately 0.53% of compensation.
3. **Delayed implementation of contribution rate** – Rates determined by the Board are implemented in the year following the valuation date. Contribution recommendations from the June 30, 2021 valuation are delayed and not implemented until the plan year beginning July 1, 2021. Since each valuation is performed on a basis that implicitly anticipates immediate implementation of the recommended rate structure following the valuation date, variations from the recommendation will produce an "actuarial gain or loss" equal to the difference between the recommended and actual contributions. Actual contributions for the 2021-2022 plan year were based on the 12.881% contribution rate adopted by the Board while the baseline recommended contribution rate was 12.455%. Contributions slightly higher than expected caused a contribution decrease of 0.04% of compensation.
4. **COLA adjustments** implemented as of January 1, 2022 were significantly higher than the rates anticipated by the actuarial assumptions resulting in a contribution rate increase of 0.63% of compensation. Benefits to Division A retirees were indexed at 5.00% (versus the assumed rate of 2.50%) while benefits to Division B retirees were indexed at 3.50% (versus the assumed rate of 1.25%).
5. **New entrants** for whom implicit contribution rates are different than the prevailing contribution rate resulted in a small decrease in the employer contribution rate of 0.01% of payroll. New entrant contribution rates do not have the effect of actuarial gains and losses (primarily associated with investment returns) that tend to cause the aggregate contribution rate to differ from the long-term expected rate. The aggregate new entrant rate varies from year to year but tends to stay in the range of 11-13% of new entrant payroll.
6. **Valuation System Update** As of June 30, 2022, USI Consulting Group updated the valuation system used to determine liabilities and normal costs for the plan from a legacy system developed in-house

to a commercial system known as Proval (a product of Winklevoss Technologies). Slight variations in the calculation methods between the two systems resulted in a contribution rate decline of 0.28%.

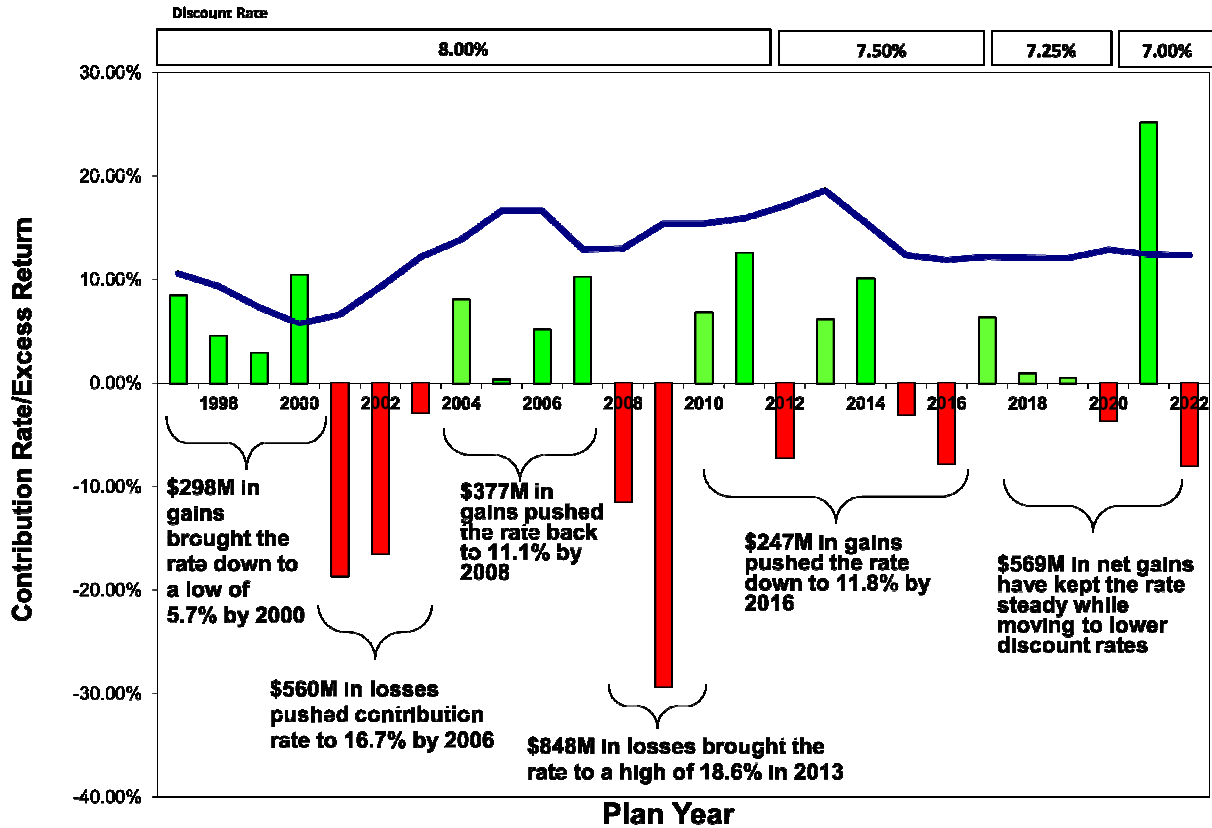
7. **Assumption Changes** – Effective with the June 30, 2022 valuation, a number of actuarial assumptions have been revised based on the results of the 2017-2022 Experience Study. These changes, and their impact on the Metro-wide contribution rate, are as follows:

Assumption Change	Impact on Contribution Rate
Salary Scale Change	0.85%
COLA (Fist Year set at 5.00%/4.00%)	0.73%
Mortality Table and Projection Scale	1.92%
Disability Rates	(0.06%)
Beneficiary Date of Birth Update	(1.02%)
Disability Mortality Table	0.11%
Revised Withdrawal Table	0.05%
Revised Retirement Rates	(0.93%)
	1.65%

The net effect of these six factors was a 0.46% increase in the required contribution rate. The net result of all other variations of actual from assumed experience produced a decrease in the overall contribution rate of 0.577%. These unreconciled amounts include the net impact of participant withdrawals and retirements different than expected.

Historical Impact of Investment Gains and Losses

A key driver in the recommended contribution rate is the pattern of historical investment gains and losses. The impact of investment returns tends to outweigh other factors such as compensation increases and the pattern of member terminations, retirements and deaths. The graph that follows provides a summary of the contribution rate as a percentage of payroll (indicated by the line) and the historical gains and losses versus expected (indicated by the bars). Periods of investment gains will tend to push the rate down over time, while periods of investment losses (such as the period in 2008-2009) will drive the rate higher. Periods of gains and losses tend to offset over time, providing more stability in the rate, as seen in recent years.



Summary

Slight elements of conservatism built into the valuation process result in a long-term tendency that a given year's rate will be lower than the prior year's rate. However, as of the current valuation date under the "five-year smoothing" asset valuation method, the plan has not yet recognized \$177,119,624 of investment gains. Recognition of those amounts will be taken gradually over the next few years with the largest portions recognized in 2023-2025. The pattern of recognition of these net gains and losses will have the effect of pushing contribution rates lower over that period. After the full effect of these investment gains is realized, contribution rates are expected to trend towards a long-term rate of approximately 12-14%. Of course, deviations from other actuarial assumptions (investment return, salary increases, turnover/retirement, disability, etc.) could alter the required contribution rate further. Furthermore, future changes to the underlying actuarial assumptions will likely change the long-term trend rate.

C. FUNDING STATUS HISTORY

The following is a schedule of funding progress based upon comparison to the unfunded past service liability on the valuation dates for the years in which the calculations are consistent with the parameters. The schedule presented herein is based upon valuation results for the current valuation period and historical periods. More information on the Funded Status pursuant to the Government Accounting Standard Board Statements No. 67 and No. 68 can be found in the Actuarial Report GASB 67 and GASB 68, dated October 19, 2022.

Metropolitan Government of Nashville and Davidson County Tennessee Pension Plan

Schedule of Funding Progress

June 30, 2022

Plan Year	Actuarial Value of Assets	Actuarial Accrued Liability	Unfunded Actuarial Accrued Liability	Funded Ratio	Covered Payroll	Unfunded Actuarial Accrued Liability as a Pct of Covered Payroll
June 30, 2005	1,602,285,363	1,818,206,856	215,921,493	88.1%	474,531,741	45.50%
June 30, 2006	1,706,677,125	1,959,952,204	253,275,079	87.1%	515,500,760	49.13%
June 30, 2007	1,921,193,702	2,144,144,792	222,951,090	89.6%	529,100,484	42.14%
June 30, 2008	2,119,228,659	2,323,837,472	204,608,813	91.2%	555,972,878	36.80%
June 30, 2009	1,925,305,076	2,275,399,550	350,094,474	84.6%	562,015,408	62.29%
June 30, 2010	2,143,522,150	2,360,892,310	217,370,160	90.8%	554,606,279	39.19%
June 30, 2011	2,188,868,356	2,468,971,488	280,103,132	88.7%	571,381,362	49.02%
June 30, 2012	2,185,046,912	2,580,685,072	395,638,160	84.7%	563,356,943	70.23%
June 30, 2013	2,220,622,176	2,688,495,620	467,873,444	82.6%	556,220,289	84.12%
June 30, 2014	2,450,131,517	2,730,430,660	280,299,143	91.1%	513,758,978	54.56%
June 30, 2015	2,668,035,418	2,806,587,788	138,552,370	95.1%	531,266,860	26.08%
June 30, 2016	2,788,543,840	2,904,694,246	116,150,406	96.0%	538,698,977	21.56%
June 30, 2017	2,948,928,567	3,091,309,368	142,380,801	95.4%	577,129,309	24.67%
June 30, 2018	3,097,585,778	3,264,476,848	166,891,070	94.9%	623,435,266	26.77%
June 30, 2019	3,203,494,948	3,368,175,795	164,680,847	95.1%	638,020,376	25.81%
June 30, 2020	3,312,807,377	3,548,735,221	235,927,844	93.4%	662,803,760	35.60%
June 30, 2021	3,615,841,062	3,793,100,017	177,258,955	95.3%	687,540,370	25.78%
June 30, 2022	3,875,715,466	3,987,066,872	111,351,406	97.2%	706,049,330	15.77%

D. SUMMARY AND RECOMMENDATIONS

Based on the assumptions and methodology previously adopted by the Board and outlined in this report, an employer contribution rate of 12.338% of covered payroll would be recommended for the next fiscal year. In recent years, a practice has been developed whereby adjustments to the baseline recommended rate may be recommended under a limited set of circumstances. These adjustments have the sole purpose of reducing contribution rate volatility. In general, the rate will only be adjusted in the direction of the projected contribution rate trend. Contributions in excess of the baseline recommended rate will create a surplus contribution. A negative adjustment to the baseline rate may only be recommended if a sufficient surplus contribution exists. **At the meeting of the Benefit Board on February 7, 2023, we recommended and the Board approved an aggregate contribution rate of 12.338% of covered payroll be contributed for the fiscal year beginning July 1, 2023.** Below is a summary of the baseline and recommended rates for most recent valuations.

Valuation Date	Baseline Recommended Rate	Adjusted Rate Recommended and Approved	Surplus/(Deficit) Contribution	Cumulative Surplus/(Deficit) Contribution with Adjustment
June 30, 2014	15.510%	15.510%	0.000%	0.000%
June 30, 2015	12.340%	12.340%	0.000%	0.000%
June 30, 2016	11.891%	12.340%	0.449%	0.449%
June 30, 2017	12.170%	12.340%	0.170%	0.520%
June 30, 2018	12.106%	12.340%	0.234%	0.735%
June 30, 2019	12.057%	12.340%	0.283%	1.007%
June 30, 2020	12.881%	12.881%	0.000%	0.965%
June 30, 2021	12.455%	12.455%	0.000%	
June 30, 2022	12.338%	12.338%	0.000%	

E. ASSESSMENT OF RISK

Risk Factor	Commentary on the Plan's Risk Exposure
Investment	<p>Due to the plan's substantial equity exposure, investment returns will likely be much more volatile than the measurements of plan liabilities. Therefore, there is a risk that the funded status of the plan, as well as recommended and required plan contributions, could be volatile.</p> <p>Over a period of years, investment returns below the expected level will create actuarial losses and lead to higher recommend and required contributions. Conversely, investment returns above the expected level will create actuarial gains and lead to lower recommended and required contributions.</p>
Assumed Rate of Return	<p>Due to the plan's estimated duration of 11 to 12, a 1% decrease in the assumed rate of investment return would increase the measurement of the liability by 11% to 12%.</p>
Longevity	<p>Since the majority of plan benefits are paid as annuities over the lifetime of the members and beneficiaries, the plan is sensitive to changes in overall population longevity. As a result, the liabilities will fluctuate with the actual mortality experience of the plan. Effective with the July 1, 2022 valuation, fully generational mortality improvements are incorporated.</p>
Other demographic factors	<p>Decisions of plan members with respect to termination and retirement can impact the cost of the plan. Generally, earlier retirements are more costly and delayed retirements less costly. Deviations from expected experience for terminations and retirements can, over time, create volatility in the contribution rate.</p>
Lump sums	<p>The plan does not pay lump sums for the full value of benefits. The Deferred Retirement Option Plan (DROP) pays a partial lump sum of 12, 24 or 36 months of payments with subsequent annuity payments reduced actuarially based on the most recently adopted actuarial assumptions.</p>
Inflation	<p>Inflation is a component of future interest rates, investment returns and salary increases. As a result, changes to inflation can affect funded percentages. Additionally, the plan provides a cost-of-living adjustment (COLA) that is based on inflation. Higher actual or expected rates of inflation will have the impact of increasing plan liabilities.</p>

USI Consulting Group can perform more detailed assessments of these risks as desired by the plan sponsor to provide a better understanding of these risks.

F. SUMMARY OF PLAN PROVISIONS

DIVISION A

1. **Eligibility (Chapter 3.08.010)**

All persons hired by the Metropolitan Government after April 1, 1963 and before July 1, 1995 participate after six months of service as a condition of employment. All employees on April 1, 1963 who were participants in a former plan had the right to elect voluntarily to transfer participation from the former plan to this plan. Those participants who elected to transfer ceased to be participants in the former plan, and all contributions made to a former plan were transferred to the fund of the Metro Plan. Employees eligible for coverage by any pension plan for teachers or any other plan provided by the Metropolitan Government are not eligible to participate in the Metro Plan.

Any Metro employee on January 1, 1971 who was then a participant of a former plan, or was not a member of any plan, could elect to become a member of the Metro System on January 1, 1972.

(See Item 19 below for Firemen and Policemen)

2. **Credited Service (Chapter 3.08.010)** (See Item 20 below for Firemen and Policemen)

(a) Members who were Metro employees on April 1, 1963:

Service includes all continuous service with Metro after April 1, 1963 and all service, prior to April 1, 1963, continuous or not, with the government of Metro, the City of Nashville or the County of Davidson excluding (i) all service covered by a retirement plan for teachers, (ii) any fire and police service, (iii) one-half of the service which was not covered by a former plan and (iv) all service which the Charter prohibits.

(b) Members who were Metro employees on January 1, 1972 and first became members of this plan on that date:

Service includes all continuous service with Metro after January 1, 1972, all service under any former plan of which he was a member, and one-half of any service not covered by a former plan.

(c) Metro employees hired after April 1, 1963:

Service includes all continuous, uninterrupted service after date of hire, excluding fire and police service.

3. **Normal Retirement** (See Item 21 below for Firemen and Policemen)

(a) **Condition** (Chapter 3.32.020)

The normal retirement date is the day following the member's attainment of age 65, but retirement may be postponed.

(b) **Benefit** (Chapter 3.32.020)

The monthly benefit, payable for life, is computed as 1/12 of the product of (1) and (2):

- (1) 1.00% of average base earnings plus 1.75% of average excess earnings; and
- (2) Years of credited Service.

"Base earnings" means that part of earnings in any calendar year determined in accordance with the following table:

<u>Year of Birth</u>	<u>Base Earnings</u>
1903 or earlier	\$4,800
1904 - 1906	5,400
1907 - 1913	6,000
1914 - 1928	6,600
1929 - 1935	7,200
1936 or later	7,800

"Excess earnings" means earnings in any calendar year in excess of "base earnings".

"Average earnings" means the annual average of monthly earnings for the sixty consecutive months of credited service (excluding service credited during periods of disability) during the past fifteen years in which earnings were highest or for such lesser number of full calendar months as have been actually completed.

(c) **Minimum Benefit (Chapter 3.40.050)**

A minimum normal retirement benefit is provided for participants who have completed at least ten years of Credited Service. The amount of the minimum benefit is \$15.00 per month per full year of Credited Service, subject to a maximum of twenty years of Credited Service.

4. **Early Retirement** (See Item 22 below for Firemen and Policemen)

(a) **Condition** (Chapter 3.32.030)

A member may retire after attainment of age 55 and completion of 20 years of service.

(b) **Benefit** (Chapter 3.32.030)

A member who retires early may receive his pension benefit in one of two ways:

- (1) A deferred monthly benefit commencing at age 65, computed in the manner set forth in 3(b) above. If the deferred retired member is subsequently rehired, his service will not be deemed interrupted but will not include the period he was not an employee. If the death of a member who elected a deferred monthly benefit occurs prior to his attainment of age 65, his beneficiary receives a refund of the pension contribution standing to his credit.
- (2) A reduced, immediate monthly income, the amount of which is determined as the actuarial equivalent of the deferred benefit in the preceding paragraph.

5. **Vested Pension after 5 Years of Service (Chapter 3.32.040)** (See Item 23 below for Firemen and Policemen)

A member who terminates his service after completion of 5 years of service, but before he is eligible for early or normal retirement, may leave his contributions in the plan and be eligible to receive the deferred benefits provided in 4(b)(1) above.

6. **Escalation Provision (Chapter 3.08.170)**

Benefits under 3, 4 and 5 above (and the equivalent items dealing with Firemen and Policemen) are increased each January 1 by the percentage (up to 5%) which the Consumer Price Index has increased during the 12 months ending on the September 30 prior to the calendar year for which the escalation applies. The percentage is applied to the original benefit. Escalated benefits never decrease.

7. **Disability Retirement**

(a) **Condition** (Chapters 3.28.020-3.28.040)

A member who becomes disabled after 10 years of service is eligible to receive a disability retirement benefit. A member who becomes disabled in the line of duty is eligible to receive a disability benefit regardless of length of service; such disability must occur while performing regular duties as an employee of the Metropolitan Government as determined by the Benefit Board. Disability and continuation of disability are determined by the Board.

(b) **Benefit** (Chapter 3.28.050)

The monthly disability benefit payable will be equal to 60% of the member's earnings during the 12 months prior to his disability, plus an additional 10% of such earnings in the event that the member has at least one dependent child, less any primary disability benefits he receives from Social Security.

If a disabled member receives a disability pension payment until age 65, his disability pension then ceases and thereafter he is eligible to receive a normal retirement pension, computed as in item 3 above or item 21 below, with the period of disability included as service in the determination of the benefit and as though his earnings had remained the same as his earnings prior to the date his disability pension commenced. A disabled member who has satisfied the requirements to receive an early retirement benefit may voluntarily elect to receive an early retirement benefit computed as in item 4 above or item 22 below.

8. **Death of a Disabled Member**

(a) **Condition** (Chapters 3.28.070-3.28.090)

In the event of the death of a disabled member prior to age 65 and while entitled to receive a Disability Pension, his surviving dependents are eligible for a survivorship benefit.

(b) **Benefit** (Chapter 3.28.070)

The survivorship benefit is 75% of the difference between (a) the member's disability retirement benefit, and (b) 75% of the widow's Social Security benefits.

The benefit will be payable to:

- (1) The widow until her death or remarriage, and thereafter to the guardian of the surviving dependent children, if any; or
- (2) The legal guardian of the surviving dependent children if no spouse survives the deceased disabled member.

All benefits for surviving children will cease when there are no surviving dependent children.

Benefits payable after the widow's age 65 cannot exceed the benefits which would have been payable on the member's retirement at 65 under Option A (100% Joint and Survivor) based on average earnings at date of disability.

9. **Death in Line of Duty (Chapter 3.28.080)**

If the death of a member occurs as a result of an act which was required of him in the performance of his duties as an employee of the Metropolitan Government, his surviving dependents are eligible for a benefit computed and payable as though the member had died after commencing to receive a disability benefit.

10. **Death Not in Line of Duty (Chapter 3.40.040)**

(a) **Condition**

If the death of a member occurs after he becomes eligible to retire and receive a normal, early, or vested retirement benefit as specified in items 3, 4 or 5 above or 21, 22 or 23 below, his surviving Beneficiary is eligible to receive a benefit.

(b) **Benefit**

The surviving Beneficiary will receive a benefit in accordance with the applicable option in effect or, if no option had been elected, in accordance with Option A as though the member had retired on the first day of the month prior to the month of death and had elected Option A.

11. **Hazardous Duty Death Benefit (Chapter 3.20.040)**

Indemnity of \$100,000 is paid to the estate of an employee whose death is a "direct result" of "engaging in hazardous duty" as defined in the plan. The Board may fully or partly self-insure this benefit.

12. **Minimum Benefit - Refund of Member Contributions (Chapter 3.40.010)**

If a member terminates his employment before completion of 10 years of service or dies before becoming eligible for a pre-retirement death benefit, he or his beneficiary is entitled to the refund of his contributions to the fund. If the member has completed 3 years of service when he terminates, he also is entitled to receive interest, at 3% per annum, on the amount in his contribution account at the end of each calendar year following his completion of 3 years of service.

Any employee terminating after 10 years' service may elect to receive a refund of his contributions with interest in lieu of all other benefits under the system.

If the member elects a refund before age 60, he forfeits any contributions he made to a predecessor plan.

13. **Re-employment (Chapter 3.40.010)**

Any member who terminates service and is subsequently rehired will receive credit for his prior period of service upon written application to the Board within one year of rehire. A rehired member who elected to

receive a refund of his contributions and is re-employed must repay such contributions with interest at 6% per year from the date of the refund in order to receive such credit. If a member's break in service occurs after January 1, 1996, credit for prior service will be granted only if (1) the break in service does not exceed five years and (2) the period of prior service equals or exceeds the period of the break.

14. **Options (Chapters 3.40.020, 3.40.030)**

The following options are available:

- A. Joint and 100% to survivor
- B. Joint and 50% to survivor
- C. Social Security Option
- D. 120 payments certain and life
- E. Joint and 100% to survivor with "popup"
- F. Joint and 50% to survivor with "popup"

15. **Contributions (Chapter 3.16.030)**

Prior to January 1, 1987, each member contributed

- (a) 3% of annual earnings subject to Social Security tax, plus
- (b) 6% of annual earnings not subject to Social Security tax.

Effective January 1, 1987, the Metropolitan Government assumed responsibility for the total cost of the plan, except that participating employees of the Metropolitan Board of Education continue to contribute at the pre-1987 rates. Effective July 1, 2001, the Metropolitan Government assumed responsibility for the total cost of the plan for all groups.

16. **Employer Contributions (Chapter 3.16.050)**

The Metropolitan Government contributes each year an amount equal to at least (a) 0.3% plus the Contribution Rate expressed as a percentage of valuation payroll for the prior year or (b) if less, the amount determined by an actuarial valuation of the plan, equal to a normal contribution plus a percentage of the unfunded past service liability, such percentage to be at a level at least equal to the actuarial valuation interest rate.

17. **Trust Funds (Chapters 3.08.010, 3.08.130, 3.08.140)**

Employee contributions are deposited in Trust Funds B and C. Employer contributions are divided on an actuarial basis between Trust Funds A, B and C.

Trust Fund A provides for disability benefits for all employees, including fire and police.

Trust Fund B is a pension benefit fund for benefits (other than disability benefits) arising from service other than credited fire and police service.

Trust Fund C is a pension benefit fund for benefits (other than disability benefits) arising from credited fire and police service.

The Treasurer of Metropolitan Government is the Trustee and the Investment Committee of Metropolitan Government manages investment of the funds.

18. **Administration**

The system is administered by the Metropolitan Employee Benefit Board.

DIVISION A members with fire and police service

The summary of benefits in Sections 1-18 preceding is generally applicable to members with credited fire and police service, with the following exceptions:

19. **Eligibility**

Metro employees who are in the uniformed fire service of any division of the Department of Fire of Metropolitan Government or who are police officers in the Department of Police as determined in accordance with the qualifications prescribed by applicable rules and regulations of the Civil Service Commission are eligible to be members of this plan as "Firemen" and "Policemen".

20. **Credited Service (Chapter 3.08.010)**

- (a) Firemen or Policemen who were Metro employees on April 1, 1963:

Service includes all continuous service with Metro after April 1, 1963 as a uniformed Fireman or Policeman. Service also includes all continuous service prior to April 1, 1963 which was included as service under a former plan and one half of all such service which was not covered by a prior plan.

- (b) Firemen or Policemen who were Metro employees on January 1, 1972, and first became members of this plan on that date:

Service includes all continuous service with Metro after January 1, 1972 as a uniformed Fireman or Policeman. Service also includes all continuous service prior to January 1, 1972 which was included as service under a former plan and one half of all such service which was not covered by a prior plan.

- (c) Metro Firemen or Policemen hired after April 1, 1963:

Service includes all continuous service as a uniformed Policeman or Fireman after the date of hire and prior to the member's compulsory retirement date. Service as a correctional officer or park ranger is considered Credited Service as "Firemen" or "Policemen."

21. **Normal Retirement**

- (a) **Condition** (Chapter 3.36.020)

The normal retirement date is the day following attainment of age 55 and completion of 20 years of service. Retirement at age 60 is compulsory.

(b) **Benefit** (Chapter 3.36.020)

The monthly benefit, payable for life, is computed as 1/12 of the sum of (1) and (2), as follows:

- (1) 2% of average annual earnings for each year of service not in excess of 25 years, and
- (2) 1.75% of average annual earnings for each year of service in excess of 25 years.

However, after the retired member is age 65 or after he has commenced receiving Social Security Benefits, whichever occurs first, the above monthly benefit shall be reduced by the amount of his monthly Primary Social Security Benefit.

In no instance will the monthly benefit be less than 1/12 of the product of (3) and (4), as follows:

- (3) 1% of average base earnings plus 1.75% of average excess earnings; and
- (4) Years of credited service.

(c) **Minimum Benefit (Chapter 3.40.050)**

A minimum normal retirement benefit is provided for participants who have completed at least ten years of Credited Service. The amount of the minimum benefit is \$15.00 per month per full year of Credited Service, subject to a maximum of twenty years of Credited Service.

22. **Early Retirement (Chapter 3.36.030)**

(a) **Condition**

A member may retire early after attaining age 55 or after attaining age 50 and completion of 20 years of service.

(b) **Benefit**

A member who retires early may receive his pension benefit in either of two ways:

- (1) A deferred monthly benefit commencing at age 62, computed in the manner set forth in item 21(b) above. If the deferred retired member is subsequently rehired, his service will not be deemed interrupted but shall not include the period he was not an employee.
- (2) A reduced immediate monthly benefit determined as the actuarial equivalent of the deferred benefit provided in the preceding paragraph.

23. *Vested Pension After 5 Years of Service (Chapter 3.36.040)*

A member who terminates his service after completion of 5 years of service and before he is eligible for Early or Normal Retirement may leave his contributions in the plan and be eligible to receive a deferred benefit computed and payable as in item 22(b)(1) above.

DIVISION B

24. **Eligibility (Chapter 3.12.031)**

All persons hired by the Metropolitan Government on or after July 1, 1995 participate after six months of service as a condition of employment. All employees on July 1, 1995 who were participants in Division A or a superseded plan had the right to elect voluntarily to transfer participation from the former plan to Division B effective January 1, 1996.

(See Item 43 below for Firemen and Policemen)

25. **Credited Service (Chapter 3.08.010)** (See Item 44 below for Firemen and Policemen)

The language of Item 2 above also applies to Division B.

26. **Normal Retirement** (See Item 45 below for Firemen and Policemen)

(a) **Condition** (Chapter 3.08.012)

The normal retirement date is the earlier of (i) the date when the sum of the member's age last birthday and his credited employee service equals 85, but not before age 60; and (ii) the date when the member reaches age 65 and has completed five years of credited employee service.

(b) **Benefit** (Chapter 3.33.020)

The monthly benefit, payable for life, is computed as 1/12 of the product of (1) and (2):

(1) 1.75% of average earnings; and

(2) Years of Credited Service.

"Average earnings" means the annual average of monthly earnings for the sixty consecutive months of credited service (excluding service credited during periods of disability) during the past fifteen years in which earnings were highest or for such lesser number of full calendar months as have been actually completed.

(c) **Minimum Benefit (Chapter 3.40.050)**

A minimum normal retirement benefit is provided for participants who have completed at least ten years of Credited Service. The amount of the minimum benefit is \$15.00 per month per full year of Credited Service, subject to a maximum of twenty years of Credited Service.

27. **Early Retirement** (See Item 46 below for Firemen and Policemen)

(a) **Condition** (Chapter 3.33.030)

A member may retire after attainment of age 50 and completion of 10 years of service.

(b) **Benefit** (Chapter 3.33.030)

A member who retires early may receive his pension benefit in one of two ways:

- (1) A deferred monthly benefit commencing at his normal retirement date, computed in the manner set forth in 26(b) above. If the deferred retired member is subsequently rehired, his service will not be deemed interrupted but will not include the period he was not an employee. If the death of a member who elected a deferred monthly benefit occurs before his benefits commence, his beneficiary receives a refund of the pension contribution standing to his credit.
- (2) A reduced, immediate monthly income. The amount of the immediate annuity is determined as the deferred benefit in the preceding paragraph, decreased by 4% for each of the first five years by which his benefit commencement date precedes the date on which he could receive his deferred benefit, and by 8% for each additional such year. The immediate benefit shall not be less than the actuarial equivalent of the member's deferred benefit.

28. **Vested Pension after 5 Years of Service (Chapter 3.33.040)** (See Item 47 below for Firemen and Policemen)

A member who terminates his service after completion of 5 years of service, but before he is eligible for early or normal retirement, may leave his contributions in the plan and be eligible to receive the deferred benefits provided in 27(b)(1) above.

29. **Unused Sick Leave at Service Retirement (Chapter 3.33.050)**.

A member who becomes eligible for a service retirement benefit receives credit for unused sick leave time for purposes of calculating his benefit under Item 26(b) and to reduce the age at which he is eligible to receive an unreduced benefit under Item 26, 27 or 28.

30. **Escalation Provision (Chapter 3.08.171)**

Benefits under 26, 27 and 28 above (and the equivalent items dealing with Firemen and Policemen) are increased each January 1 by 80% of the percentage (up to 5%) by which the increase in the Consumer Price Index during the 12 months ending on the September 30 prior to the calendar year for which the escalation applies exceeds 1%. The percentage is applied to the original benefit. Escalated benefits never decrease.

31. **Disability Retirement**

(a) **Condition** (Chapters 3.29.020-3.29.040)

A member who becomes disabled after 10 years of service is eligible to receive a disability retirement benefit. A member who becomes disabled in the line of duty is eligible to receive a disability benefit regardless of length of service; such disability must occur while performing regular duties as an employee of the Metropolitan Government as determined by the Benefit Board. Disability and continuation of disability are determined by the Board.

(b) **Benefit** (Chapter 3.29.050)

The monthly disability benefit payable will be equal to 50% of the member's earnings during the 12 months prior to his disability, plus an additional 10% of such earnings in the event that the member has at least one dependent child. If the member becomes eligible for social Security disability benefits, the 50% figure in the preceding sentence is reduced to 30%.

If a disabled member receives a disability pension payment until his normal retirement date (calculated as if his service had continued), his disability pension then ceases and thereafter he is eligible to receive a normal retirement pension, computed as in item 26 above or item 45 below, with the period of disability included as service in the determination of the benefit and as though his earnings had remained the same as his earnings prior to the date his disability pension commenced. A disabled member who has satisfied the requirements to receive an early retirement benefit may voluntarily elect to receive an early retirement benefit computed as in item 27 above or item 46 below.

If a disabled member returns to work with Metro at a rate of pay less than he was receiving at the time he became disabled, the plan will make up the difference between his current base salary and his pre-disability base salary.

32. **Death of a Disabled Member**

(a) **Condition** (Chapters 3.29.070-3.29.080)

In the event of the death of a disabled member prior to his normal retirement date and while entitled to receive a Disability Pension, his surviving dependents are eligible for a survivorship benefit.

(b) **Benefit** (Chapter 3.29.070)

The survivorship benefit is 25% of the member's average earnings at the time of his disability, but not less than the benefit that would have commenced at the member's date of death had he retired instead of dying, based on his average earnings and service at the time of his termination of service, in accordance with Option A.

The benefit will be payable to:

- (1) The widow until her death or remarriage, and thereafter to the guardian of the surviving dependent children, if any; or
- (2) The legal guardian of the surviving dependent children if no spouse survives the deceased disabled member.

All benefits for surviving children will cease when there are no surviving dependent children.

33. **Death in Line of Duty (Chapter 3.29.080)**

If the death of a member occurs as a result of an act which was required of him in the performance of his duties as an employee of the Metropolitan Government, his surviving dependents are eligible for a benefit computed and payable as though the member had died after commencing to receive a disability benefit.

34. **Death Not in Line of Duty (Chapter 3.40.041)**

(a) **Condition**

If the death of a member occurs after he becomes eligible to retire and receive a normal or early retirement benefit as specified in items 26, 27 or 28 above or 45, 46, or 47 below, his surviving Beneficiary is eligible to receive a benefit.

(b) **Benefit**

The surviving Beneficiary will receive a benefit in accordance with the applicable option in effect or, if no option had been elected, in accordance with Option A as though the member had retired on the first day of the month prior to the month of death and had elected Option A. In no case, however, will an eligible employee's death benefit be less than 25% of his average earnings over the last twelve months preceding his death.

35. **Hazardous Duty Death Benefit (Chapter 3.20.040)**

The language of Item 11 above also applies to Division B.

36. **Minimum Benefit - Refund of Member Contributions (Chapter 3.40.010)**

The language of Item 12 above also applies to Division B.

37. **Re-employment (Chapter 3.40.010)**

The language of Item 13 above also applies to Division B.

38. **Options (Chapters 3.40.020, 3.40.030)**

The language of Item 14 above also applies to Division B.

39. **Contributions (Chapter 3.16.030)**

The language of Item 15 above also applies to Division B.

40. **Employer Contributions (Chapter 3.16.050)**

The language of Item 16 above also applies to Division B.

41. **Trust Funds (Chapters 3.08.010, 3.08.130, 3.08.140)**

Employee contributions are deposited in Trust Funds B and C. Employer contributions are divided on an actuarial basis between Trust Funds A, B and C.

Trust Fund A provides for disability benefits for all employees, including fire and police.

Trust Fund B is a pension benefit fund for benefits (other than disability benefits) arising from service other than credited fire and police service.

Trust Fund C is a pension benefit fund for benefits (other than disability benefits) arising from credited fire and police service.

The Treasurer of Metropolitan Government is the Trustee and the Investment Committee of Metropolitan Government manages investment of the funds.

42. **Administration**

The language of Item 18 above also applies to Division B.

DIVISION B members with fire and police service

The summary of benefits in Sections 24-42 preceding is generally applicable to members with credited fire and police service, with the following exceptions:

43. Eligibility (3.08.010, 3.08.012, 3.12.031)

All Firemen and Policemen hired by The Metropolitan Government on or after July 1, 1995 participate after six months of service as a condition of employment. All employees on July 1, 1995 who were participating as Firemen or Policemen in Division A or a superseded plan had the right to elect voluntarily to transfer participation from the former plan to Division B as Firemen and Policemen effective January 1, 1996.

Metro employees who are in the uniformed fire service (fire suppression, fire prevention, fire training, fire inspection, Emergency Medical Technicians, and paramedics) of any division of the Department of Fire of Metropolitan Government, or who are police officers in the Department of Police as determined in accordance with the qualifications prescribed by applicable rules and regulations of the Civil Service Commission, are eligible to be members of this plan as "Firemen" and "Policemen".

44. Credited Service (Chapter 3.08.010)

The language of Item 20 above also applies to Division B.

45. Normal Retirement

(a) Condition (Chapter 3.08.012)

The normal retirement date is the date when the sum of the member's age last birthday and his credited police and fire service equals 75, but not before age 53 nor after age 60. Retirement at age 60 is compulsory.

(b) Benefit (Chapter 3.37.020)

The monthly benefit, payable for life, is computed as 1/12 of the sum of (1) and (2), as follows:

- (1) 2% of average annual earnings for each year of service not in excess of 25 years; and
- (2) 1.75% of average annual earnings for each year of service in excess of 25 years.

(c) **Minimum Benefit (Chapter 3.40.050)**

A minimum normal retirement benefit is provided for participants who have completed at least ten years of Credited Service. The amount of the minimum benefit is \$15.00 per month per full year of Credited Service, subject to a maximum of twenty years of Credited Service.

46. **Early Retirement (Chapter 3.37.030)**

(a) **Condition**

A member may retire early after attaining age 45 and completion of 10 years of service.

(b) **Benefit**

A member who retires early may receive his pension benefit in either of two ways:

- (1) A deferred monthly benefit commencing at his normal retirement date, computed in the manner set forth in item 45(b) above. If the deferred retired member is subsequently rehired, his service will not be deemed interrupted but shall not include the period he was not an employee. If the death of a member who elected a deferred monthly benefit occurs before his benefits commence, his beneficiary receives a refund of the pension contribution standing to his credit.
- (2) A reduced, immediate monthly income. The amount of the immediate annuity is determined as the deferred benefit in the preceding paragraph, decreased by 4% for each of the first five years by which his benefit commencement date precedes the date on which he could receive his deferred benefit, and by 8% for each additional such year. The immediate benefit shall not be less than the actuarial equivalent of the member's deferred benefit.

47. **Vested Pension After 5 Years of Service (Chapter 3.37.040)**

A member who terminates his service after completion of 5 years of service and before he is eligible for Early or Normal Retirement may leave his contributions in the plan and be eligible to receive a deferred benefit computed and payable as in item 46(b)(1) above.

48. **Unused Sick Leave at Early Retirement (Chapter 3.37.050)**

A member who becomes eligible for a service retirement benefit receives credit for unused sick leave time for purposes of calculating his benefit under Item 45(b) and to reduce the age at which he is eligible to receive an unreduced benefit under Item 45, 46, or 47.

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TABLE I-1
 ACTIVE PARTICIPANTS' AVERAGE EARNINGS BY AGE AND SERVICE
 METRO GENERAL GOVERNMENT
 DIVISION A

Age Group	Years of Service					TOTAL
	0-9	10-19	20-29	30-39	40+	
Under 20	0	0	0	0	0	0
	0	0	0	0	0	0
20-24	0	0	0	0	0	0
	0	0	0	0	0	0
25-29	0	0	0	0	0	0
	0	0	0	0	0	0
30-34	0	0	0	0	0	0
	0	0	0	0	0	0
35-39	0	0	0	0	0	0
	0	0	0	0	0	0
40-44	0	0	0	0	0	0
	0	0	0	0	0	0
45-49	0	0	0	0	0	0
	0	0	0	0	0	0
50-54	0	0	7	1	0	8
	0	0	62,324	60,972	0	62,155
55-59	0	0	7	2	0	9
	0	0	50,893	96,729	0	61,079
60-64	0	0	6	3	0	9
	0	0	73,976	38,910	0	62,288
65-69	0	0	1	2	0	3
	0	0	107,555	29,645	0	55,615
70-74	0	0	0	0	0	0
	0	0	0	0	0	0
75 and up	1	0	0	0	0	1
	33,398	0	0	0	0	33,398
TOTAL	1	0	21	8	0	30
	33,398	0	63,997	53,806	0	60,259

TABLE I-2
ACTIVE PARTICIPANTS' AVERAGE EARNINGS BY AGE AND SERVICE
METRO FIRE AND POLICE
DIVISION A

Age Group	Years of Service					TOTAL
	0-9	10-19	20-29	30-39	40+	
Under 20	0	0	0	0	0	0
	0	0	0	0	0	0
20-24	0	0	0	0	0	0
	0	0	0	0	0	0
25-29	0	0	0	0	0	0
	0	0	0	0	0	0
30-34	0	0	0	0	0	0
	0	0	0	0	0	0
35-39	0	0	0	0	0	0
	0	0	0	0	0	0
40-44	0	0	0	0	0	0
	0	0	0	0	0	0
45-49	0	0	0	0	0	0
	0	0	0	0	0	0
50-54	0	0	2	0	0	2
	0	0	59,288	0	0	59,288
55-59	0	0	1	1	0	2
	0	0	82,665	105,963	0	94,314
60-64	0	0	1	1	0	2
	0	0	96,320	92,454	0	94,387
65-69	0	1	0	0	0	1
	0	47,192	0	0	0	47,192
70-74	0	0	0	0	0	0
	0	0	0	0	0	0
75 and up	0	0	0	0	0	0
	0	0	0	0	0	0
TOTAL	0	1	4	2	0	7
	0	47,192	74,390	99,208	0	77,596

TABLE I-3
 ACTIVE PARTICIPANTS' AVERAGE EARNINGS BY AGE AND SERVICE
 TOTAL
 DIVISION A

Age Group	Years of Service					TOTAL
	0-9	10-19	20-29	30-39	40+	
Under 20	0	0	0	0	0	0
	0	0	0	0	0	0
20-24	0	0	0	0	0	0
	0	0	0	0	0	0
25-29	0	0	0	0	0	0
	0	0	0	0	0	0
30-34	0	0	0	0	0	0
	0	0	0	0	0	0
35-39	0	0	0	0	0	0
	0	0	0	0	0	0
40-44	0	0	0	0	0	0
	0	0	0	0	0	0
45-49	0	0	0	0	0	0
	0	0	0	0	0	0
50-54	0	0	9	1	0	10
	0	0	61,649	60,972	0	61,581
55-59	0	0	8	3	0	11
	0	0	54,865	99,807	0	67,122
60-64	0	0	7	4	0	11
	0	0	77,168	52,296	0	68,124
65-69	0	1	1	2	0	4
	0	47,192	107,555	29,645	0	53,509
70-74	0	0	0	0	0	0
	0	0	0	0	0	0
75 and up	1	0	0	0	0	1
	33,398	0	0	0	0	33,398
TOTAL	1	1	25	10	0	37
	33,398	47,192	65,660	62,887	0	63,539

TABLE I-4
ACTIVE PARTICIPANTS' AVERAGE EARNINGS BY AGE AND SERVICE
METRO GENERAL GOVERNMENT
DIVISION B

Age Group	Years of Service					TOTAL
	0-9	10-19	20-29	30-39	40+	
Under 20	3	0	0	0	0	3
	25,622	0	0	0	0	25,622
20-24	155	0	0	0	0	155
	31,716	0	0	0	0	31,716
25-29	650	2	0	0	0	652
	38,252	53,211	0	0	0	38,298
30-34	870	53	0	0	0	923
	42,592	53,849	0	0	0	43,238
35-39	743	201	2	0	0	946
	45,724	57,764	64,163	0	0	48,321
40-44	643	351	57	0	0	1051
	47,921	59,682	68,401	0	0	52,960
45-49	490	311	195	2	0	998
	44,762	59,381	64,028	52,311	0	53,097
50-54	486	328	286	51	0	1151
	45,771	57,417	68,725	73,635	0	56,028
55-59	394	332	313	191	5	1235
	46,090	56,288	63,984	76,401	100,185	58,273
60-64	340	259	233	128	20	980
	47,637	55,631	60,549	75,190	87,646	57,235
65-69	152	115	86	21	18	392
	47,297	56,076	62,936	59,227	89,872	55,898
70-74	40	40	19	8	9	116
	42,299	46,378	68,281	65,059	66,437	51,404
75 and up	21	13	5	2	3	44
	48,793	38,971	51,352	67,821	58,655	47,719
TOTAL	4,987	2,005	1,196	403	55	8,646
	44,142	57,220	64,607	74,384	84,462	51,672

TABLE I-5
ACTIVE PARTICIPANTS' AVERAGE EARNINGS BY AGE AND SERVICE
METRO FIRE AND POLICE
DIVISION B

Age Group	Years of Service					TOTAL
	0-9	10-19	20-29	30-39	40+	
Under 20	0	0	0	0	0	0
	0	0	0	0	0	0
20-24	73	0	0	0	0	73
	51,951	0	0	0	0	51,951
25-29	395	0	0	0	0	395
	62,391	0	0	0	0	62,391
30-34	508	45	0	0	0	553
	68,556	82,123	0	0	0	69,660
35-39	304	221	1	0	0	526
	70,184	88,335	97,648	0	0	77,863
40-44	141	244	35	0	0	420
	67,298	89,459	97,410	0	0	82,682
45-49	88	145	230	0	0	463
	69,083	87,612	103,644	0	0	92,054
50-54	44	93	249	20	0	406
	73,612	87,888	103,745	112,833	0	97,295
55-59	34	37	80	77	1	229
	65,078	81,607	104,502	106,773	101,314	95,699
60-64	9	9	24	44	3	89
	61,262	72,056	90,947	102,464	132,187	93,119
65-69	2	2	6	9	3	22
	59,301	71,968	89,995	95,345	105,127	89,818
70-74	0	0	0	0	0	0
	0	0	0	0	0	0
75 and up	0	0	0	0	0	0
	0	0	0	0	0	0
TOTAL	1,598	796	625	150	7	3,176
	66,514	87,607	102,817	105,631	116,179	80,901

TABLE I-6
ACTIVE PARTICIPANTS' AVERAGE EARNINGS BY AGE AND SERVICE
TOTAL
DIVISION B

Age Group	Years of Service					TOTAL
	0-9	10-19	20-29	30-39	40+	
Under 20	3	0	0	0	0	3
	25,622	0	0	0	0	25,622
20-24	228	0	0	0	0	228
	38,195	0	0	0	0	38,195
25-29	1045	2	0	0	0	1047
	47,376	53,211	0	0	0	47,387
30-34	1378	98	0	0	0	1476
	52,163	66,832	0	0	0	53,137
35-39	1047	422	3	0	0	1472
	52,826	73,774	75,325	0	0	58,877
40-44	784	595	92	0	0	1471
	51,406	71,893	79,437	0	0	61,446
45-49	578	456	425	2	0	1461
	48,465	68,358	85,467	52,311	0	65,443
50-54	530	421	535	71	0	1557
	48,082	64,148	85,024	84,676	0	66,789
55-59	428	369	393	268	6	1464
	47,598	58,827	72,232	85,127	100,373	64,127
60-64	349	268	257	172	23	1069
	47,988	56,183	63,388	82,167	93,455	60,223
65-69	154	117	92	30	21	414
	47,453	56,348	64,701	70,062	92,051	57,700
70-74	40	40	19	8	9	116
	42,299	46,378	68,281	65,059	66,437	51,404
75 and up	21	13	5	2	3	44
	48,793	38,971	51,352	67,821	58,655	47,719
TOTAL	6,585	2,801	1,821	553	62	11,822
	49,571	65,856	77,721	82,860	88,043	59,524

TABLE I-7
ACTIVE PARTICIPANTS' AVERAGE EARNINGS BY AGE AND SERVICE
METRO GENERAL GOVERNMENT
COMBINED

Age Group	Years of Service					TOTAL
	0-9	10-19	20-29	30-39	40+	
Under 20	3	0	0	0	0	3
	25,622	0	0	0	0	25,622
20-24	155	0	0	0	0	155
	31,716	0	0	0	0	31,716
25-29	650	2	0	0	0	652
	38,252	53,211	0	0	0	38,298
30-34	870	53	0	0	0	923
	42,592	53,849	0	0	0	43,238
35-39	743	201	2	0	0	946
	45,724	57,764	64,163	0	0	48,321
40-44	643	351	57	0	0	1051
	47,921	59,682	68,401	0	0	52,960
45-49	490	311	195	2	0	998
	44,762	59,381	64,028	52,311	0	53,097
50-54	486	328	293	52	0	1159
	45,771	57,417	68,572	73,391	0	56,070
55-59	394	332	320	193	5	1244
	46,090	56,288	63,698	76,611	100,185	58,294
60-64	340	259	239	131	20	989
	47,637	55,631	60,886	74,359	87,646	57,281
65-69	152	115	87	23	18	395
	47,297	56,076	63,449	56,654	89,872	55,895
70-74	40	40	19	8	9	116
	42,299	46,378	68,281	65,059	66,437	51,404
75 and up	22	13	5	2	3	45
	48,093	38,971	51,352	67,821	58,655	47,401
TOTAL	4,988	2,005	1,217	411	55	8,676
	44,140	57,220	64,596	73,983	84,462	51,702

TABLE I-8

ACTIVE PARTICIPANTS' AVERAGE EARNINGS BY AGE AND SERVICE
METRO FIRE AND POLICE
COMBINED

Age Group	Years of Service					TOTAL
	0-9	10-19	20-29	30-39	40+	
Under 20	0	0	0	0	0	0
	0	0	0	0	0	0
20-24	73	0	0	0	0	73
	51,951	0	0	0	0	51,951
25-29	395	0	0	0	0	395
	62,391	0	0	0	0	62,391
30-34	508	45	0	0	0	553
	68,556	82,123	0	0	0	69,660
35-39	304	221	1	0	0	526
	70,184	88,335	97,648	0	0	77,863
40-44	141	244	35	0	0	420
	67,298	89,459	97,410	0	0	82,682
45-49	88	145	230	0	0	463
	69,083	87,612	103,644	0	0	92,054
50-54	44	93	251	20	0	408
	73,612	87,888	103,391	112,833	0	97,109
55-59	34	37	81	78	1	231
	65,078	81,607	104,233	106,763	101,314	95,687
60-64	9	9	25	45	3	91
	61,262	72,056	91,162	102,241	132,187	93,146
65-69	2	3	6	9	3	23
	59,301	63,709	89,995	95,345	105,127	87,964
70-74	0	0	0	0	0	0
	0	0	0	0	0	0
75 and up	0	0	0	0	0	0
	0	0	0	0	0	0
TOTAL	1,598	797	629	152	7	3,183
	66,514	87,556	102,636	105,547	116,179	80,894

TABLE I-9
ACTIVE PARTICIPANTS' AVERAGE EARNINGS BY AGE AND SERVICE
TOTAL
COMBINED

Age Group	Years of Service					TOTAL
	0-9	10-19	20-29	30-39	40+	
Under 20	3	0	0	0	0	3
	25,622	0	0	0	0	25,622
20-24	228	0	0	0	0	228
	38,195	0	0	0	0	38,195
25-29	1045	2	0	0	0	1047
	47,376	53,211	0	0	0	47,387
30-34	1378	98	0	0	0	1476
	52,163	66,832	0	0	0	53,137
35-39	1047	422	3	0	0	1472
	52,826	73,774	75,325	0	0	58,877
40-44	784	595	92	0	0	1471
	51,406	71,893	79,437	0	0	61,446
45-49	578	456	425	2	0	1461
	48,465	68,358	85,467	52,311	0	65,443
50-54	530	421	544	72	0	1567
	48,082	64,148	84,638	84,347	0	66,756
55-59	428	369	401	271	6	1475
	47,598	58,827	71,886	85,290	100,373	64,150
60-64	349	268	264	176	23	1080
	47,988	56,183	63,753	81,488	93,455	60,303
65-69	154	118	93	32	21	418
	47,453	56,270	65,162	67,536	92,051	57,660
70-74	40	40	19	8	9	116
	42,299	46,378	68,281	65,059	66,437	51,404
75 and up	22	13	5	2	3	45
	48,093	38,971	51,352	67,821	58,655	47,401
TOTAL	6,586	2,802	1,846	563	62	11,859
	49,569	65,849	77,558	82,505	88,043	59,537

TABLE II-1
 PROJECTED SCHEDULE OF BENEFIT PAYMENTS
 ACTIVE LIVES
 FIRE AND POLICE

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability (Present Value of Benefits)
2022	4,070,346	1,075,249,129
2023	8,544,663	1,146,303,760
2024	13,311,215	1,217,701,297
2025	18,393,902	1,289,163,281
2026	23,746,713	1,360,367,022
2027	29,327,657	1,431,014,865
2028	35,046,827	1,500,831,780
2029	40,979,115	1,569,616,539
2030	47,130,662	1,637,076,312
2031	53,440,843	1,702,891,418
2032	59,971,224	1,766,782,545
2033	66,567,466	1,828,387,106
2034	73,233,145	1,887,476,876
2035	80,053,119	1,943,803,952
2036	87,164,333	1,997,015,251
2037	94,503,369	2,046,591,233
2038	102,095,467	2,092,041,633
2039	109,520,092	2,132,815,739
2040	116,818,904	2,168,759,545
2041	124,126,854	2,199,665,148
2042	131,673,726	2,225,170,414
2043	138,945,514	2,244,650,037
2044	145,873,731	2,257,966,932
2045	152,665,195	2,265,045,306
2046	159,086,373	2,265,590,000

TABLE II-2
PROJECTED SCHEDULE OF BENEFIT PAYMENTS
ACTIVE LIVES
GENERAL GOVERNMENT

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability (Present Value of Benefits)
2022	8,027,969	1,319,485,241
2023	15,222,486	1,403,540,260
2024	22,623,168	1,486,032,806
2025	30,322,742	1,566,640,124
2026	38,294,394	1,644,920,894
2027	46,143,951	1,720,430,659
2028	54,228,242	1,793,101,816
2029	62,459,547	1,862,492,713
2030	70,564,544	1,928,221,572
2031	78,854,283	1,990,162,779
2032	86,850,227	2,047,859,991
2033	95,109,281	2,101,320,205
2034	103,254,933	2,149,974,514
2035	111,328,946	2,193,603,874
2036	119,293,747	2,231,930,686
2037	127,282,575	2,264,696,806
2038	134,953,766	2,291,488,117
2039	142,530,037	2,312,215,138
2040	149,886,596	2,326,551,609
2041	157,170,822	2,334,277,595
2042	164,236,051	2,335,005,226
2043	170,769,865	2,328,471,279
2044	176,739,248	2,314,717,458
2045	181,970,915	2,293,822,559
2046	186,528,411	2,266,050,241

TABLE II-3
 PROJECTED SCHEDULE OF BENEFIT PAYMENTS
 ACTIVE LIVES
 METRO TOTAL

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability (Present Value of Benefits)
2022	12,153,700	2,403,806,848
2023	23,855,865	2,559,494,248
2024	36,065,665	2,713,968,026
2025	48,934,773	2,866,617,824
2026	62,397,861	3,016,633,581
2027	75,888,715	3,163,216,146
2028	89,787,210	3,306,096,456
2029	104,035,822	3,444,593,445
2030	118,372,291	3,578,037,911
2031	133,073,051	3,705,985,244
2032	147,672,139	3,827,673,604
2033	162,584,639	3,942,770,092
2034	177,491,762	4,050,488,898
2035	192,462,324	4,150,319,147
2036	207,599,375	4,241,642,982
2037	222,982,044	4,323,692,638
2038	238,261,230	4,395,564,707
2039	253,283,605	4,456,653,863
2040	267,945,800	4,506,471,103
2041	282,531,011	4,544,600,177
2042	297,128,966	4,570,302,593
2043	310,908,287	4,582,695,295
2044	323,775,525	4,581,693,888
2045	335,764,122	4,567,304,792
2046	346,704,070	4,539,500,262

TABLE III-1
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 DIVISION A
 METRO DISABLED RETIRED LIVES

Age Group	Number	Total	Average
Under 20	-	-	-
20 - 29	1	14,094	14,094
30 - 39	-	-	-
40 - 49	-	-	-
50 - 59	9	106,743	11,860
60 - 69	22	342,863	15,585
70 - 79	37	344,953	9,323
80 - 89	20	202,424	10,121
90 - 99	4	27,564	6,891
100 - 109	-	-	-
110 - 120	-	-	-
Total	93	1,038,640	11,168

TABLE III-2
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 DIVISION A
 METRO GENERAL GOVERNMENT RETIRED LIVES

Age Group	Number	Total	Average
Under 20	-	-	-
20 - 29	-	-	-
30 - 39	2	4,811	2,405
40 - 49	1	13,628	13,628
50 - 59	7	112,246	16,035
60 - 69	68	933,131	13,723
70 - 79	146	1,790,583	12,264
80 - 89	170	1,905,879	11,211
90 - 99	120	1,270,360	10,586
100 - 109	4	32,136	8,034
110 - 120	-	-	-
Total	518	6,062,775	11,704

TABLE III-3
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 DIVISION A
 METRO FIRE AND POLICE RETIRED LIVES

Age Group	Number	Total	Average
Under 20	-	-	-
20 - 29	2	35,272	17,636
30 - 39	-	-	-
40 - 49	-	-	-
50 - 59	1	13,622	13,622
60 - 69	35	909,822	25,995
70 - 79	102	2,451,484	24,034
80 - 89	37	757,913	20,484
90 - 99	3	37,116	12,372
100 - 109	-	-	-
110 - 120	-	-	-
Total	180	4,205,228	23,362

TABLE III-4
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 DIVISION A
 METRO TOTALS - RETIRED LIVES

Age Group	Number	Total	Average
Under 20	-	-	-
20 - 29	3	49,366	16,455
30 - 39	2	4,811	2,405
40 - 49	1	13,628	13,628
50 - 59	17	232,611	13,683
60 - 69	125	2,185,816	17,487
70 - 79	285	4,587,019	16,095
80 - 89	227	2,866,216	12,627
90 - 99	127	1,335,040	10,512
100 - 109	4	32,136	8,034
110 - 120	-	-	-
Total	791	11,306,643	14,294

TABLE III-5
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 DIVISION B
 METRO DISABLED RETIRED LIVES

Age Group	Number	Total	Average
Under 20	2	26,550	13,275
20 - 29	1	8,313	8,313
30 - 39	12	385,354	32,113
40 - 49	94	2,182,807	23,221
50 - 59	204	3,568,261	17,491
60 - 69	125	1,576,142	12,609
70 - 79	36	412,255	11,452
80 - 89	14	170,616	12,187
90 - 99	1	2,980	2,980
100 - 109	1	14,717	14,717
110 - 120	-	-	-
Total	490	8,347,995	17,037

TABLE III-6
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 DIVISION B
 METRO GENERAL GOVERNMENT RETIRED LIVES

Age Group	Number	Total	Average
Under 20	8	43,984	5,498
20 - 29	5	48,023	9,605
30 - 39	10	176,859	17,686
40 - 49	32	460,928	14,404
50 - 59	330	6,897,126	20,900
60 - 69	2,513	44,995,765	17,905
70 - 79	2,734	44,394,101	16,238
80 - 89	1,086	15,895,900	14,637
90 - 99	120	1,648,952	13,741
100 - 109	-	-	-
110 - 120	-	-	-
Total	6,838	114,561,637	16,754

TABLE III-7
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 DIVISION B
 METRO FIRE AND POLICE RETIRED LIVES

Age Group	Number	Total	Average
Under 20	6	40,726	6,788
20 - 29	2	27,052	13,526
30 - 39	1	4,655	4,655
40 - 49	24	397,799	16,575
50 - 59	322	10,260,529	31,865
60 - 69	742	23,330,900	31,443
70 - 79	616	19,933,625	32,360
80 - 89	162	5,666,544	34,979
90 - 99	4	131,810	32,953
100 - 109	-	-	-
110 - 120	-	-	-
Total	1,879	59,793,640	31,822

TABLE III-8
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 DIVISION B
 METRO TOTALS - RETIRED LIVES

Age Group	Number	Total	Average
Under 20	16	111,260	6,954
20 - 29	8	83,388	10,423
30 - 39	23	566,868	24,646
40 - 49	150	3,041,534	20,277
50 - 59	856	20,725,916	24,213
60 - 69	3,380	69,902,807	20,681
70 - 79	3,386	64,739,981	19,120
80 - 89	1,262	21,733,060	17,221
90 - 99	125	1,783,743	14,270
100 - 109	1	14,717	14,717
110 - 120	-	-	-
Total	9,207	182,703,273	19,844

TABLE III-9
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 COMBINED
 METRO DISABLED RETIRED LIVES

Age Group	Number	Total	Average
Under 20	2	26,550	13,275
20 - 29	2	22,407	11,204
30 - 39	12	385,354	32,113
40 - 49	94	2,182,807	23,221
50 - 59	213	3,675,004	17,254
60 - 69	147	1,919,005	13,054
70 - 79	73	757,208	10,373
80 - 89	34	373,039	10,972
90 - 99	5	30,544	6,109
100 - 109	1	14,717	14,717
110 - 120	0	-	-
Total	583	9,386,636	16,101

TABLE III-10
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 COMBINED
 METRO GENERAL GOVERNMENT RETIRED LIVES

Age Group	Number	Total	Average
Under 20	8	43,984	5,498
20 - 29	5	48,023	9,605
30 - 39	12	181,670	15,139
40 - 49	33	474,556	14,380
50 - 59	337	7,009,372	20,799
60 - 69	2581	45,928,896	17,795
70 - 79	2880	46,184,683	16,036
80 - 89	1256	17,801,779	14,173
90 - 99	240	2,919,312	12,164
100 - 109	4	32,136	8,034
110 - 120	0	-	-
Total	7356	120,624,413	16,398

TABLE III-11
DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
COMBINED
METRO FIRE AND POLICE RETIRED LIVES

Age Group	Number	Total	Average
Under 20	6	40,726	6,788
20 - 29	4	62,323	15,581
30 - 39	1	4,655	4,655
40 - 49	24	397,799	16,575
50 - 59	323	10,274,151	31,809
60 - 69	777	24,240,721	31,198
70 - 79	718	22,385,109	31,177
80 - 89	199	6,424,458	32,284
90 - 99	7	168,926	24,132
100 - 109	-	-	-
110 - 120	-	-	-
Total	2,059	63,998,868	31,083

TABLE III-12
 DISTRIBUTION OF BASE BENEFITS BY AGE GROUPS
 COMBINED
 METRO TOTALS - RETIRED LIVES

Age Group	Number	Total	Average
Under 20	16	111,260	6,954
20 - 29	11	132,753	12,068
30 - 39	25	571,679	22,867
40 - 49	151	3,055,162	20,233
50 - 59	873	20,958,527	24,007
60 - 69	3,505	72,088,623	20,567
70 - 79	3,671	69,327,000	18,885
80 - 89	1,489	24,599,276	16,521
90 - 99	252	3,118,782	12,376
100 - 109	5	46,854	9,371
110 - 120	-	-	-
Total	9,998	194,009,916	19,405

TABLE IV-1
 PROJECTION OF BENEFIT PAYOUT
 DIVISION A
 METRO DISABLED RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	844,246	6,959,168
2023	812,500	6,588,133
2024	780,361	6,224,232
2025	747,953	5,868,303
2026	715,407	5,521,111
2027	682,846	5,183,345
2028	650,386	4,855,619
2029	618,132	4,538,472
2030	586,186	4,232,379
2031	554,647	3,937,742
2032	523,598	3,654,897
2033	493,104	3,384,128
2034	463,228	3,125,671
2035	434,031	2,879,715
2036	405,569	2,646,401
2037	377,913	2,425,816
2038	351,139	2,217,974
2039	325,337	2,022,809
2040	300,592	1,840,156
2041	276,985	1,669,755
2042	254,574	1,511,258
2043	233,404	1,364,236
2044	213,483	1,228,206
2045	194,793	1,102,653
2046	177,296	987,057

TABLE IV-2
 PROJECTION OF BENEFIT PAYOUT
 DIVISION A
 METRO GENERAL GOVERNMENT RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	6,414,423	49,293,609
2023	6,191,785	46,317,360
2024	5,804,945	42,996,078
2025	5,433,821	39,860,488
2026	5,079,657	36,905,282
2027	4,743,199	34,123,806
2028	4,422,947	31,509,519
2029	4,120,084	29,054,578
2030	3,835,613	26,751,690
2031	3,562,446	24,594,157
2032	3,306,883	22,576,157
2033	3,068,053	20,688,949
2034	2,843,109	18,924,544
2035	2,631,230	17,276,613
2036	2,431,722	15,739,176
2037	2,243,943	14,306,586
2038	2,067,267	12,973,505
2039	1,901,079	11,734,894
2040	1,744,791	10,586,029
2041	1,597,795	9,522,508
2042	1,459,527	8,540,263
2043	1,329,480	7,635,523
2044	1,207,233	6,804,774
2045	1,092,452	6,044,671
2046	984,908	5,351,963

TABLE IV-3
 PROJECTION OF BENEFIT PAYOUT
 DIVISION A
 METRO FIRE AND POLICE RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	4,258,170	40,752,719
2023	4,265,302	39,263,684
2024	4,138,731	37,352,909
2025	4,009,437	35,458,877
2026	3,875,679	33,585,209
2027	3,737,728	31,737,433
2028	3,595,909	29,921,115
2029	3,450,588	28,141,813
2030	3,302,197	26,405,028
2031	3,151,263	24,716,118
2032	2,998,418	23,080,183
2033	2,844,396	21,501,951
2034	2,690,065	19,985,629
2035	2,536,347	18,534,778
2036	2,384,143	17,152,259
2037	2,234,435	15,840,133
2038	2,088,143	14,599,630
2039	1,946,090	13,431,169
2040	1,809,026	12,334,388
2041	1,677,472	11,308,272
2042	1,551,944	10,351,179
2043	1,432,764	9,460,958
2044	1,320,110	8,635,070
2045	1,213,979	7,870,732
2046	1,114,243	7,165,046

TABLE IV-4
 PROJECTION OF BENEFIT PAYOUT
 DIVISION A
 DEFERRED VESTED BENEFITS

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	35,430	539,962
2023	43,057	541,614
2024	42,411	534,681
2025	48,392	525,045
2026	47,544	509,242
2027	50,109	492,353
2028	52,641	474,554
2029	51,484	451,902
2030	50,217	427,015
2031	48,841	402,015
2032	47,356	377,001
2033	45,764	352,079
2034	44,070	327,360
2035	42,277	302,953
2036	40,388	278,975
2037	38,407	255,544
2038	36,339	232,780
2039	34,192	210,806
2040	31,980	189,740
2041	29,719	169,693
2042	27,432	150,763
2043	25,144	133,029
2044	22,883	116,547
2045	20,676	101,351
2046	18,545	87,452

TABLE IV-5
 PROJECTION OF BENEFIT PAYOUT
 DIVISION A
 METRO TOTALS

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	11,552,269	97,545,458
2023	11,312,644	92,710,791
2024	10,766,448	87,107,900
2025	10,239,603	81,712,713
2026	9,718,287	76,520,844
2027	9,213,882	71,536,937
2028	8,721,883	66,760,807
2029	8,240,288	62,186,765
2030	7,774,213	57,816,112
2031	7,317,197	53,650,032
2032	6,876,255	49,688,238
2033	6,451,317	45,927,107
2034	6,040,472	42,363,204
2035	5,643,885	38,994,059
2036	5,261,822	35,816,811
2037	4,894,698	32,828,079
2038	4,542,888	30,023,889
2039	4,206,698	27,399,678
2040	3,886,389	24,950,313
2041	3,581,971	22,670,228
2042	3,293,477	20,553,463
2043	3,020,792	18,593,746
2044	2,763,709	16,784,597
2045	2,521,900	15,119,407
2046	2,294,992	13,591,518

TABLE IV-6
 PROJECTION OF BENEFIT PAYOUT
 DIVISION B
 METRO DISABLED RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	13,778,649	94,094,787
2023	13,275,910	92,025,405
2024	12,531,869	89,863,115
2025	11,745,020	87,639,859
2026	11,149,712	85,349,079
2027	10,762,764	82,998,687
2028	10,166,831	80,600,824
2029	9,744,129	78,146,440
2030	9,376,593	75,646,296
2031	8,942,887	73,104,360
2032	8,581,559	70,519,813
2033	8,296,624	67,898,611
2034	7,906,915	65,249,064
2035	7,634,319	62,569,977
2036	7,299,706	59,872,274
2037	7,069,467	57,158,818
2038	6,805,285	54,440,861
2039	6,603,121	51,723,892
2040	6,259,579	49,018,548
2041	5,961,791	46,325,727
2042	5,713,247	43,655,551
2043	5,461,523	41,018,407
2044	5,212,219	38,423,215
2045	4,978,515	35,878,850
2046	4,744,347	33,394,359

TABLE IV-7
 PROJECTION OF BENEFIT PAYOUT
 DIVISION B
 METRO GENERAL GOVERNMENT RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	115,354,669	1,177,082,872
2023	117,075,430	1,141,193,243
2024	115,695,590	1,101,140,853
2025	114,081,603	1,059,827,190
2026	112,237,362	1,017,404,126
2027	110,184,832	974,018,884
2028	107,904,542	929,825,532
2029	105,417,739	884,996,538
2030	102,707,345	839,711,507
2031	99,732,312	794,176,586
2032	96,578,657	748,601,646
2033	93,292,327	703,165,185
2034	89,825,209	658,026,110
2035	86,188,402	613,385,561
2036	82,394,793	569,446,361
2037	78,459,384	526,411,164
2038	74,399,701	484,480,047
2039	70,235,920	443,847,678
2040	65,991,305	404,700,032
2041	61,692,426	367,210,490
2042	57,368,518	331,535,922
2043	53,051,123	297,812,957
2044	48,773,888	266,154,326
2045	44,571,326	236,645,667
2046	40,478,237	209,343,050

TABLE IV-8
 PROJECTION OF BENEFIT PAYOUT
 DIVISION B
 METRO FIRE AND POLICE RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	60,470,653	680,728,369
2023	61,837,991	666,124,272
2024	61,615,831	649,136,351
2025	61,287,575	631,243,729
2026	60,850,669	612,492,803
2027	60,307,995	592,935,845
2028	59,646,135	572,628,965
2029	58,864,327	551,648,762
2030	57,967,825	530,060,146
2031	56,948,170	507,952,314
2032	55,816,757	485,401,579
2033	54,576,321	462,496,177
2034	53,222,379	439,324,058
2035	51,757,211	415,982,225
2036	50,183,852	392,571,678
2037	48,505,968	369,197,033
2038	46,728,379	345,965,819
2039	44,857,123	322,987,494
2040	42,899,910	300,372,103
2041	40,866,674	278,228,309
2042	38,769,365	256,661,151
2043	36,621,873	235,769,758
2044	34,439,911	215,645,029
2045	32,240,486	196,367,425
2046	30,041,314	178,005,235

TABLE IV-9
 PROJECTION OF BENEFIT PAYOUT
 DIVISION B – GENERAL GOVERNMENT
 DEFERRED VESTED BENEFITS

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	3,983,946	169,861,048
2023	5,356,043	178,164,064
2024	6,411,985	185,745,063
2025	7,552,280	192,687,289
2026	8,674,955	198,945,695
2027	9,649,228	204,463,658
2028	10,431,586	209,312,161
2029	11,353,545	213,603,099
2030	12,177,301	217,336,001
2031	13,031,730	220,470,383
2032	13,756,903	222,908,193
2033	14,493,276	224,731,982
2034	15,261,860	225,936,555
2035	16,097,929	226,458,545
2036	16,742,594	226,195,144
2037	17,352,047	225,230,792
2038	17,995,031	223,544,796
2039	18,627,713	221,059,799
2040	19,035,933	217,881,640
2041	19,327,816	213,900,717
2042	19,558,748	209,330,966
2043	19,735,778	204,194,563
2044	19,778,394	198,516,785
2045	19,730,058	192,351,483
2046	19,651,331	185,840,189

TABLE IV-10
 PROJECTION OF BENEFIT PAYOUT
 DIVISION B
 METRO TOTALS

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	193,587,917	2,121,767,076
2023	197,545,374	2,077,506,984
2024	196,255,275	2,025,885,382
2025	194,666,478	1,971,398,067
2026	192,912,698	1,914,191,703
2027	190,904,819	1,854,417,074
2028	188,149,094	1,792,367,482
2029	185,379,740	1,728,394,839
2030	182,229,064	1,662,753,950
2031	178,655,099	1,595,703,643
2032	174,733,876	1,527,431,231
2033	170,658,548	1,458,291,955
2034	166,216,363	1,388,535,787
2035	161,677,861	1,318,396,308
2036	156,620,945	1,248,085,457
2037	151,386,866	1,177,997,807
2038	145,928,396	1,108,431,523
2039	140,323,877	1,039,618,863
2040	134,186,727	971,972,323
2041	127,848,707	905,665,243
2042	121,409,878	841,183,590
2043	114,870,297	778,795,685
2044	108,204,412	718,739,355
2045	101,520,385	661,243,425
2046	94,915,229	606,582,833

TABLE IV-11
PROJECTION OF BENEFIT PAYOUT
COMBINED
METRO DISABLED RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	14,622,895	101,053,955
2023	14,088,410	98,613,538
2024	13,312,230	96,087,347
2025	12,492,973	93,508,162
2026	11,865,119	90,870,190
2027	11,445,610	88,182,032
2028	10,817,217	85,456,443
2029	10,362,261	82,684,912
2030	9,962,779	79,878,675
2031	9,497,534	77,042,102
2032	9,105,157	74,174,710
2033	8,789,728	71,282,739
2034	8,370,143	68,374,735
2035	8,068,350	65,449,692
2036	7,705,275	62,518,675
2037	7,447,380	59,584,634
2038	7,156,424	56,658,835
2039	6,928,458	53,746,701
2040	6,560,171	50,858,704
2041	6,238,776	47,995,482
2042	5,967,821	45,166,809
2043	5,694,927	42,382,643
2044	5,425,702	39,651,421
2045	5,173,308	36,981,503
2046	4,921,643	34,381,416

TABLE IV-12
 PROJECTION OF BENEFIT PAYOUT
 COMBINED
 METRO GENERAL GOVERNMENT RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	121,769,092	1,226,376,481
2023	123,267,215	1,187,510,603
2024	121,500,535	1,144,136,931
2025	119,515,424	1,099,687,678
2026	117,317,019	1,054,309,408
2027	114,928,031	1,008,142,690
2028	112,327,489	961,335,051
2029	109,537,823	914,051,116
2030	106,542,958	866,463,197
2031	103,294,758	818,770,743
2032	99,885,540	771,177,803
2033	96,360,380	723,854,134
2034	92,668,318	676,950,654
2035	88,819,632	630,662,174
2036	84,826,515	585,185,537
2037	80,703,327	540,717,750
2038	76,466,968	497,453,552
2039	72,136,999	455,582,572
2040	67,736,096	415,286,061
2041	63,290,221	376,732,998
2042	58,828,045	340,076,185
2043	54,380,603	305,448,480
2044	49,981,121	272,959,100
2045	45,663,778	242,690,338
2046	41,463,145	214,695,013

TABLE IV-13
PROJECTION OF BENEFIT PAYOUT
COMBINED
METRO FIRE AND POLICE RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	64,728,823	721,481,088
2023	66,103,293	705,387,956
2024	65,754,562	686,489,260
2025	65,297,012	666,702,606
2026	64,726,348	646,078,012
2027	64,045,723	624,673,278
2028	63,242,044	602,550,080
2029	62,314,915	579,790,575
2030	61,270,022	556,465,174
2031	60,099,433	532,668,432
2032	58,815,175	508,481,762
2033	57,420,717	483,998,128
2034	55,912,444	459,309,687
2035	54,293,558	434,517,003
2036	52,567,995	409,723,937
2037	50,740,403	385,037,166
2038	48,816,522	360,565,449
2039	46,803,213	336,418,663
2040	44,708,936	312,706,491
2041	42,544,146	289,536,581
2042	40,321,309	267,012,330
2043	38,054,637	245,230,716
2044	35,760,021	224,280,099
2045	33,454,465	204,238,157
2046	31,155,557	185,170,281

TABLE IV-14
PROJECTION OF BENEFIT PAYOUT
COMBINED
DEFERRED VESTED BENEFITS

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	5,045,167	231,550,565
2023	6,675,659	243,249,286
2024	8,140,502	254,119,725
2025	9,741,567	264,226,736
2026	11,273,381	273,444,638
2027	12,739,802	281,632,384
2028	13,955,281	288,864,527
2029	15,192,099	295,241,127
2030	16,495,613	300,879,318
2031	17,716,856	305,581,665
2032	18,864,185	309,319,346
2033	20,001,970	312,121,296
2034	21,139,536	313,919,140
2035	22,245,770	314,700,461
2036	23,096,340	314,409,123
2037	23,942,210	313,167,542
2038	24,963,400	310,983,835
2039	25,799,237	307,618,737
2040	26,327,467	303,189,676
2041	26,713,933	297,752,838
2042	27,038,279	291,494,479
2043	27,229,396	284,490,658
2044	27,249,847	276,751,149
2045	27,173,832	268,396,606
2046	27,043,830	259,577,927

TABLE IV-15
 PROJECTION OF BENEFIT PAYOUT
 COMBINED
 METRO INACTIVE TOTALS

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	206,165,977	2,280,462,089
2023	210,134,577	2,234,761,383
2024	208,707,829	2,180,833,263
2025	207,046,976	2,124,125,182
2026	205,181,867	2,064,702,248
2027	203,159,166	2,002,630,384
2028	200,342,031	1,938,206,101
2029	197,407,098	1,871,767,730
2030	194,271,372	1,803,686,364
2031	190,608,581	1,734,062,942
2032	186,670,057	1,663,153,621
2033	182,572,795	1,591,256,297
2034	178,090,441	1,518,554,216
2035	173,427,310	1,445,329,330
2036	168,196,125	1,371,837,272
2037	162,833,320	1,298,507,092
2038	157,403,314	1,225,661,671
2039	151,667,907	1,153,366,673
2040	145,332,670	1,082,040,932
2041	138,787,076	1,012,017,899
2042	132,155,454	943,749,803
2043	125,359,563	877,552,497
2044	118,416,691	813,641,769
2045	111,465,383	752,306,604
2046	104,584,175	693,824,637

TABLE V-1
PROJECTION OF BENEFIT PAYOUT
METRO DISABLED RETIRED LIVES

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	14,622,895	101,053,955
2023	14,088,410	98,613,538
2024	13,312,230	96,087,347
2025	12,492,973	93,508,162
2026	11,865,119	90,870,190
2027	11,445,610	88,182,032
2028	10,817,217	85,456,443
2029	10,362,261	82,684,912
2030	9,962,779	79,878,675
2031	9,497,534	77,042,102
2032	9,105,157	74,174,710
2033	8,789,728	71,282,739
2034	8,370,143	68,374,735
2035	8,068,350	65,449,692
2036	7,705,275	62,518,675
2037	7,447,380	59,584,634
2038	7,156,424	56,658,835
2039	6,928,458	53,746,701
2040	6,560,171	50,858,704
2041	6,238,776	47,995,482
2042	5,967,821	45,166,809
2043	5,694,927	42,382,643
2044	5,425,702	39,651,421
2045	5,173,308	36,981,503
2046	4,921,643	34,381,416

TABLE V-2
PROJECTION OF BENEFIT PAYOUT
METRO GENERAL GOVERNMENT

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	129,852,446	2,554,934,200
2023	138,578,416	2,600,701,091
2024	144,254,986	2,640,403,660
2025	150,056,295	2,677,142,221
2026	155,968,167	2,710,575,967
2027	161,489,089	2,740,343,971
2028	167,067,871	2,766,599,726
2029	172,594,529	2,789,028,023
2030	177,784,587	2,807,424,796
2031	182,926,965	2,821,864,569
2032	187,586,454	2,832,068,862
2033	192,377,553	2,838,237,121
2034	196,926,935	2,839,962,676
2035	201,228,837	2,837,177,369
2036	205,261,557	2,829,813,268
2037	209,182,002	2,817,819,155
2038	212,632,731	2,800,976,626
2039	215,900,512	2,779,420,696
2040	218,862,992	2,752,997,618
2041	221,694,378	2,721,668,027
2042	224,283,284	2,685,208,363
2043	226,343,376	2,643,493,738
2044	227,882,915	2,596,686,056
2045	228,762,705	2,544,949,824
2046	229,080,843	2,488,605,274

TABLE V-3
PROJECTION OF BENEFIT PAYOUT
METRO FIRE AND POLICE

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	68,799,169	1,796,730,217
2023	74,647,956	1,851,691,716
2024	79,065,777	1,904,190,557
2025	83,690,914	1,955,865,887
2026	88,473,061	2,006,445,034
2027	93,373,380	2,055,688,143
2028	98,288,871	2,103,381,860
2029	103,294,030	2,149,407,114
2030	108,400,684	2,193,541,486
2031	113,540,276	2,235,559,850
2032	118,786,399	2,275,264,307
2033	123,988,183	2,312,385,234
2034	129,145,589	2,346,786,563
2035	134,346,677	2,378,320,955
2036	139,732,328	2,406,739,188
2037	145,243,772	2,431,628,399
2038	150,911,989	2,452,607,082
2039	156,323,305	2,469,234,402
2040	161,527,840	2,481,466,036
2041	166,671,000	2,489,201,729
2042	171,995,035	2,492,182,744
2043	177,000,151	2,489,880,753
2044	181,633,752	2,482,247,031
2045	186,119,660	2,469,283,463
2046	190,241,930	2,450,760,281

TABLE V-4
PROJECTION OF BENEFIT PAYOUT
METRO DEFERRED

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	5,045,167	231,550,565
2023	6,675,659	243,249,286
2024	8,140,502	254,119,725
2025	9,741,567	264,226,736
2026	11,273,381	273,444,638
2027	12,739,802	281,632,384
2028	13,955,281	288,864,527
2029	15,192,099	295,241,127
2030	16,495,613	300,879,318
2031	17,716,856	305,581,665
2032	18,864,185	309,319,346
2033	20,001,970	312,121,296
2034	21,139,536	313,919,140
2035	22,245,770	314,700,461
2036	23,096,340	314,409,123
2037	23,942,210	313,167,542
2038	24,963,400	310,983,835
2039	25,799,237	307,618,737
2040	26,327,467	303,189,676
2041	26,713,933	297,752,838
2042	27,038,279	291,494,479
2043	27,229,396	284,490,658
2044	27,249,847	276,751,149
2045	27,173,832	268,396,606
2046	27,043,830	259,577,927

TABLE V-5
PROJECTION OF BENEFIT PAYOUT
METRO TOTAL

Plan Year Beginning in	Annual Benefits	Beginning of Year Liability
2022	218,319,677	4,684,268,938
2023	233,990,442	4,794,255,631
2024	244,773,494	4,894,801,289
2025	255,981,749	4,990,743,006
2026	267,579,728	5,081,335,829
2027	279,047,881	5,165,846,530
2028	290,129,241	5,244,302,557
2029	301,442,920	5,316,361,175
2030	312,643,663	5,381,724,275
2031	323,681,632	5,440,048,186
2032	334,342,196	5,490,827,225
2033	345,157,434	5,534,026,389
2034	355,582,203	5,569,043,114
2035	365,889,634	5,595,648,477
2036	375,795,500	5,613,480,254
2037	385,815,364	5,622,199,730
2038	395,664,544	5,621,226,378
2039	404,951,512	5,610,020,536
2040	413,278,470	5,588,512,035
2041	421,318,087	5,556,618,076
2042	429,284,420	5,514,052,396
2043	436,267,850	5,460,247,792
2044	442,192,216	5,395,335,657
2045	447,229,505	5,319,611,396
2046	451,288,245	5,233,324,899

TABLE VI
ESTABLISHMENT OF VALUATION ASSETS
June 30, 2022

	Trust Fund A (Disability)	Trust Fund B (Gen Govt)	Trust Fund C (Fire & Police)	Total
1. Market Value of Assets on June 30, 2021	\$171,606,708	\$2,678,515,783	\$1,354,709,733	\$4,204,832,224
2. Contributions				
a. By employees	0	46,950	0	46,950
b. By employer	0	57,356,687	35,395,589	92,752,276
c. Other	0	0	0	0
3. Investment income	(1,634,423)	(26,066,698)	(13,149,874)	(40,850,996)
4. Disbursements to employees and beneficiaries	(7,820,836)	(123,770,615)	(72,353,912)	(203,945,363)
5. Market Value of Assets on June 30, 2022	162,151,449	2,586,082,106	1,304,601,536	4,052,835,091
6. Expected Income at 7.00%	11,738,740	185,173,261	93,536,140	290,448,141
7. Excess Income Base, Current Year, (3) - (6)	na	na	na	(331,299,137)
8. Excess Income Base, Preceding Year	na	na	na	809,372,273
9. Excess Income Base, Second Preceding Year	na	na	na	(116,171,568)
10. Excess Income Base, Third Preceding Year	na	na	na	15,020,989
11. Excess Income Base, Fourth Preceding Year	na	na	na	25,939,448
12. Adjustment to Market Value Assets, .8*(7) + .6*(8) + .4*(9) + .2*(10)	na	na	na	177,119,624
13. Preliminary Valuation Assets, June 30, 2022 (5) - (12)	\$155,065,001	\$2,473,063,471	\$1,247,586,995	\$3,875,715,467
14. Maximum Valuation Assets (Based on 20% Corridor)	\$194,581,738	\$3,103,298,528	\$1,565,521,843	\$4,863,402,109
15. Valuation Assets, June 30, 2022, Minimum of (13), (14)	\$155,065,001	\$2,473,063,471	\$1,247,586,995	\$3,875,715,467

Note: The "Valuation Assets" for each of the three trust funds was obtained by multiplying the Market Value of that fund (line 5) by the ratio of the total Valuation Asset figure (line 13, total) to the total Market Value (line 5, total).

TABLE VII
NORMAL COST CALCULATIONS

	<u>Trust Fund A (Disability)</u>	<u>Trust Fund B (Gen. Gov.)</u>	<u>Trust Fund C (Fire & Police)</u>	<u>Total</u>
1. Present Value of Benefits	\$138,461,851	\$2,704,132,701	\$1,841,674,386	\$4,684,268,938
2. Past Service Liability (or assets if larger)	116,207,960	2,390,701,670	1,480,157,242	3,987,066,872
3. Present Value of Future Employee Contributions	0	0	0	0
4. Present Value of Employer Normal Costs ((1)-(2)-(3))	22,253,891	313,431,031	361,517,144	697,202,066
5. Present Value of Future Salaries*	6,850,681,099	4,007,372,206	2,843,308,893	6,850,681,099
6. Normal Cost Percentage ((4)/(5))	0.325%	7.821%	12.715%	10.177%
7. Current Payroll*	706,049,330	448,563,594	257,485,735	706,049,330
8. Aggregate Normal Cost ((6) * (7))	2,293,545	35,083,776	32,738,444	70,115,765
9. Entry Age Normal Cost	\$2,241,799	\$36,337,317	\$34,164,708	\$72,743,824

*Cost of disability benefits is spread over the present value of future salaries of all plan participants. Cost of benefits to "general government" employees and "fire and police" employees is spread over the present value of future salaries of those specific groups.

TABLE VIII
TOTAL COST CALCULATIONS

	Trust Fund A (Disability)	Trust Fund B (Gen. Gov.)	Trust Fund C (Fire & Police)	Total
Development of Amortization Contributions				
1. Present Value of Benefits	\$138,461,851	\$2,704,132,701	\$1,841,674,386	\$4,684,268,938
2. Present Value of Future Employee Contributions	0	0	0	0
3. Present Value of Future Normal Costs	22,253,891	313,431,031	361,517,144	697,202,066
4. Existing Assets	158,174,866	2,468,865,460	1,248,675,140	3,875,715,466
5. Unfunded Past Service Liability (1)-(2)-(3)-(4)	-41,966,906	-78,163,790	231,482,102	111,351,406
6. Amortization Contributions				
a. No amortization - int. only (.0654 x (5))	-2,745,499	-5,113,519	15,143,689	7,284,671
b. 15-year amortization (.10261 x (5))	-4,306,300	-8,020,527	23,752,795	11,425,968
Development of Total Costs				
7. Entry Age Normal Cost	2,241,799	36,337,317	34,164,708	72,743,824
8. Total Cost				
a. No amortization ((7)+(6a))x1.035	-521,329	32,316,631	51,034,191	82,829,493
% of payroll	-0.074%	7.204%	19.820%	11.731%
b. 15-year amortization ((7)+(6b))x1.035	-2,136,758	29,307,878	59,944,615	87,115,735
% of payroll	-0.303%	6.534%	23.281%	12.338%

TABLE IX

MINIMUM FUNDING UNDER TCA §9-3-501

As a result of the Public Employee Defined Benefit Financial Security Act of 2014 (Tenn. Code Ann. §9-3-501) all political subdivisions within the State of Tennessee that provide defined benefit plans not administered by the Tennessee Consolidated Retirement System (TCRS) must adopt a written funding policy and contribute an actuarially determined contribution that meets minimum standards specified by Tenn. Code Ann. §9-3-501. The actuarially determined contribution is comprised of the normal cost under the Entry Age Normal Cost Method, plus a level dollar amortization of the unfunded liability as of July 1, 2015 over a closed period of 30 year. A new layer of amortization will be added each year equal to the 30-year, level dollar amortization of gains and/or losses for each subsequent year.

Year Established	Type of Base	Remaining Amortization Period (Years)	Original Amount	Current Payment	Remaining Balance at June 30, 2022
2015	Original Base	23	138,552,370	10,477,197	126,367,988
2016	(Gains)/Losses	24	(21,061,991)	(1,591,034)	(19,525,469)
2017	(Gains)/Losses	25	27,467,170	2,072,810	25,846,566
2018	(Gains)/Losses	26	26,173,793	1,974,164	24,980,243
2019	(Gains)/Losses	27	(161,225)	(12,154)	(155,887)
2020	(Gains)/Losses	28	73,442,916	5,533,918	71,867,388
2021	(Gains)/Losses	29	(55,570,552)	(4,185,263)	(54,982,259)
2022	(Gains)/Losses	30	(63,047,164)	(4,748,359)	(63,047,164)
	Total			9,521,279	111,351,406
Entry Age Normal Cost			72,743,824		
Amortization of Unfunded Liability			9,521,279		
Interest			<u>2,879,279</u>		
Total Minimum Contribution			85,144,381		
Total Payroll			706,049,330		
Percent of Payroll Contribution			12.059%		

Since the recommended contribution of 12.338% of payroll exceeds the minimum required contribution of 12.059%, the minimum contribution does not currently apply.

TABLE X
SUMMARY OF ACTUARIAL ASSUMPTIONS
 (Sample Values per 1,000 Lives)

	Age			
	20	35	50	60
Mortality Rates – Active Employees				
Male: 115% RP-2014 Employee Table	.41	.52	1.69	4.69
Females: 115% RP-2014 Employee Table	.16	.29	1.10	2.44
	Age			
	60	70	80	90
Mortality Rates – Inactive Employees				
Male: 112% RP-2014 Blue Collar	9.96	22.56	58.87	172.58
Females: 112% RP-2014 Blue Collar	7.17	15.31	43.64	136.81
(Rates projected to 2023 with Scale MP-21)				
Mortality Improvement Rates – Active Employees				
Improvement Scale MP-21, Fully Generational				
Mortality Improvement Rates – Inactive Employees				
Improvement Scale MP-21, Fully Generational				

TABLE X (Continued)

SUMMARY OF ACTUARIAL ASSUMPTIONS

(Sample Values per 1,000 Lives)

	Age			
	20	35	50	60
Withdrawal Rates				
First Year				
General Government	210.00	180.00	144.00	---
Fire and Police	105.00	70.00	0.00	---
Second Year				
General Government	190.00	158.00	120.00	---
Fire and Police	80.00	35.00	25.00	---
Ultimate				
General Government	219.00	105.00	20.00	---
Fire and Police	71.00	39.00	10.00	---
 Salary Scale				
Declining Scale to age 65	1.059	1.050	1.041	1.035
 Compensation Basis				
	Gross pay for prior year			
	Age			
	20	35	50	60
Disability Rates				
<i>Division A:</i>				
General Government				
Males: 150% of 1965 Railroad Retirement	0.00	6.00	10.95	37.20
Females: 1965 Railroad Retirement	0.00	4.00	7.30	24.80
Fire and Police				
200% of 1965 Railroad Retirement	0.00	8.00	14.60	49.60
50% of disabled members eligible for Social Security disability benefits				

TABLE X (Continued)
SUMMARY OF ACTUARIAL ASSUMPTIONS
 (Sample Values per 1,000 Lives)

Division B:

General Government: Historical Experience

Males	0.00	2.28	5.05	3.66
Females	0.00	0.44	3.90	2.92

Fire and Police: Historical Experience

Males	0.00	1.58	5.45	1.28
Females	0.00	2.36	8.17	1.92

50% of disabled members eligible for Social Security disability benefits
 One-sixth of disabled members return to work, at 75% of pre-disability salaries

	Age			
	20	35	50	60
Rate of Death and Recovery Among Disabled Lives				
Pre-Age 60				
Male: 120% RP-2014 Disabled Mortality	8.53	10.99	24.47	31.92
Female: 120% RP-2014 Disabled Mortality	2.68	4.73	14.29	20.40
	Age			
	60	70	80	90
Post-Age 60				
Male: 120% RP-2014 Disabled Mortality	31.92	48.42	91.94	207.61
Female: 120% RP-2014 Disabled Mortality	20.40	33.84	73.24	159.18

Social Security Benefit Projection Rate

Wage base escalation at 4.00% per annum

Consumer price index at 2.50% per annum

TABLE X (Continued)

SUMMARY OF ACTUARIAL ASSUMPTIONS

(Sample Values per 1,000 Lives)

Rate of Normal Retirement

	Percent Rating at Age							
	55	56	57	58	59	60	61	62
Division A:								
General Government								
Male:	--	--	--	--	--	--	2	5
Female:	--	--	--	--	--	3	4	8
Fire and Police	10	10	10	10	10	50	--	--
	Percent Rating at Age							
	63	64	65	66	67	68	69	70
General Government								
Male:	5	12	23	18	6	6	6	17
Female:	6	15	26	11	9	5	3	10
Fire and Police	--	--	--	--	--	--	--	--

TABLE X (Continued)

SUMMARY OF ACTUARIAL ASSUMPTIONS

(Sample Values per 1,000 Lives)

Rate of Normal Retirement (continued)

Division B:

Percentages of participants retiring in each year before and after a participant's normal retirement age are determined as follows:

	Rates of Retirement						
	NRA-10	NRA-9	NRA-8	NRA-7	NRA-6	NRA-5	NRA-4
General Government	1	1	2	2	2	3	6

	Rates of Retirement						
	NRA-3	NRA-2	NRA-1	NRA	NRA+1	NRA+2	NRA+3
General Government	6	8	8	20	20	20	20

	Rates of Retirement						
	NRA+4	NRA+5	NRA+6	NRA+7	NRA+8	NRA+9	NRA+10
General Government	20	20	30	30	30	30	100

An additional 5% of participants in excess of the percentages above are assumed to retire upon attainment of ages 62 and 65 respectively.

Fire and Police

Age	Percent of Remaining Actives Retiring at Each Age	Age	Percent of Remaining Actives Retiring at Each Age
50	3.0%	60	14.7%
51	4.1%	61	17.2%
52	8.6%	62	25.0%
53	14.1%	63	16.7%
54	11.0%	64	20.0%
55	10.8%	65	25.0%
56	12.1%	66	22.2%
57	13.7%	67	28.6%
58	11.4%	68	100.0%
59	12.8%		

TABLE X (Continued)

SUMMARY OF ACTUARIAL ASSUMPTIONS

(Sample Values per 1,000 Lives)

Rate of Investment Return

7.00% per annum

Spouse Frequency and Ages

Assume 85% married, with husbands four years older than wives. Surviving spouses of disabled members assumed to receive Social Security benefits after age 65, but not before.

Actuarial Valuation Method

Entry age normal

Asset Valuation Method

Five-year smoothing of difference between market value and expected valuation assets.

Annual Cost-of-Living Adjustment

Division A 2.50% (5.00% for January 1, 2023)

Division B 1.25% (4.00% for January 1, 2023)

TABLE XI

SUMMARY OF ACTUARIAL ASSUMPTIONS

ASSUMPTIONS USED DURING THE 5 YEARS PERIOD ENDING JUNE 30, 2022

(Sample Values per 1,000 Lives)

	Age			
	20	35	50	60
Mortality Rates – Active Employees				
Male: 115% RP-2014 Employee Table	.41	.52	1.69	4.69
Females: 115% RP-2014 Employee Table	.16	.29	1.10	2.44
	Age			
	60	70	80	90
Mortality Rates – Inactive Employees				
Male: 115% RP-2014 Blue Collar Proj to 2023 (MP-17)	9.83	22.87	59.48	171.37
Females: 115% RP-2014 Blue Collar Proj to 2023 (MP-17)	7.14	15.85	44.33	136.50
	Age			
	20	35	50	60
Withdrawal Rates				
First Year				
General Government	210.00	180.00	120.00	--
Fire and Police	60.00	40.00	0.00	--
Second Year				
General Government	190.00	150.00	100.00	--
Fire and Police	40.00	28.00	20.00	--
Ultimate				
General Government	219.00	89.00	4.00	--
Fire and Police	71.00	36.00	4.00	--

TABLE XI

SUMMARY OF ACTUARIAL ASSUMPTIONS

ASSUMPTIONS USED DURING THE 5 YEARS PERIOD ENDING JUNE 30, 2022

(Sample Values per 1,000 Lives)

Salary Scale

Declining Scale to age 65	1.055	1.046	1.037	1.031
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Compensation Basis

Gross pay for prior year

Disability Rates

Age			
20	35	50	60

Division A:

General Government

Males: 150% of 1965 Railroad Retirement	0.00	6.00	10.95	37.20
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Females: 1965 Railroad Retirement	0.00	4.00	7.30	24.80
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Fire and Police

200% of 1965 Railroad Retirement	0.00	8.00	14.60	49.60
----------------------------------	------	------	-------	-------

50% of disabled members eligible for Social Security disability benefits

Division B:

General Government: Historical Experience

Males	0.00	2.28	6.31	4.58
-------	------	------	------	------

Females	0.00	0.44	3.90	7.29
---------	------	------	------	------

Fire and Police: Historical Experience

Combined:	0.00	1.58	5.45	1.28
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50% of disabled members eligible for Social Security disability benefits

One-sixth of disabled members return to work, at 75% of pre-disability salaries

TABLE XI

SUMMARY OF ACTUARIAL ASSUMPTIONS

ASSUMPTIONS USED DURING THE 5 YEARS PERIOD ENDING JUNE 30, 2022

(Sample Values per 1,000 Lives)

	Age			
	20	35	50	60
Rate of Death and Recovery Among Disabled Lives				
Pre-Age 60				
Male: 130% RP-2014 Disabled Mortality	9.24	11.91	26.51	34.59
Female: 130% RP-2014 Disabled Mortality	2.90	5.12	15.48	22.10
	Age			
	60	70	80	90
Post-Age 60				
Male: 150% RP 2000 Disabled Mortality/Recovery	34.59	52.54	99.60	224.91
Female: 150% RP 2000 Disabled Mortality/Recovery	22.10	36.66	79.35	172.45

Social Security Benefit Projection Rate

Wage base escalation at 4.00% per annum

Consumer price index at 2.50% per annum

Rate of Normal Retirement

	Percent Rating at Age							
	55	56	57	58	59	60	61	62
Division A:								
General Government								
Male:	--	--	--	--	--	--	2	5
Female:	--	--	--	--	--	3	4	8
Fire and Police	10	10	10	10	10	50	--	--

TABLE XI

SUMMARY OF ACTUARIAL ASSUMPTIONS

ASSUMPTIONS USED DURING THE 5 YEARS PERIOD ENDING JUNE 30, 2022

(Sample Values per 1,000 Lives)

	Percent Rating at Age							
	63	64	65	66	67	68	69	70
General Government								
Male:	5	12	23	18	6	6	6	17
Female:	6	15	26	11	9	5	3	10
Fire and Police	--	--	--	--	--	--	--	--

Division B:

Percentages of participants retiring in each year before and after a participant's normal retirement age are determined as follows:

	Rates of Retirement						
	NRA-10	NRA-9	NRA-8	NRA-7	NRA-6	NRA-5	NRA-4
General Government	1	1	2	2	2	3	6

	Rates of Retirement						
	NRA-3	NRA-2	NRA-1	NRA	NRA+1	NRA+2	NRA+3
General Government	6	8	8	20	20	20	20

	Rates of Retirement						
	NRA+4	NRA+5	NRA+6	NRA+7	NRA+8	NRA+9	NRA+10
General Government	20	20	30	30	30	30	100

TABLE XI

SUMMARY OF ACTUARIAL ASSUMPTIONS

ASSUMPTIONS USED DURING THE 5 YEARS PERIOD ENDING JUNE 30, 2022

(Sample Values per 1,000 Lives)

An additional 5% of participants in excess of the percentages above are assumed to retire upon attainment of ages 62 and 65 respectively.

	Percent Rating at Age									
	50	51	52	53	54	55	56	57	58	
Fire and Police	3	3	4	8	12	8	8	8	8	8
	59	60	61	62	63	64-69				
Fire and Police	5	5	5	5	6	2				

Rate of Investment Return

7.25% per annum

7.00% per annum (for the June 30, 2021 valuation)

Spouse Frequency and Ages

Assume 85% married, with husbands four years older than wives. Surviving spouses of disabled members assumed to receive Social Security benefits after age 65, but not before.

Actuarial Valuation Method

Entry age normal

Asset Valuation Method

Five-year smoothing of difference between market value and expected valuation assets.

Annual Cost-of-Living Adjustment

Division A 2.50%

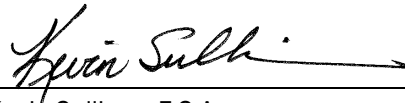
Division B 1.25%

TABLE XII
ACTUARIAL CERTIFICATION

This report has been prepared under my supervision; I am a member of the American Academy of Actuaries, a Fellow of the Society of Actuaries, and a consulting actuary with USI Consulting Group of Brentwood, Tennessee, and have met the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions herein. To the best of our knowledge this report has been prepared in accordance with generally accepted actuarial standards, including the overall appropriateness of the analysis, assumptions, and results and conforms to appropriate Standards of Practice as promulgated from time to time by the Actuarial Standards Board, which standards form the basis for the actuarial report. We are not aware of any direct or material indirect financial interest or relationship, including investment management or other services that could create, or appear to create, a conflict of interest that would impair the objectivity of our work.

July 12, 2023

Date



S. Kevin Sullivan, F.S.A.

Enrollment Number 23-06235