FORMER DAVIDSON COUNTY PENSION PLAN

Valuation and Report as of June 30, 2023

ACTUARIAL VALUATION REPORT

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A. SUMMARY OF REPORT

An actuarial valuation of the former Davidson County Pension System was performed as of June 30, 2023. The purpose of the valuation was to examine the liabilities and cost implications of the system, which prior to June 30, 2005 was being funded on a pay-as-you-go basis. The plan is now being actuarially funded through the Guaranteed Payment Plan.

The former Davidson County Pension System is a small system at this time, because most of the members transferred to the Metro plan which superseded the County System on April 1, 1963. The Metro plan was patterned after Division A of the County plan. Most of the remaining active employees of the County plan transferred to Division B of the Metro plan in 1995. Currently, there are no active employees in the County System. There were 23 retirees and survivors in the County System as of June 30, 2023.

The present value of future benefits under the County system was $2,846,958 as of the valuation date. All of this amount would be classified as "past service liability" if the entry age normal method (the method used for the valuation of the Metro plan) were applied to the County system. The amount listed includes the effect of the cost-of-living adjustment effective July 1, 2022.

Since the plan is a closed system with no active employees, funding had traditionally been conducted on a pay-as-you-go basis without following a fixed amortization schedule. However, commencing with the plan year beginning July 1, 2004, some prefunding of the plan has been undertaken through the Guaranteed Payment Plan. The Guaranteed Payment Plan is an umbrella plan created by the Metro Council to ensure actuarially sound funding for a group of five closed plans supervised by the Metro Employee Benefit Board and the Board of Education.

The table below shows the unfunded liabilities of the plan as of June 30, 2023.

Present Value of Benefits	$2,846,958
Accumulated Assets	(0)
Unfunded Liability as of June 30, 2023	$2,846,958

The following table shows the results of applying the usual "normal cost plus amortization of unfunded past service liabilities" approach to the funding of the closed system.

	Annual Contribution
20-Year Amortization	$214,151
10-Year Amortization	352,048
5-Year Amortization	634,550

Under the GPP, unfunded liabilities of the aggregate plan are amortized over a period of no more than thirty years, commencing July 1, 2000. Payments for the County System move to a payment account from which distributions are paid to the constituent plans of the GPP as necessary to satisfy current benefit need and to satisfy funding objectives of the GPP. During the 2022-2023 year, payments of $3,501,843 were paid into the GPP on behalf of the plan. $561,885 was transferred from the GPP account to the plan during this period for the payment of benefits. Funding issues that are specific to the GPP are addressed in a separate report. The following is a summary of GPP transfers for the County Pension Plan.

GPP Appropriation for the Plan	$3,501,843
Transfer for Benefit Payments	$561,885
Transfer to the other GPP Plans	$2,939,958
Transfer to the Open Plan Separate Account for Future Payments	$0

Table III-4 of the Appendix illustrates the annual payout which could be expected from the entire County System during the next twenty calendar years. The annualized payout as of the beginning of the 2023-2024 fiscal year is approximately $467,513. A level payout of this amount will amortize the full liability over a period of approximately 7 years.

The actuarial valuation underlying this report has been made utilizing employee data furnished by Metro and the actuarial assumptions summarized in Table VII of the Appendix. Quantities called for by Statement 25 of the Governmental Accounting Standards Board are set out in Table VI of the Appendix. Since the system was funded on a pay-as-you-go basis prior to June 30, 2005, no assets are shown for those dates.

B. SUMMARY OF PLAN PROVISIONS

DAVIDSON COUNTY PENSION PLANS

Introduction

The amendments to the Davidson County Pension System which were effective July 1, 1961, created two classifications of membership: Division A and Division B.

Division B of the Plan was essentially identical to the Plan and all amendments in effect immediately prior to July 1, 1961. Division A of the Plan contained a different program of benefits integrated with Social Security.

As of July 1, 1961, all members of the prior plan became members of Division B. Each such member could then elect (on or before September 15, 1961) to transfer into Division A; if he did not do so, he remained a member of Division B. Similarly, individuals employed prior to July 1, 1961 who for any reason had not become members of the prior plan were allowed to elect (on or before September 15, 1961) to become members of Division A. All full time employees hired on or after July 1, 1961 and prior to April 1, 1963 (when the County System was superseded by the Metro Plan) were enrolled as members of Division A.

All employees of the former Davidson County who were employed prior to April 1, 1963, who elected not to transfer to the Metropolitan Government Employee Benefit System on that date or on a later open enrollment date, and who also elected not to transfer to Division B of the Metro plan in 1995, are participants in the former Davidson County Pension System.

Division A

All benefits are in addition to Social Security benefits, except disability benefits which are reduced by Social Security benefits as described in Item 4.

1. <u>Normal Retirement</u>

   At or after age 65, the monthly benefit is determined as the product of (a) and (b) as follows:

   (a) Credited Service (including prior service)

   (b) .75% of Average Base Earnings per month plus 1.50% of Average Excess Earnings per month.

   No service is credited after age 70. Base earnings for each year are earnings subject to Social Security tax. Excess earnings for each year are earnings not subject to Social Security tax.

   "Average earnings" means the average of annual earnings for the ten full consecutive calendar years in which earnings were highest, or for such lesser number of full calendar years of service as have been completed.

2. <u>Early Retirement</u>

   After age 55 and 20 years of service, the benefit at retirement can be either (a) or (b).

   (a) An accrued normal retirement benefit to commence on his otherwise normal retirement date.

   (b) An immediate benefit to commence on his early retirement date, computed as (a), but reduced by 5/12% for each month that early retirement precedes normal retirement.

3. Delayed Retirement

With the approval of the Pension Commission, an employee may defer retirement (but not later than age 75), but no credit is given for service after 70.

4. Disability Retirement

Condition. Disability is defined as a condition which has persisted six months or more and is presumably permanent which renders the employee incapable of earning 25% of his income at date of disability.

(a) Not in Line of Duty

A disabled member gets life income computed as in item 1 above, but not less than $50 per month, and also gets 6 months benefits in a lump sum upon disability retirement.

(b) In Line of Duty

No period of service is required and the disabled member gets life income computed as in item 1 above, but not less than 50% of total earnings less Primary Social Security benefits.

5. Death Before Retirement

(a) On death before 20 years of service and age 55, the member's contributions are paid in a lump sum.

(b) On death after 20 years of service and age 55, the beneficiary receives a life income, based on the presumed election by the member of early retirement under Option B the day before his death, but not less than a survivor would have received under the provisions of Division B (see below). If no beneficiary survives the member, or if the beneficiary so elects in lieu of the survivor income, the member's contributions are paid in a lump sum.

6. Death After Retirement

None, unless employee has elected an optional form of retirement benefit.

7. Options

Optional forms of retirement benefits are actuarially equivalent in value to the benefit payable if no option were elected. Options are:

A. Joint & Survivor Option

B. Joint & 50% Survivor Option

C. Social Security Option for Early Retirement

D. 120 Payments Certain and Life Option

8. Other Termination of Employment

Either (a) or (b):

(a) a refund of employee's contributions without interest;

(b) a paid-up deferred pension to start at age 65, computed at date of termination of employment as in item 1 above, with return of employee contributions on death before deferred pension begins.

9. Escalation Provision

   Effective July 1, 2002, benefits under the provisions above are increased annually by the increase in the Consumer Price Index during the previous year.

10. Employee Contributions

    Prior to January 1, 1987, employees contributed 3% of Earnings subject to Social Security tax, plus 6% of Earnings not subject to Social Security tax. Thereafter, employees no longer contribute toward the cost of the plan.

11. Employer Contributions

    The Metropolitan Government provides such additional amounts as are necessary to provide benefits as they come due.

Division B

Social Security benefits are not available to members of Division B.

1. Normal Retirement

   After completing 30 years of service, or after both attaining age 60 and completing 24 years of service, the amount of benefit upon retirement is 50% of the highest earnings in any calendar year.

2. Early Retirement

   (a) After 15 years of service and attainment of age 60, the early retirement benefit is an immediate life income of 30% of the member's highest yearly earnings if he has 15 years of service, increasing 2% per year of service to 48% for 24 years or more of service.

   (b) After 28 years of service, the benefit in the event of involuntary termination is an immediate life income of 50% of highest yearly earnings, as in item 1 above.

3. Disability in Line of Duty

   In the event that disability occurs which is permanent and renders the employee incapable of performing the duties of his job, the benefit payable is the same as in item 1 above.

4. Disability Not in Line of Duty

   In the event that disability occurs which is permanent and renders the employee incapable of being gainfully employed, the benefit is equal to 50% of his highest annual earnings.

5. Survivor Benefits

   In the event of death of a member or retired member, the survivor receives a life income of $675 per month, ceasing on remarriage. "Survivor" means widow (until remarriage), dependent child or dependent mother, in that order. Dependent children receive benefits for no more than 10 years.

6. Optional Forms of Pension

None

7. Other Termination of Employment

   Since each participant now has over 15 years of service, a terminating participant can elect either the return of contributions or a deferred pension beginning at age 60 for the same amount as in item 1 above.

8. Escalation Provision

   Effective July 1, 2002, benefits under the provisions above are increased annually by the increase in the Consumer Price Index during the previous year.

9. Employee Contributions

   Prior to January 1, 1987, each employee contributed 5% of earnings, payable for 24 years, which could include years after retirement. The rate was 2-1/2% for females who elected not to be covered for survivor (death) benefits. Thereafter, employees no longer contribute toward the cost of the plan.

10. Employer Contributions

    The Metropolitan Government provides such additional amounts as are necessary to provide benefits as they become due.

C. ASSESSMENT OF RISK

Risk Factor	Commentary on the Plan's Risk Exposure
Investment	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. The plan's low current funded ratio means the plan has a relatively low exposure to investment return risk.
Assumed Rate of Return	Due to the plan's estimated duration of 4 to 5, a 1% decrease in the assumed rate of investment return would increase the measurement of the liability by 4% to 5%.
Longevity	Since all 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. Given the extreme age of the population, there is less sensitivity to long-term changes in overall mortality improvement.
Other demographic factors	No significant risk.
Lump sums	No significant risk.
Inflation	Inflation is a component of future interest rates and investment returns over a long period. 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.
Low-Default-Risk Obligation Measurement	In accordance with Actuarial Standards of Practice (ASOP) No. 4, the actuary is required to provide a "Low-Default-Risk Obligation Measurement" (LDROM). The intended purpose of the measurement is to show how the pension obligation could hypothetically be settled on the measurement date using current interest rate conditions. This may provide additional information regarding the security of benefits that members have earned. This is not intended to be a precise calculation as assumptions such as early retirement provisions, lump sum election percentages, and various other assumptions may need to be revised to reflect a terminal liability. This disclosure is required and does not imply the plan sponsor has considered or is considering the termination of this plan and may not be appropriate for other uses. As of the valuation date, the Low-Default-Risk Obligation for the plan is $2,898,159, an increase of 1.8%.

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

D. APPENDIX

TABLE I-1

DISTRIBUTION OF ANNUAL BENEFITS BY AGE GROUPS

COUNTY BENEFICIARIES

Age Group	Number	Total	Average
Under 20	0	-	-
20 - 29	0	-	-
30 - 39	0	-	-
40 - 49	0	-	-
50 - 59	0	-	-
60 - 69	0	-	-
70 - 79	2	27,658	13,829
80 - 89	7	96,803	13,829
90 - 99	5	68,739	13,748
100 - 109	0	-	-
110 - 120	0	-	-
Total	14	193,201	13,800

TABLE I-2

DISTRIBUTION OF ANNUAL BENEFITS BY AGE GROUPS

COUNTY SERVICE RETIREMENTS

Age Group	Number	Total	Average
Under 20	0	-	-
20 - 29	0	-	-
30 - 39	0	-	-
40 - 49	0	-	-
50 - 59	0	-	-
60 - 69	0	-	-
70 - 79	0	-	-
80 - 89	8	235,566	29,446
90 - 99	1	38,746	38,746
100 - 109	0	-	-
110 - 120	0	-	-
Total	9	274,313	30,479

TABLE I-3

DISTRIBUTION OF ANNUAL BENEFITS BY AGE GROUPS

COUNTY TOTALS - RETIRED LIVES

Age Group	Number	Total	Average
Under 20	0	-	-
20 - 29	0	-	-
30 - 39	0	-	-
40 - 49	0	-	-
50 - 59	0	-	-
60 - 69	0	-	-
70 - 79	2	27,658	13,829
80 - 89	15	332,369	22,158
90 - 99	6	107,486	17,914
100 - 109	0	-	-
110 - 120	0	-	-
Total	23	467,513	20,327

TABLE II-1

PROJECTION OF BENEFIT PAYOUT

COUNTY BENEFICIARIES

Plan Year	Number of Retirees	Annual Benefits	Beginning of Year Liability
2023	14	182,909	1,153,003
2023	12	163,335	1,004,865
2024	11	145,179	871,773
2025	10	128,477	752,777
2026	8	113,210	646,862
2027	7	99,332	552,997
2028	6	86,775	470,164
2029	5	75,454	397,381
2030	5	65,280	333,720
2031	4	56,166	278,314
2032	3	48,029	230,356
2033	3	40,796	189,096
2034	2	34,398	153,835
2035	2	28,768	123,920
2036	2	23,839	98,746
2037	1	19,549	77,755
2038	1	15,839	60,436
2039	1	12,663	46,318
2040	1	9,975	34,965
2041	0	7,736	25,971
2042	0	5,900	18,957
2043	0	4,420	13,579
2044	0	3,247	9,530
2045	0	2,333	6,540
2046	0	1,636	4,382

TABLE II-2

PROJECTION OF BENEFIT PAYOUT

COUNTY SERVICE RETIREMENTS

Plan Year	Number of Retirees	Annual Benefits	Beginning of Year Liability
2023	9	262,507	1,693,955
2024	9	239,432	1,466,870
2025	8	216,156	1,257,545
2026	8	193,024	1,066,817
2027	8	170,391	895,144
2028	7	148,596	742,581
2029	6	127,951	608,798
2030	6	108,750	493,087
2031	5	91,204	394,387
2032	4	75,433	311,372
2033	4	61,499	242,544
2034	3	49,399	186,311
2035	2	39,073	141,054
2036	2	30,421	105,190
2037	2	23,302	77,214
2038	1	17,546	55,741
2039	1	12,972	39,535
2040	1	9,406	27,525
2041	1	6,682	18,796
2042	0	4,647	12,580
2043	0	3,161	8,245
2044	0	2,102	5,289
2045	0	1,365	3,318
2046	0	865	2,036
2047	0	535	1,220

TABLE II-3

PROJECTION OF BENEFIT PAYOUT

COUNTY TOTALS - RETIRED LIVES

Plan Year	Number of Retirees	Annual Benefits	Beginning of Year Liability
2023	23	445,416	2,846,958
2023	21	402,767	2,471,735
2024	19	361,335	2,129,318
2025	18	321,501	1,819,594
2026	16	283,601	1,542,006
2027	14	247,928	1,295,578
2028	12	214,726	1,078,962
2029	11	184,204	890,468
2030	10	156,484	728,107
2031	8	131,599	589,686
2032	7	109,528	472,900
2033	6	90,195	375,407
2034	4	73,471	294,889
2035	4	59,189	229,110
2036	4	47,141	175,960
2037	2	37,095	133,496
2038	2	28,811	99,971
2039	2	22,069	73,843
2040	2	16,657	53,761
2041	0	12,383	38,551
2042	0	9,061	27,202
2043	0	6,522	18,868
2044	0	4,612	12,848
2045	0	3,198	8,576
2046	0	2,171	5,602

TABLE III

DAVIDSON COUNTY PENSION PLAN

DETAILED CALCULATION OF FUNDING LEVELS

The contribution levels for the fiscal year beginning June 30, 2023 were derived as follows:

(1)	Present Value of Benefits	$2,846,958
(2)	Past Service Liability	2,846,958
(3)	Allocated Assets	(0)
(4)	Unfunded Post Service Liability (2) – (3)	$2,846,958
(5)	Present Value of Future Normal Costs (1) - (2)	$ 0
(6)	Present Value of Future Salaries	0
(7)	Normal Cost Pct (5)/(6)	0
(8)	Eligible Payroll	0
(9)	Normal Cost (7) x (8)	0
(10)	Total Cost, Including Amortization of Unfunded Past Service Liability Over Specified Period (assuming payments made uniformly throughout plan year)	
	20 Years	$214,151
	10 Years	352,048
	5 Years	634,550

TABLE IV

ROSTER OF FORMER PARTICIPANTS WITH DEFERRED VESTED BENEFITS

There are no former participants.

TABLE V

GOVERNMENTAL ACCOUNTING STANDARDS BOARD

STATEMENT NO. 25 INFORMATION

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 January 17, 2024.

Former Davidson County Pension Plan

Schedule of Funding Progress

June 30, 2023

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, 1998	$ 0	$25,430,114	$25,430,114	0.00%	$0	na
June 30, 2000	0	21,487,993	21,487,993	0.00%	0	na
June 30, 2002	0	25,088,621	25,088,621	0.00%	0	na
June 30, 2004	0	18,159,599	18,159,599	0.00%	0	na
June 30, 2006	711,665	16,971,095	16,259,430	4.19%	0	na
June 30, 2008	1,455,077	14,299,429	12,844,352	10.18%	0	na
June 30, 2009	1,181,871	13,572,334	12,390,463	8.71%	0	na
June 30, 2010	1,320,421	12,644,049	11,323,628	10.44%	0	na
June 30, 2011	1,556,601	11,786,135	10,229,534	13.21%	0	na
June 30, 2012	0	11,177,639	11,177,639	0.00%	0	na
June 30, 2013	0	10,052,974	10,052,974	0.00%	0	na
June 30, 2014	0	9,244,613	9,244,613	0.00%	0	na
June 30, 2015	0	8,293,394	8,293,394	0.00%	0	na
June 30, 2016	0	7,334,350	7,334,350	0.00%	0	na
June 30, 2017	0	6,601,738	6,601,738	0.00%	0	na
June 30, 2018	0	5,966,532	5,966,532	0.00%	0	na
June 30, 2019	0	5,838,614	5,838,614	0.00%	0	na
June 30, 2020	0	4,935,804	4,935,804	0.00%	0	na
June 30, 2021	0	3,692,938	3,692,938	0.00%	0	na
June 30, 2022	0	3,075,563	3,075,563	0.00%	0	na
June 30, 2023	0	2,846,958	2,846,958	0.00%	0	na

TABLE VI

SUMMARY OF ACTUARIAL ASSUMPTIONS

(Sample Values per 1,000 Lives)

	AGE			
	60	70	80	90
Mortality Rates – Inactive Members				
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 – Inactive Members				
Improvement Scale MP-21, Fully Generational				
Withdrawal Rates	N/A	N/A	N/A	N/A
Salary Scale	N/A	N/A	N/A	N/A
Disability Rates	N/A	N/A	N/A	N/A
Rate of Death and Recovery Among Disabled Lives				
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

Rate of Normal Retirement

Assume retirement as soon as eligible.

Rate of Investment Return

4.50% per annum

LD-ROM Discount Rate

4.13% per annum, compounded annually

Based on the 6/30 S&P Municipal Bond 20-year high grade rate index

Cost-of-Living Adjustment

2.50% per annum

Spouse Frequency and Ages

Assume 50% of remaining retirees married, with husbands four years older than wives

Actuarial Valuation Method

Entry Age Normal

Asset Valuation Method

Market Value

TABLE VII

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 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.

May 31, 2024
Date

Kevin Sullivan

S. Kevin Sullivan, F.S.A.
Enrollment Number 23-06235