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June 13, 2019

Michelle Warner
Director of Retirement Field Services and Defined Contribution Programs
Georgia Municipal Association
201 Pryor Street, SW
Atlanta, Georgia 30303

RE: Benefit Study for the City of Hapeville – Updated to reflect May 1, 2019 Assets and include Additional Scenarios

Dear Michelle,

As requested, we have updated the cost of re-establishing a plan in the GMEBS Retirement System as of January 1, 2019 for Employees of the City of Hapeville, Georgia to reflect assets as of May 1, 2019 and to include an additional scenario where all participants are eligible for an annual 1% cost-of-living adjustment while in payment status. The City provided census data 130 active participants, 24 inactive vested participants, 89 retirees, and eight survivors in payment status.

The proposed plan provisions are provided in Exhibit 1.

The assumptions and methods used to develop these results are summarized in Exhibit 2. These are consistent with the funding policy approved by the GMEBS Board of Trustees. In addition, we have assumed Tier 4 administrative expenses of \$9,000 plus \$66 per active or terminated vested participant, plus \$78 per retiree or beneficiary, plus 0.06% of the market value of assets.

Exhibit 3 shows a development of the recommended contribution for the proposed plan for the July 1, 2019 to June 30, 2020 fiscal year, using a January 1, 2019 valuation date. We expect future valuations will be performed as of January 1 for the following fiscal year.

If you have any questions or need additional information, please let us know.

Sincerely,

A handwritten signature in black ink that reads "Jeanette R. Cooper".

Jeanette R. Cooper, FSA, FCA, MAAA, EA
Vice President & Actuary

A handwritten signature in black ink that reads "Malichi S. Waterman".

Malichi S. Waterman, FCA, MAAA, EA
Consulting Actuary

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CITY OF HAPEVILLE HILL

PLAN PROVISIONS

EFFECTIVE DATE	3-1-76
ELIGIBILITY REQUIREMENTS	Employees: Immediate Officials: Not Eligible
PARTICIPANT CONTRIBUTIONS	Noncontributory now, but some still have contributions in the fund
NORMAL RETIREMENT AGE	Class 3 and 4: 60+5 or 30 years Class 5: 65+5 Class 6: 65+5 or 35 years
EARLY RETIREMENT	Class 3 and 4: 50+10 Class 5 and 6: 55+10
BENEFIT FORMULA	Class 3 – 1.00%-1.75% (table breakpoint) Class 4 – 2.50% Class 5 – 1.32% Class 6 – 2.00%
FINAL AVERAGE SALARY	5 years
VESTING	Scenario 1: 10 years Scenario 2 and 3: 5 years
DEATH BENEFITS	Auto A (Participant must be vested in a Normal Retirement Benefit) Terminated vested Auto A death benefit applies
DISABILITY MINIMUM	66-2/3% minus benefits paid from workers' compensation, disability benefits as a result of disability, state compulsory disability plans, and any employer-sponsored group disability income plan. (Offset amounts are added back into the monthly benefit for survivors.)
COST-OF-LIVING	Scenarios 1 and 2: None Scenario 3: 1.00%

SPECIAL JOB CLASSES

Class 3 – Not in old plan (either by choice or was hired after 3-1-76 and prior to 10-4-05) but covered by Social Security

Class 4 – Hired after 3-1-76 and prior to 10-4-05 and not covered by Social Security

Class 5 – Non-public-safety employees hired or rehired after 10-4-05 and from whose earnings Social Security contributions are not regularly deducted

Class 6 – Certified public safety employees hired or rehired after 10-4-05 and from whose earnings Social Security contributions are not regularly deducted

OTHER

Scenario 1: No changes in plan features since last valuation

Scenario 2: Change vesting requirement from 10 years to 5 years

Scenario 3: Change vesting requirement from 10 years to 5 years. Add an annual 1% cost-of-living adjustment for current and future retirees and beneficiaries.

EXHIBIT 2

City of Hapeville

Valuation Actuarial Assumptions and Actuarial Cost Method

Mortality Rates:

- Healthy:* RP-2000 Combined Healthy Mortality Table with sex-distinct rates, set forward two years for males and one year for females
- Disabled:* RP-2000 Disabled Retiree Mortality Table with sex-distinct rates
- Plan termination basis (all lives):* 1994 Group Annuity Reserving Unisex Table

The RP-2000 mortality tables were determined to contain sufficient provision appropriate to reasonably reflect future mortality improvement, based on a four-year review of mortality experience for the period January 1, 2010 to June 30, 2014. Mortality experience will be reviewed periodically and updated if necessary.

Termination Rates before Retirement:

Age	Rate (%)				Turnover after 5 Years of Service*
	Male Mortality	Female Mortality	Male Disability	Female Disability	
20	0.04	0.02	0.06	0.04	21.93
25	0.04	0.02	0.06	0.05	16.83
30	0.06	0.03	0.06	0.06	13.26
35	0.09	0.05	0.06	0.06	10.33
40	0.12	0.08	0.14	0.08	8.03
45	0.17	0.12	0.22	0.11	6.63
50	0.27	0.19	0.34	0.17	4.97
55	0.47	0.31	0.49	0.36	0.00
60	0.88	0.58	0.66	0.57	0.00

*For the first five years of service, turnover is shown below (but not less than the age-based rates shown above).

Turnover during first 5 Years of Service	
Years of Service	Rate (%)
0 but less than 1	32.00
1 but less than 2	15.00
2 but less than 3	12.00
3 but less than 4	11.00
4 but less than 5	9.00

Retirement Rates:

	Age	Annual Rate (%)
Class 5	65-69	60
	70 and over	100

	Age	Annual Rate (%)
Class 3, 4 and 6	55-59	10
	60	20
	61	25
	62	35
	63	40
	64	45
	65-69	50
	70 and over	100

Retirement Age for Inactive Vested Participants:

65

Form of Payment

Life Annuity

Unknown Data for Participants:

Same as those exhibited by Participants with similar known characteristics. If not specified, Participants are assumed to be male.

Percent Married:

100%

Age of Spouse:

Females three years younger than males.

Benefit Election:

All participants are assumed to elect the life annuity form of payment and the valuation includes the 36 months of guaranteed benefits. On a system-wide basis, the optional forms of payment are essentially actuarially equivalent.

Net Investment Return:

On-going basis:

7.50% - On-going basis, based on long-term expected rate of return on pension plan investments

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. The difference between the resulting rate and the rate on the ongoing basis is a margin for adverse deviation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of March 31, 2018 (see the discussion of the pension plan's investment policy) are summarized in the following table:

Asset Class	Target Allocation	Long-Term Expected Real Rate of Return
Domestic equity	45%	6.40%
International equity	20%	7.40%
Real estate	10%	5.10%
Global fixed income	5%	3.03%
Domestic fixed income	20%	1.75%
Cash	0%	
Total	100%	

Inflation: 2.75%

Salary Increases:

Years of Service	Rate (%)
0-1	8.25
2	5.25
3	5.00
4	4.75
5	4.50
6	4.25
7	4.00
8	3.75
9	3.50
10 or more	3.25

Note the above rates include inflation of 2.75%.

Social Security Wage Base Increase: 2.75%

Cost of Living Adjustment: Scenarios 1 and 2: N/A
 Scenario 3: 1.00%

Actuarial Value of Assets: Sum of the actuarial value at the beginning of the year and the cash flow during year plus the assumed investment return, adjusted by 10 percent of the amount that the value exceeds or is less than the market value at the end of the year. The actuarial value is adjusted, if necessary, to be within 20% of market value. Reset to market value as of January 1, 2019. For purposes of the study, assume the actuarial value and market value of assets as of January 1, 2019 equals the market value of assets as of May 1, 2019.

Administrative Expenses: \$9,000 plus \$66 per active or terminated vested participant, plus \$78 per retiree or beneficiary plus 0.06% of the market value of assets

Actuarial Cost Method: Projected Unit Credit Cost Method. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis and are allocated by service.

Amortization: The unfunded actuarial accrued liability was fresh started as of January 1, 2019 with an amortization period of 15 years.

EXHIBIT 3

New Plan Study
City of Hapeville

	Scenario (1) Proposed Defined Benefit Plan as of January 1, 2019	Scenario (2) Proposed Defined Benefit Plan as of January 1, 2019	Scenario (3) Proposed Defined Benefit Plan as of January 1, 2019
	10 Years	5 Years	5 Years
Vesting Period			
Annual Cost-of-Living Adjustment	0.00%	0.00%	1.00%
Active Employees	130	130	130
Payroll	\$5,548,005	\$5,548,005	\$5,548,005
Average Age	43.1	43.1	43.1
Average Eligibility Service	10.9	10.9	10.9
Average Benefit Service	11.0	11.0	11.0
Pensioners and Beneficiaries	97	97	97
Inactive Participants with Vested Rights	24	24	24
Actuarial Accrued Liability (AAL)	\$25,359,177	\$25,406,405	\$27,235,642
Market Value of Assets*	<u>23,313,892</u>	<u>23,313,892</u>	<u>23,313,892</u>
Unfunded AAL	\$2,045,285	\$2,092,513	\$3,921,750
Percent Funded	91.93%	91.76%	85.60%
Mid-year Normal Cost	\$245,016	\$254,902	\$264,205
Mid-year Administrative Expenses	40,718	40,718	40,718
Expected Employee Contributions	<u>0</u>	<u>0</u>	<u>0</u>
Mid-year Employer Normal Cost	\$285,734	\$295,620	\$304,923
Mid-year 15-Year Amortization of the Unfunded AAL	<u>\$223,476</u>	<u>\$228,636</u>	<u>\$428,506</u>
Annual Recommended Contribution beginning July 1, 2019**	\$527,960	\$543,560	\$760,435
% of Covered Payroll	9.39%	9.67%	13.52%

*Market value of assets as of May 1, 2019.

**Payment assumed as of middle of the year. Fiscal year begins July 1, 2019.