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January 12, 2021

Mr. Miguel A. Codorniu
Pension Plan Administrator
North Miami Retirement Systems
12000 Biscayne Boulevard, Suite #205
North Miami, Florida 33181

Re: North Miami Clair T. Singerman Employees Retirement System
Supplemental Actuarial Valuation Report

Dear Miguel:

As requested, we have prepared the enclosed Supplemental Actuarial Valuation Report measuring the first-year impact on the City of North Miami Clair T. Singerman Employees Retirement System for establishing a Deferred Retirement Option Program (DROP) under the two scenarios summarized below. These changes would only apply to non-bargaining unit members.

1. Establish a five-year DROP program that allows entry upon normal retirement eligibility, with no member contributions paid during DROP participation and interest credited at the same investment rate of return earned by the fund.

2. Establish a five-year DROP program that allows entry upon early retirement eligibility, with no member contributions paid during DROP participation and interest credited at the same investment rate of return earned by the fund. The early retirement penalty would apply to the DROP benefit, i.e. the benefit would be reduced by 4% for each year that the early retirement date at DROP entry precedes the normal retirement date.

Interest Rate Credited to DROP Accounts

As summarized above, this study reflects that for the proposed DROP program, interest would be credited to DROP accounts at the same investment rate of return earned by the fund. We were also asked to discuss the impact if interest is credited to DROP accounts at 100 basis points or 200 basis points below the investment rate of return earned by the fund. If interest is credited to DROP accounts at a rate below the actual fund return, there would be actuarial gains caused by the lower interest crediting rate in DROP accounts compared to the actual investment return the fund received. These actuarial gains are not reflected in the pre-funding impact shown in our study.

Summary of Findings

- Under the scenario reflecting a proposed DROP program at eligibility for normal retirement, the results for general employees would be impacted as follows:

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   - The increase in the present value of future benefits net of the change in the present value of future member contributions, which represents the expected increase in employer-funded benefit payments from the Plan in today's dollars, would increase by about $408,000.
   - The required employer contribution for the first year would increase by about $126,000 (from $3,586,825 to $3,712,551).
   - The Unfunded Actuarial Accrued Liability (UAAL) would increase by about $484,000 (from approximately $11.3 million to $11.8 million).
   - The funded ratio would decrease from 91.6% to 91.3%.

- Under the scenario reflecting a proposed DROP program at eligibility for early retirement, the results for general employees would be impacted as follows:
   - The increase in the present value of future benefits net of the change in the present value of future member contributions, which represents the expected increase in employer-funded benefit payments from the Plan in today's dollars, would increase by about $634,000.
   - The required employer contribution for the first year would increase by about $160,000 (from $3,586,825 to $3,746,941).
   - The Unfunded Actuarial Accrued Liability (UAAL) would increase by about $623,000 (from approximately $11.3 million to $11.9 million).
   - The funded ratio would decrease from 91.6% to 91.2%.

- Our results do not reflect any changes for bargaining unit members. The changes were reflected for the 85 non-bargaining unit members of the 188 active members as of October 1, 2019.

- The assumed retirement rates were changed to reflect the proposed establishment of a DROP program. The revised retirement rates are summarized on pages 5 and 6. If the proposed changes are adopted, we recommend that the retirement rates be reviewed and revised periodically to reflect emerging experience.

Please note that the impact of the proposed ordinance is being shown on the actuarially determined contribution for the fiscal year ending September 30, 2021 for illustrative purposes only using the valuation results as of October 1, 2019, the most recent actuarial valuation. If the proposed change is adopted before the end of the current fiscal year, funding would need to begin October 1, 2021. The upcoming actuarial valuation as of October 1, 2020 would show the actuarially determined contribution for the fiscal year ending September 30, 2022 reflecting the plan amendment.

Additional Disclosures

Please refer to the last two pages of this report for a discussion of risks associated with measuring the accrued liability and actuarially determined contribution.

This Report was prepared at the request of the Board and is intended for use by the Retirement System and those designated or approved by the Board. This Report may be provided to parties other than the Plan only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

This report is intended to describe the financial effect of the proposed plan changes on the Retirement System. Potential effects on other benefit plans were not considered. No statement in this report is intended to be interpreted as a recommendation in favor of the changes, or in opposition to them.

The study was performed on the basis of participant and financial data supplied by the Plan Administrator for the October 1, 2019 valuation and the non-bargaining unit member list provided by the Plan Administrator for this study. We checked for internal and year-to-year consistency, but did not audit this data. We are not responsible for the accuracy or completeness of the information provided by the Plan Administrator.

The calculations are based upon assumptions regarding future events, which may or may not materialize. They are also based upon present and proposed plan provisions that are outlined in the report. If you have reason to believe that the assumptions that were used are unreasonable, that the plan provisions are incorrectly described, that important plan provisions relevant to this proposal are not described, or that conditions have changed since the calculations were made, you should contact the author of this report prior to relying on information in the report.

If you have reason to believe that the information provided in this report is inaccurate, or is in any way incomplete, or if you need further information in order to make an informed decision on the subject matter of this report, please contact the author of the report prior to making such decision.

The measurement date used for calculating the financial effect of the assumption and method changes was October 1, 2019. Future actuarial measurements may differ significantly from the current measurements presented in this Report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

This report was prepared using our proprietary valuation model and related software which in our professional judgment has the capability to provide results that are consistent with the purposes of the valuation and this report. We performed tests to ensure that the model reasonably represents that which is intended to be modeled.

Jeffrey Amrose and Trisha Amrose are members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. The signing actuaries are independent of the plan sponsor.

This Report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, with the Actuarial Standards of Practice issued by the Actuarial Standards Board and with applicable statutes.

Respectfully submitted,

Jeffrey Amrose, EA, MAAA	Trisha Amrose, EA, MAAA
Senior Consultant and Actuary	Consultant and Actuary

Enclosures

This communication shall not be construed to provide tax advice, legal advice or investment advice.

SUPPLEMENTAL ACTUARIAL VALUATION REPORT

Plan

City of North Miami Clair T. Singerman Employees Retirement System

Valuation Date

October 1, 2019

Date of Report

January 12, 2021

Report Requested by

Board of Trustees

Prepared by

Jeffrey Amrose

Group Valued

All active and inactive members of the Plan.

Benefit Provisions Being Considered for Change

1. Establish a five-year DROP program that allows entry upon normal retirement eligibility, with no member contributions paid during DROP participation and interest credited at the same investment rate of return earned by the fund. These changes would only apply to non-bargaining unit members.

2. Establish a five-year DROP program that allows entry upon early retirement eligibility, with no member contributions paid during DROP participation and interest credited at the same investment rate of return earned by the fund. The early retirement penalty would apply to the DROP benefit, i.e. the benefit would be reduced by 4% for each year that the early retirement date at DROP entry precedes the normal retirement date. These changes would only apply to non-bargaining unit members.

Actuarial Assumptions and Methods

Same Actuarial Assumptions and Methods used in the October 1, 2019 Actuarial Valuation except as detailed below.

1. The retirement rates were modified as detailed below to reflect that members may enter the DROP at normal retirement.
    - Increase the probability of retirement in the first year when reaching normal retirement eligibility from 30% to 50%.
    - Increase the probability of retirement seven years after first eligibility for normal retirement from 50% to 100%.
    - Increase the initial retirement rate for members eligible for normal retirement as of the valuation date, October 1, 2019, by 25%.

2. The retirement rates were modified as detailed below to reflect that members may enter the DROP at early retirement, in addition to the normal retirement rate changes above.
    - Change the early retirement rates to 5% before age 50 and 12% after reaching age 50.

Some of the other key assumptions/methods are:

Investment Return:	6.75%
Inflation:	2.5%
Cost Method:	Entry Age Normal
Salary Increases:	3.0% - 6.0% depending on service
Mortality Table:	The mortality table for General Employees is the PUB-2010 Headcount Weighted Below Median Employee Male Table (pre-retirement), the PUB-2010 Headcount Weighted Below Median Employee Female Table (pre-retirement), the PUB-2010 Headcount Weighted Below Median Healthy Retiree Male Table (post-retirement) and the PUB-2010 Headcount Weighted Below Median Retiree Female Table (post-retirement). These tables use ages set back one year for males and future improvements in mortality projected to all future years after 2010 using scale MP 2018. These are the same rates used for Regular Class members of the Florida Retirement System (FRS) in their actuarial valuation as of July 1, 2019.

Amortization Period for Any Change in Actuarial Accrued Liability

15 years

Summary of Data Used in Report

See attached page; same as the participant data supplied by the Plan Administrator for the October 1, 2019 valuation, along with the non-bargaining unit member list provided by the Plan Administrator for this study.

Actuarial Impact of Proposal(s)

See attached page(s)

Other Cost Considerations

None

ACTUARIALLY DETERMINED (REQUIRED) CONTRIBUTION (ADC) - GENERAL EMPLOYEES			
A. Valuation Date	October 1, 2019 *Baseline*	October 1, 2019 *5-Year DROP If Eligible for Normal Retirement*	October 1, 2019 *5-Year DROP If Eligible for Early Retirement*
B. ADC to Be Paid During Fiscal Year Ending	9/30/2021	9/30/2021	9/30/2021
C. Assumed Date of Employer Contrib.	10/1/2020	10/1/2020	10/1/2020
D. Annual Payment to Amortize Unfunded Actuarial Liability	$ 1,983,100	$ 2,032,113	$ 2,046,197
E. Employer Normal Cost	1,376,923	1,445,687	1,463,818
F. ADC as of the Valuation Date: D+E	3,360,023	3,477,800	3,510,015
G. ADC If Paid on the First Day of the Next Fiscal Year	3,586,825	3,712,551	3,746,941
H. ADC as % of Covered Payroll	29.24 %	30.26 %	30.54 %
I. Change in ADC	N/A	125,726	160,116
J. Change in ADC as a % of Covered Payroll	N/A	1.02 %	1.30 %

ACTUARIAL VALUE OF BENEFITS AND ASSETS - GENERAL EMPLOYEES			
A. Valuation Date	October 1, 2019 *Baseline*	October 1, 2019 *5-Year DROP If Eligible for Normal Retirement*	October 1, 2019 *5-Year DROP If Eligible for Early Retirement*
B. Actuarial Present Value of All Projected Benefits for			
1. Active Members			
a. Service Retirement Benefits	$ 61,026,947	$ 61,292,605	$ 61,533,890
b. Vesting Benefits	902,647	902,647	902,647
c. Disability Benefits	317,909	301,558	296,642
d. Preretirement Death Benefits	589,844	543,235	535,563
e. Return of Member Contributions	62,759	62,759	62,759
f. Total	62,900,106	63,102,804	63,331,501
2. Inactive Members			
a. Service Retirees & Beneficiaries	82,443,854	82,443,854	82,443,854
b. Disability Retirees	636,591	636,591	636,591
c. Terminated Vested Members	706,162	706,162	706,162
d. Total	83,786,607	83,786,607	83,786,607
3. Total for All Members	146,686,713	146,889,411	147,118,108
C. Actuarial Accrued (Past Service) Liability (Entry Age Normal)	134,718,209	135,202,361	135,341,483
D. Plan Assets			
1. Market Value	125,497,731	125,497,731	125,497,731
2. Actuarial Value	123,381,826	123,381,826	123,381,826
E. Unfunded Actuarial Accrued Liability	11,336,383	11,820,535	11,959,657
F. Actuarial Present Value of Projected Covered Payroll	83,808,750	81,692,149	81,766,656
G. Actuarial Present Value of Projected Member Contributions	5,513,488	5,308,276	5,310,473
H. Funded Ratio: D2 ÷ C	91.6%	91.3%	91.2%
I. Change in Present Value of Future Benefits Net of Change in Present Value of Member Contributions	**N/A**	**407,910**	**634,410**

CALCULATION OF EMPLOYER NORMAL COST - GENERAL EMPLOYEES

	October 1, 2019 *Baseline*	October 1, 2019 *5-Year DROP If Eligible for Normal Retirement*	October 1, 2019 *5-Year DROP If Eligible for Early Retirement*
A. Valuation Date			
B. Normal Cost for			
1. Service Retirement Benefits	$ 1,591,294	$ 1,603,118	$ 1,619,568
2. Vesting Benefits	173,093	174,014	173,681
3. Disability Benefits	23,760	23,610	23,534
4. Preretirement Death Benefits	27,231	26,397	26,319
5. Return of Member Contributions	69,487	69,877	69,680
6. Total for Future Benefits	1,884,865	1,897,016	1,912,782
7. Assumed Amount for Administrative Expenses	320,675	320,675	320,675
8. Total Normal Cost	2,205,540	2,217,691	2,233,457
9. Total as a % of Covered Payroll	17.98 %	18.08 %	18.21 %
C. Expected Member Contribution	828,617	772,004	769,639
D. Employer Normal Cost: B8-C	1,376,923	1,445,687	1,463,818
E. Employer Normal Cost as a % of Covered Payroll	11.22 %	11.78 %	11.93 %

PARTICIPANT DATA - GENERAL EMPLOYEES			
	October 1, 2019 *Baseline*	October 1, 2019 *5-Year DROP If Eligible for Normal Retirement*	October 1, 2019 *5-Year DROP If Eligible for Early Retirement*
ACTIVE MEMBERS			
Number	188	188	188
Covered Annual Payroll	$ 12,267,884	$ 12,267,884	$ 12,267,884
Average Annual Payroll	$ 65,255	$ 65,255	$ 65,255
Average Age	48.2	48.2	48.2
Average Past Service	13.9	13.9	13.9
Average Age at Hire	34.3	34.3	34.3
RETIREES, BENEFICIARIES & DROP			
Number	203	203	203
Annual Benefits	$ 6,461,000	$ 6,461,000	$ 6,461,000
Average Annual Benefit	$ 31,828	$ 31,828	$ 31,828
Average Age	69.3	69.3	69.3
DISABILITY RETIREES			
Number	2	2	2
Annual Benefits	$ 81,176	$ 81,176	$ 81,176
Average Annual Benefit	$ 40,588	$ 40,588	$ 40,588
Average Age	62.9	62.9	62.9
TERMINATED VESTED MEMBERS			
Number	4	4	4
Annual Benefits	$ 49,906	$ 49,906	$ 49,906
Average Annual Benefit	$ 12,477	$ 12,477	$ 12,477
Average Age	46.9	46.9	46.9

Risks Associated with Measuring the Accrued Liability and Actuarially Determined Contribution

The determination of the accrued liability and the actuarially determined contribution requires the use of assumptions regarding future economic and demographic experience. Risk measures are intended to aid in the understanding of the effects of future experience differing from the assumptions used in the course of the actuarial valuation. Risk measures may also help with illustrating the potential volatility in the accrued liability and the actuarially determined contribution that result from the differences between actual experience and the actuarial assumptions.

Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: Plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions due to changing conditions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period, or additional cost or contribution requirements based on the Plan's funded status); and changes in Plan provisions or applicable law. The scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

Examples of risk that may reasonably be anticipated to significantly affect the Plan's future financial condition include:

1. Investment risk – actual investment returns may differ from the either assumed or forecasted returns;
2. Contribution risk – actual contributions may differ from expected future contributions. For example, actual contributions may not be made in accordance with the Plan's funding policy or material changes may occur in the anticipated number of covered employees, covered payroll, or other relevant contribution base;
3. Salary and Payroll risk – actual salaries and total payroll may differ from expected, resulting in actual future accrued liability and contributions differing from expected;
4. Longevity risk – members may live longer or shorter than expected and receive pensions for a period of time other than assumed;
5. Other demographic risks – members may terminate, retire or become disabled at times or with benefits other than assumed resulting in actual future accrued liability and contributions differing from expected.

The effects of certain trends in experience can generally be anticipated. For example if the investment return is less (or more) than the assumed rate, the cost of the Plan can be expected to increase (or decrease). Likewise if longevity is improving (or worsening), increases (or decreases) in cost can be anticipated.

The computed contribution amounts may be considered as a minimum contribution that complies with the pension Board's funding policy and the State statutes. The timely receipt of the actuarially determined contributions is critical to support the financial health of the Plan. Users of this report should be aware that contributions made at the actuarially determined rate do not necessarily guarantee benefit security.

Risk Assessment

Risk assessment was outside the scope of this report. Risk assessment may include scenario tests, sensitivity tests, stochastic modeling, stress tests, and a comparison of the present value of accrued benefits at low-risk discount rates with the actuarial accrued liability. We are prepared to perform such assessment to aid in the decision making process.