



June 16, 2021

Pension Board  
South Miami Pension Plan  
c/o Ms. Edemir K. Estrada  
Pension Administrator  
Gabriel, Roeder, Smith & Company  
One East Broward Blvd.  
Suite 505  
Fort Lauderdale, Florida 33301-1804

**Re: South Miami Pension Plan  
October 1, 2020 Chapter 112.664 Compliance Report**

Dear Board Members:

As requested, we are pleased to enclose twelve (12) copies of the October 1, 2020 Chapter 112.664 Compliance Report for the South Miami Pension Plan (Plan).

As required, we will timely upload the required data to the State's online portal prior to the filing deadline.

Please note we understand the following items must be posted on the Plan's website and must be posted on any website containing budget information relating to the City or actuarial or performance information relating to the Plan:

- this compliance report
- most recent financial statement
- most recent actuarial valuation report
- a link to the Division of Retirement Actuarial Summary Fact Sheet  
[http://www.dms.myflorida.com/workforce\\_operations/retirement/local\\_retirement\\_plans/local\\_retirement\\_section/actuarial\\_summary\\_fact\\_sheets](http://www.dms.myflorida.com/workforce_operations/retirement/local_retirement_plans/local_retirement_section/actuarial_summary_fact_sheets)
- for the previous five years - a side-by-side comparison of the Plan's assumed rate of return compared to the actual rate of return as well as the percentages of cash, equity, bond and alternative investments in the Plan portfolio
- the Plan's funded ratio as determined in the most recent actuarial valuation – 105.5% on a market value of assets basis as of October 1, 2020

We appreciate the opportunity to work with the Board on this important assignment.

Pension Board  
June 16, 2021  
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If you should have any questions concerning the above, please do not hesitate to contact us.

Sincerest regards,

A handwritten signature in black ink that reads "Jennifer Borregard". The signature is written in a cursive style with a large initial "J".

Jennifer M. Borregard, E.A.  
Consultant and Actuary

Enclosures



# South Miami Pension Plan

## CHAPTER 112.664, F.S. COMPLIANCE REPORT

In Connection with the October 1, 2020 Funding Actuarial Valuation Report and the Plan's Financial Reporting for the Year Ended September 30, 2020







June 16, 2021

Pension Board  
South Miami Pension Plan  
c/o Ms. Edemir K. Estrada  
Pension Administrator  
Gabriel, Roeder, Smith & Company  
One East Broward Blvd.  
Suite 505  
Fort Lauderdale, Florida 33301-1804

**Re: October 1, 2020 Chapter 112.664 Compliance Report**

Dear Board Members:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the Pension Board (Board) of the South Miami Pension Plan (Plan) to prepare a disclosure report to satisfy the requirements set forth in Chapter 112.664, F.S. and as further required pursuant to Chapter 60T-1.0035, F.A.C.

This report was prepared at the request of the Board and is intended for use by the Board and those designated or approved by the Board. This report may be provided to parties other than the Board only in its entirety and only with the permission of the Board.

The purpose of the report is to provide the required information specified in Chapter 112.664, F.S. and to supplement this information with additional exhibits. This report should not be relied on for any purpose other than the purpose described above.

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. The scope of this engagement does not include an analysis of the potential range of such measurements.

This report was based upon information furnished by the City and the Board concerning Plan benefits, Plan provisions and Plan members as used in the corresponding Actuarial Valuation Reports for the Valuation Dates indicated. Financial information was provided by the City and Board as of September 30, 2020. We reviewed the information provided for internal and year-to-year consistency, but did not audit the data. The Plan is responsible for the accuracy of the data.

Except where specific assumptions are required by Chapter 112.664, F.S, this report was prepared using actuarial assumptions adopted by the Board as described in Section C. The Board's assumptions are based on the results of an Experience Study covering the period October 1, 2005 – May 31, 2013 along with past and expected future Plan experience. The mortality assumptions are prescribed by statute and were last updated in 2019. The assumptions represent an estimate of future Plan experience.

The investment return assumption of 2% higher than the investment return assumption utilized in the Actuarial Valuation Report does not represent an estimate of future Plan experience nor observation of the estimates inherent in market data. This assumption is provided as a counterpart to the Chapter 112.664, F.S. requirement to utilize an investment return assumption of 2% lower than the investment return assumption utilized in the Actuarial Valuation Report. The inclusion of the additional 2% higher assumption shows a more complete assessment of the range of potential results as opposed to the *one-sided* range required by statute.

If all actuarial assumptions are met and if all current and future minimum required contributions are paid Plan assets will be sufficient to pay all Plan benefits, future contributions are expected to remain relatively stable as a percent of payroll and the funded status is expected to approach 100%. Plan minimum required contributions are determined in compliance with the requirements of the Florida Protection of Public Employee Retirement Benefits Act and Police Officers Retirement Chapter 185 with normal cost determined as a level percent of covered payroll and a level percent of pay amortization payment using a maximum amortization period of 25 years.

The Plan's funded ratio as of October 1, 2020 is 105.5% defined as the ratio of the market value of Plan assets to the actuarial accrued liability.

The Plan's funded ratio and the GASB Net Pension Liability may not be appropriate for assessing the sufficiency of Plan assets to meet the estimated cost of settling benefit obligations but may be appropriate for assessing the need for or the amount of future contributions.

The undersigned 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 was prepared using ProVal's valuation model, a software product of Winklevoss Technologies. We are relying on the ProVal model. We performed tests of the ProVal model with this assignment and made a reasonable attempt to understand the developer's intended purpose of, general operation of, major sensitivities and dependencies within, and key strengths and limitations of the ProVal model. In our professional judgment, the ProVal valuation model has the capability to provide results that are consistent with the purposes of the valuation and has no material limitations or known weaknesses.



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 presents the actuarial position of the Plan as of the valuation date as required by statute. 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.

With respect to the reporting standards for defined benefit retirement plans or systems contained in Section 112.664(1), F.S., the actuarial disclosures required under this section were prepared and completed by us or under our direct supervision and we acknowledge responsibility for the results. To the best of our knowledge, the results are complete and accurate, and in our opinion, meet the requirements of Section 112.664(1), F.S., and Section 60T-1.0035, F.A.C.

Respectfully submitted,

GABRIEL, ROEDER, SMITH AND COMPANY

By *Jennifer Borregard*  
Jennifer M. Borregard, M.A.A.A.  
Enrolled Actuary No. 20-07624  
Consultant & Actuary

By *Michelle Jones*  
Shelly L. Jones, M.A.A.A.  
Enrolled Actuary No. 20-08646  
Consultant & Actuary



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## **SECTION A**

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### **CHAPTER 112.664, F.S. RESULTS**

**Net Pension Liability**  
**Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68**  
**and Using Assumptions Required Under 112.664(1)(a), F.S.**

Measurement Date	September 30, 2020
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 852,115
Interest	3,164,443
Benefit Changes	2,209,880
Difference Between Actual and Expected Experience	502,197
Assumption Changes	(1,109,800)
Benefit Payments	(1,554,048)
Contribution Refunds	(30,633)
Other	0
<b>Net Change in Total Pension Liability</b>	<b>\$ 4,034,154</b>
<b>Total Pension Liability (TPL) - (beginning of year)</b>	<b>41,240,847</b>
<b>Total Pension Liability (TPL) - (end of year)</b>	<b>\$ 45,275,001</b>
<b>B. <u>Plan Fiduciary Net Position</u></b>	
Contributions - City	\$ 2,136,287
Contributions - State	79,228
Contributions - Member	459,625
Net Investment Income	3,177,042
Benefit Payments	(1,554,048)
Contribution Refunds	(30,633)
Administrative Expenses	(143,452)
Other	359,949
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 4,483,998</b>
<b>Plan Fiduciary Net Position - (beginning of year)</b>	<b>43,646,667</b>
<b>Plan Fiduciary Net Position - (end of year)</b>	<b>\$ 48,130,665</b>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ (2,855,664)</b>
Valuation Date	October 1, 2019

**Certain Key Assumptions**

Investment Return Assumption 7.375%

**Mortality Table:**

General Employees including AMSC Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements. Police Officer Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.



**Net Pension Liability**  
**Using Assumptions Required Under 112.664(1)(b), F.S.**

Measurement Date	September 30, 2020
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 1,401,025
Interest	3,044,107
Benefit Changes	3,105,660
Difference Between Actual and Expected Experience	860,128
Assumption Changes	(1,918,518)
Benefit Payments	(1,554,048)
Contribution Refunds	(30,633)
Other	0
<b>Net Change in Total Pension Liability</b>	<b>\$ 4,907,721</b>
<b>Total Pension Liability (TPL) - (beginning of year)</b>	<b>53,975,306</b>
<b>Total Pension Liability (TPL) - (end of year)</b>	<b>\$ 58,883,027</b>
<b>B. <u>Plan Fiduciary Net Position</u></b>	
Contributions - City	\$ 2,136,287
Contributions - State	79,228
Contributions - Member	459,625
Net Investment Income	3,177,042
Benefit Payments	(1,554,048)
Contribution Refunds	(30,633)
Administrative Expenses	(143,452)
Other	359,949
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 4,483,998</b>
<b>Plan Fiduciary Net Position - (beginning of year)</b>	<b>43,646,667</b>
<b>Plan Fiduciary Net Position - (end of year)</b>	<b>\$ 48,130,665</b>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ 10,752,362</b>

Valuation Date October 1, 2019

**Certain Key Assumptions**

Investment Return Assumption 5.375%

**Mortality Table:**

General Employees including AMSC Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements. Police Officer Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.



## Net Pension Liability

Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption

Measurement Date	September 30, 2020
<b>A. <u>Total Pension Liability (TPL)</u></b>	
Service Cost	\$ 542,662
Interest	3,168,433
Benefit Changes	1,675,664
Difference Between Actual and Expected Experience	267,623
Assumption Changes	(679,157)
Benefit Payments	(1,554,048)
Contribution Refunds	(30,633)
Other	0
<b>Net Change in Total Pension Liability</b>	<b>\$ 3,390,544</b>
<b>Total Pension Liability (TPL) - (beginning of year)</b>	<b>32,775,854</b>
<b>Total Pension Liability (TPL) - (end of year)</b>	<b>\$ 36,166,398</b>
<b>B. <u>Plan Fiduciary Net Position</u></b>	
Contributions - City	\$ 2,136,287
Contributions - State	79,228
Contributions - Member	459,625
Net Investment Income	3,177,042
Benefit Payments	(1,554,048)
Contribution Refunds	(30,633)
Administrative Expenses	(143,452)
Other	359,949
<b>Net Change in Plan Fiduciary Net Position</b>	<b>\$ 4,483,998</b>
<b>Plan Fiduciary Net Position - (beginning of year)</b>	<b>43,646,667</b>
<b>Plan Fiduciary Net Position - (end of year)</b>	<b>\$ 48,130,665</b>
<b>C. <u>Net Pension Liability (NPL) - (end of year): (A) - (B)</u></b>	<b>\$ (11,964,267)</b>
Valuation Date	October 1, 2019

### Certain Key Assumptions

Investment Return Assumption 9.375%

#### Mortality Table:

General Employees including AMSC Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements. Police Officer Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.



**Asset and Benefit Payment Projection**  
**Not Reflecting Any Future Contributions**  
**Using Financial Reporting Assumptions per GASB Statements No. 67 and No. 68**  
**and Using Assumptions Required Under 112.664(1)(a), F.S.**

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2021	\$ 47,978,365	\$ 3,453,059	\$ 2,159,902	\$ 49,271,522
2022	49,271,522	3,541,280	2,340,827	50,471,975
2023	50,471,975	3,624,597	2,472,839	51,623,733
2024	51,623,733	3,704,000	2,613,040	52,714,693
2025	52,714,693	3,781,053	2,699,213	53,796,533
2026	53,796,533	3,854,649	2,855,866	54,795,316
2027	54,795,316	3,925,786	2,919,703	55,801,399
2028	55,801,399	3,997,969	2,970,720	56,828,648
2029	56,828,648	4,070,054	3,063,707	57,834,995
2030	57,834,995	4,140,427	3,161,034	58,814,388
2031	58,814,388	4,208,257	3,272,394	59,750,251
2032	59,750,251	4,274,192	3,350,455	60,673,988
2033	60,673,988	4,340,881	3,386,827	61,628,042
2034	61,628,042	4,409,526	3,430,258	62,607,310
2035	62,607,310	4,479,149	3,496,014	63,590,445
2036	63,590,445	4,551,643	3,496,321	64,645,767
2037	64,645,767	4,627,782	3,539,114	65,734,435
2038	65,734,435	4,708,211	3,535,573	66,907,073
2039	66,907,073	4,794,843	3,531,772	68,170,144
2040	68,170,144	4,888,514	3,518,638	69,540,020
2041	69,540,020	4,990,022	3,506,504	71,023,538
2042	71,023,538	5,100,508	3,479,249	72,644,797
2043	72,644,797	5,221,994	3,430,701	74,436,090
2044	74,436,090	5,355,404	3,397,760	76,393,734
2045	76,393,734	5,501,506	3,354,084	78,541,156
2046	78,541,156	5,662,220	3,294,808	80,908,568
2047	80,908,568	5,839,391	3,229,659	83,518,300
2048	83,518,300	6,034,814	3,154,865	86,398,249
2049	86,398,249	6,250,410	3,073,898	89,574,761
2050	89,574,761	6,488,079	2,987,822	93,075,018
2051	93,075,018	6,750,028	2,891,517	96,933,529
2052	96,933,529	7,038,598	2,790,161	101,181,966
2053	101,181,966	7,356,076	2,685,006	105,853,036
2054	105,853,036	7,704,891	2,575,586	110,982,341
2055	110,982,341	8,087,629	2,462,914	116,607,056

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State:

All future years

**Certain Key Assumptions**

Investment return assumption

7.375%

Mortality Table:

General Employees including AMSC Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements. Police Officer Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

**Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Plan assets does not include contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Plan is expected to be able to pay all future benefit payments.**



**Asset and Benefit Payment Projection**  
**Not Reflecting Any Future Contributions**  
**Using Assumptions Required Under 112.664(1)(b), F.S.**

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2021	\$ 47,978,365	\$ 2,516,455	\$ 2,159,902	\$ 48,334,918
2022	48,334,918	2,530,395	2,340,827	48,524,486
2023	48,524,486	2,536,771	2,472,839	48,588,418
2024	48,588,418	2,536,158	2,613,040	48,511,536
2025	48,511,536	2,529,537	2,699,213	48,341,860
2026	48,341,860	2,515,893	2,855,866	48,001,887
2027	48,001,887	2,495,775	2,919,703	47,577,959
2028	47,577,959	2,471,516	2,970,720	47,078,755
2029	47,078,755	2,441,998	3,063,707	46,457,046
2030	46,457,046	2,405,770	3,161,034	45,701,782
2031	45,701,782	2,361,958	3,272,394	44,791,346
2032	44,791,346	2,310,768	3,350,455	43,751,659
2033	43,751,659	2,253,834	3,386,827	42,618,666
2034	42,618,666	2,191,682	3,430,258	41,380,090
2035	41,380,090	2,123,209	3,496,014	40,007,285
2036	40,007,285	2,049,412	3,496,321	38,560,376
2037	38,560,376	1,970,405	3,539,114	36,991,667
2038	36,991,667	1,886,189	3,535,573	35,342,283
2039	35,342,283	1,797,644	3,531,772	33,608,155
2040	33,608,155	1,704,814	3,518,638	31,794,331
2041	31,794,331	1,607,671	3,506,504	29,895,498
2042	29,895,498	1,506,396	3,479,249	27,922,645
2043	27,922,645	1,401,758	3,430,701	25,893,702
2044	25,893,702	1,293,653	3,397,760	23,789,595
2045	23,789,595	1,181,819	3,354,084	21,617,330
2046	21,617,330	1,066,772	3,294,808	19,389,294
2047	19,389,294	948,896	3,229,659	17,108,531
2048	17,108,531	828,466	3,154,865	14,782,132
2049	14,782,132	705,760	3,073,898	12,413,994
2050	12,413,994	580,959	2,987,822	10,007,131
2051	10,007,131	454,371	2,891,517	7,569,985
2052	7,569,985	326,302	2,790,161	5,106,126
2053	5,106,126	196,907	2,685,006	2,618,027
2054	2,618,027	66,332	2,575,586	108,773
2055	108,773	-	2,462,914	-

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State: 34.00

**Certain Key Assumptions**

Investment return assumption 5.375%

**Mortality Table:**

General Employees including AMSC Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements. Police Officer Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

**Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Plan assets does not include contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Plan is expected to be able to pay all future benefit payments.**



**Asset and Benefit Payment Projection**  
**Not Reflecting Any Future Contributions**  
**Using Assumptions Required Under 112.664(1)(a), F.S. Plus 2% on Investment Return Assumption**

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2021	\$ 47,978,365	\$ 4,389,790	\$ 2,159,902	\$ 50,208,253
2022	50,208,253	4,589,781	2,340,827	52,457,207
2023	52,457,207	4,794,008	2,472,839	54,778,376
2024	54,778,376	5,004,596	2,613,040	57,169,932
2025	57,169,932	5,224,488	2,699,213	59,695,207
2026	59,695,207	5,453,386	2,855,866	62,292,727
2027	62,292,727	5,693,707	2,919,703	65,066,731
2028	65,066,731	5,951,214	2,970,720	68,047,225
2029	68,047,225	6,225,978	3,063,707	71,209,496
2030	71,209,496	6,517,566	3,161,034	74,566,028
2031	74,566,028	6,826,664	3,272,394	78,120,298
2032	78,120,298	7,155,967	3,350,455	81,925,810
2033	81,925,810	7,510,912	3,386,827	86,049,895
2034	86,049,895	7,895,369	3,430,258	90,515,006
2035	90,515,006	8,310,680	3,496,014	95,329,672
2036	95,329,672	8,762,040	3,496,321	100,595,391
2037	100,595,391	9,253,557	3,539,114	106,309,834
2038	106,309,834	9,789,464	3,535,573	112,563,725
2039	112,563,725	10,375,956	3,531,772	119,407,909
2040	119,407,909	11,018,257	3,518,638	126,907,528
2041	126,907,528	11,721,954	3,506,504	135,122,978
2042	135,122,978	12,493,517	3,479,249	144,137,246
2043	144,137,246	13,341,036	3,430,701	154,047,581
2044	154,047,581	14,271,780	3,397,760	164,921,601
2045	164,921,601	15,293,407	3,354,084	176,860,924
2046	176,860,924	16,415,688	3,294,808	189,981,804
2047	189,981,804	17,649,033	3,229,659	204,401,178
2048	204,401,178	19,004,596	3,154,865	220,250,909
2049	220,250,909	20,494,563	3,073,898	237,671,574
2050	237,671,574	22,132,062	2,987,822	256,815,814
2051	256,815,814	23,931,658	2,891,517	277,855,955
2052	277,855,955	25,909,247	2,790,161	300,975,041
2053	300,975,041	28,081,929	2,685,006	326,371,964
2054	326,371,964	30,468,371	2,575,586	354,264,749
2055	354,264,749	33,088,962	2,462,914	384,890,797

Number of years for which current market value of assets are adequate to sustain the payment of expected retirement benefits reflecting no contributions from the City, Members or State:

All future years

**Certain Key Assumptions**

Investment return assumption

9.375%

Mortality Table:

General Employees including AMSC Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements. Police Officer Mortality Assumptions: For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018. For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

**Note: As required in Section 112.664(c) of the Florida Statutes, the projection of Plan assets does not include contributions from the City, Members or State. For this reason, this projection should not be viewed as representative of the amount of time the Plan can sustain benefit payments. Under the Government Accounting Standards Board standards which include City, Member and State contributions, the Plan is expected to be able to pay all future benefit payments.**



**ACTUARIALLY DETERMINED CONTRIBUTION**

	Valuation and 112.664(1)(a), F.S. Assumptions		112.664(1)(b), F.S. Assumptions		112.664(1)(a), F.S. Assumptions Plus 2% on Investment Return Assumption
A. Valuation Date	October 1, 2020		October 1, 2020		October 1, 2020
B. Actuarial Determined Contribution to Be Paid During Fiscal Year Ending	September 30, 2022		September 30, 2022		September 30, 2022
C. Annual Payroll of Active Employees	\$ 6,753,066		\$ 6,753,066		\$ 6,753,066
D. Total Minimum Funding Requirement					
1. Total Normal Cost	\$ 1,027,239		\$ 1,598,215		\$ 705,581
2. Annual Payment to Amortize Unfunded Actuarial Liability	(300,990)		667,968		(1,200,588)
3. Interest Adjustment	27,237		60,345		(20,394)
4. Total Minimum Funding Requirement	<u>\$ 753,486</u>		<u>\$ 2,326,528</u>		<u>\$ (515,401)</u>
E. Minimum Required Contribution (F.S. 112.66 (13))	\$ 1,129,688		\$ 2,355,075		\$ 738,230
F. Expected Payroll of Active Employees for Following Plan Year (\$ / % of pay)	\$ 6,776,039   100.34%		\$ 6,776,039   100.34%		\$ 6,776,039   100.34%
G. Expected Contribution Sources (\$ / % of pay)					
1. City	\$ 614,637   9.07%		\$ 1,697,672   25.05%		\$ 221,807   3.27%
2. Member	440,265   6.50%		588,981   8.69%		440,265   6.50%
3. State	79,228   1.17%		79,228   1.17%		79,228   1.17%
4. Total	<u>\$ 1,134,130   16.74%</u>		<u>\$ 2,365,881   34.92%</u>		<u>\$ 741,300   10.94%</u>

**Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments**

**(General Employees Tier 1)**

Amortization Base	Current Unfunded Liabilities	Amortization Payment			Remaining Funding Period
		Valuation and 112.664(1)(a), F.S. Assumptions	112.664(1)(b), F.S. Assumptions	112.664(1)(a), F.S. Assumptions Plus 2%	
10/01/2015 Combined Bases *	\$ (1,339,699)	\$ (145,891)	\$ (131,536)	\$ (160,648)	14 years
10/01/2016 Actuarial Loss / (Gain)	(475,200)	(42,082)	(36,343)	(48,050)	21 years
10/01/2016 Assumption Change	490,348	43,424	37,502	49,581	21 years
10/01/2017 Actuarial Loss / (Gain)	(322,884)	(28,037)	(24,081)	(32,153)	22 years
10/01/2018 Actuarial Loss / (Gain)	(1,482,664)	(126,448)	(108,031)	(145,626)	23 years
10/01/2018 Plan Amendment - Ord. #35-19-2348	761,159	64,915	55,460	74,760	23 years
10/01/2019 Actuarial Loss / (Gain)	(847,185)	(71,072)	(60,408)	(82,182)	24 years
10/01/2019 Assumption Change	(252,790)	(21,207)	(18,025)	(24,522)	24 years
10/01/2020 Actuarial Loss / (Gain)	(56,118)	(4,637)	(3,922)	(5,383)	25 years
10/01/2020 Assumption Change - 112.664(1)(b), F.S. Assumptions	3,666,393	N/A	256,230	N/A	25 years
10/01/2020 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(2,542,689)	N/A	N/A	(243,902)	25 years

**(General Employees Tier 2)**

10/01/2017 Initial Base	\$ 89,877	\$ 7,959	\$ 6,874	\$ 9,088	21 years
10/01/2018 Actuarial Loss / (Gain)	28,804	2,457	2,099	2,829	23 years
10/01/2018 Plan Amendment - Ord. #35-19-2348	107,661	9,182	7,844	10,574	23 years
10/01/2019 Actuarial Loss / (Gain)	(161,584)	(13,556)	(11,522)	(15,675)	24 years
10/01/2019 Assumption Change	(13,628)	(1,143)	(972)	(1,322)	24 years
10/01/2020 Actuarial Loss / (Gain)	(104,817)	(8,662)	(7,325)	(10,054)	25 years
10/01/2020 Assumption Change - 112.664(1)(b), F.S. Assumptions	295,546	N/A	20,655	N/A	25 years
10/01/2020 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(181,372)	N/A	N/A	(17,398)	25 years

**(AMSC)**

10/01/2017 Combined Bases *	\$ 204,282	\$ 18,091	\$ 15,623	\$ 20,656	21 years
10/01/2018 Actuarial Loss / (Gain)	531,090	45,293	38,697	52,163	23 years
10/01/2018 Plan Amendment - Ord. #23-19-2336	240,969	20,551	17,558	23,668	23 years
10/01/2018 Plan Amendment - Ord. #35-19-2348	525,546	44,821	38,293	51,619	23 years
10/01/2019 Actuarial Loss / (Gain)	(508,066)	(42,622)	(36,227)	(49,286)	24 years
10/01/2019 Assumption Change	(65,942)	(5,532)	(4,702)	(6,397)	24 years
10/01/2020 Actuarial Loss / (Gain)	159,636	13,191	11,156	15,313	25 years
10/01/2020 Assumption Change - 112.664(1)(b), F.S. Assumptions	1,284,442	N/A	89,765	N/A	25 years
10/01/2020 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(838,658)	N/A	N/A	(80,447)	25 years

\* Combined per Internal Revenue Code Regulation 1.412(b)-1



**Unfunded Actuarial Accrued Liabilities Bases and Amortization Payments**

**(Police Officers)**

Amortization Base	Current Unfunded Liabilities	Amortization Payment			Remaining Funding Period
		Valuation and 112.664(1)(a), F.S. Assumptions	112.664(1)(b), F.S. Assumptions	112.664(1)(a), F.S. Assumptions Plus 2%	
10/01/2018 Combined Bases *	\$ (487,880)	\$ (43,044)	\$ (37,463)	\$ (48,860)	19 years
10/01/2018 Plan Amendment - Ord. #38-19-2351	343,941	27,714	23,553	32,074	23 years
10/01/2019 Actuarial Loss / (Gain)	274,937	21,753	18,384	25,286	24 years
10/01/2019 Assumption Change	(925,610)	(73,236)	(61,893)	(85,129)	24 years
10/01/2020 Actuarial Loss / (Gain)	87,764	6,828	5,739	7,971	25 years
10/01/2020 Assumption Change - 112.664(1)(b), F.S. Assumptions	8,639,492	N/A	564,986	N/A	25 years
10/01/2020 Assumption Change - 112.664(1)(a), F.S. Assumptions Plus 2%	(5,715,998)	N/A	N/A	(519,136)	25 years

\* Combined per Internal Revenue Code Regulation 1.412(b)-1

## **SECTION B**

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### **SUMMARY OF PLAN PROVISIONS**

## Outline of Principal Provisions of the Retirement Plan (as of October 1, 2020)

A. Effective Date:

October 1, 1965. Most recently amended by Ordinance 38-19-2351 adopted December 3, 2019.

B. Eligibility Requirements:

1. General Employees

Tier 1:

Regular full-time employee hired before October 1, 2011 is eligible to enter the Plan following the completion of six months of Credited Service and attainment of age 20.

Tier 2:

Regular full-time employee hired on or after October 1, 2011 and not participating in the Plan as of October 1, 2016 who elects to join or fails to make any election within ninety (90) days from September 20, 2016 is eligible to enter the Plan as a Tier 2 employee as of October 1, 2016.

Regular full-time employee hired on or after October 1, 2016 who elects to join or fails to make any election within ninety (90) days from date of hire is eligible to enter the Plan as a Tier 2 employee as of their date of hire.

Any regular full-time employee who previously entered into the Defined Contribution (DC) Plan may opt-out of the DC Plan and elect to join the Plan as a Tier 2 member or as their respective classification at the time they elect to join the Plan during an annual open enrollment period.

2. Police Officers

Regular full-time Police Officer is eligible to enter the Plan as of date of employment.

3. Administration Management Service Class (AMSC)

Employees of the City with the following positions who do not elect to participate in a defined contribution Plan of the City:

City Manager	Chief Administrative Officer (currently Finance Office Manager)
City Attorney	Chief Procurement Officer (currently Purchasing Manager)
City Clerk	Parks and Recreation Director
Assistant / Deputy City Manager	Assistant Director of Parks and Recreation
Finance Director / Chief Financial Officer	Community Redevelopment Agency Director
Chief of Police	Personnel Manager
Planning and Zoning Director	Project Manager
Building Director	Special Assistant to the Manager
Director of Public Works	Superintendent of Maintenance

## Outline of Principal Provisions of the Retirement Plan (as of October 1, 2020)

### C. Credited Service:

#### 1. General Employees and AMSC

Continuous employment. Credited service shall exclude continuous employment prior to Plan participation as follows: (1) If employed prior to October 1, 1973, credited service shall exclude the first two years of continuous employment and any additional year of continuous employment prior to attainment of age 25. (2) If employed on or after October 1, 1973, credited service shall exclude the first six (6) months of continuous employment and continuous employment prior to age 20.

Credited service for Tier 2 employees and AMSC will be continuous employment from the date of hire for all purposes except for benefit accruals which will be from the later of date of Plan entry election date or date of hire.

#### 2. Police Officers

Continuous employment. For Police Officers who did not participate when first eligible for the Plan, Credited Service shall exclude continuous employment prior to Plan participation as follows: (1) If employed prior to October 1, 1973, Credited Service shall exclude the first two years of continuous employment and any additional year of continuous employment prior to attainment of age 25. (2) If employed on or after October 1, 1973, Credited Service shall exclude the first six (6) months of continuous employment and continuous employment prior to age 20.

### D. Final Monthly Compensation (FMC):

Final Average Compensation is 1/36th of the final 36 consecutive months of compensation. For Police Officers, not less than 1/5th of the highest five (5) years out of the last (10) ten years of compensation. Compensation shall mean regular wages and salaries, excluding bonuses, vacation, sick leave and other additional compensation.

Effective October 1, 2011, Final Average Compensation for General Employees is 1/60th of the final 60 consecutive months of basic compensation, provided it is not less than the Final Average Compensation as of September 30, 2011 based on the definition above. Basic compensation shall mean base wages and salaries, excluding commissions, overtime pay, bonuses and any other forms of additional compensation earned outside of base wages.

Effective October 1, 2011, Final Average Compensation for members covered under the Police Officers and Sergeants collective bargaining agreement is the best five (5) years of basic compensation, provided it is not less than the Final Average Compensation as of September 30, 2011 based on the definition above. Basic compensation shall mean base wages and salaries, including up to 300 hours of overtime in a fiscal year and excluding payments for accrued unused sick or annual leave, extra duty or special detail work, shift differential, assignment pay, bonuses and any other forms of additional compensation earned outside of base wages.

**Outline of Principal Provisions of the Retirement Plan  
(as of October 1, 2020)**

**D. Final Monthly Compensation (FMC) (cont'd):**

Effective October 1, 2016, Final Average Compensation for members covered under the Miami-Dade County Police Benevolent Association Upper-Collective Bargaining Union (Lieutenants & Captains) collective bargaining agreement is the best five (5) years of basic compensation, provided it is not less than the Final Average Compensation as of September 30, 2016 based on the definition above. Basic compensation shall mean base wages and salaries, including up to 300 hours of overtime in a fiscal year and excluding payments for accrued unused sick or annual leave, extra duty or special detail work, shift differential, assignment pay, bonuses and any other forms of additional compensation earned outside of base wages.

Final Average Compensation for Tier 2 General Employees and AMSC shall be the average of the highest eight (8) years of credit service.

**E. Normal Retirement:**

**1. Eligibility:**

a. General Employees: Attainment of age 55 and completion of ten (10) years of Credited Service for benefits accrued as of September 30, 2011.

Attainment of age 60 and completion of ten (10) years of Credited Service for benefits accrued after September 30, 2011, including increases in the accrued benefit as of September 30, 2011 due to increases in the Final Average Compensation.

Attainment of age 65 and completion of ten (10) years of Credited Service or completion of thirty-three (33) years of Credited Service regardless of age for Tier 2 General Employees.

b. Police Officers: Attainment of age 55 and completion of ten (10) years of Credited Service or completion of twenty-five (25) years of Credited Service regardless of age.

c. AMSC: Attainment of age 60 and completion of five (5) years of Credited Service or completion of thirty-three (33) years of Credited Service regardless of age.

**2. Benefit:**

The monthly Plan benefit is the product of:

- a. FMC,
- b. Credited Service during the appropriate period and
- c. The appropriate benefit percentage

The appropriate benefit percentages are:

<u>a. General Employees</u>	<u>For Credited Service</u>	<u>Percentage</u>
	Through September 30, 1999	2.50%
	October 1, 1999 through September 30, 2011	2.75%
	October 1, 2011 and thereafter	2.25%



**Outline of Principal Provisions of the Retirement Plan  
(as of October 1, 2020)**

E. Normal Retirement (cont'd):

2. Benefit:

b. <u>Police Officers</u>	<u>For Credited Service</u>	<u>Percentage</u>
	Through September 30, 1995	2.00%
	October 1, 1995 through September 30, 1996	2.25%
	October 1, 1996 through September 30, 1997	2.50%
	October 1, 1997 through September 30, 2001	2.75%
	October 1, 2001 through September 30, 2002	2.80%
	October 1, 2002 through September 30, 2003	2.90%
	October 1, 2003 and thereafter	3.00%
c. <u>General Employees (Tier 2)</u>	<u>For Credited Service</u>	<u>Percentage</u>
	October 1, 2016 and thereafter	1.60%
d. <u>AMSC</u>	<u>For Credited Service</u>	<u>Percentage</u>
	October 1, 2016 and thereafter	3.00%

F. Supplemental Benefit:

A cost-of-living supplemental benefit based upon the consumer price index is provided upon retirement. The annual increase is limited to 3%.

No cost-of-living supplemental benefit is provided for Tier 2 General Employees and AMSC members who retired or entered the DROP prior to October 1, 2019. No cost-of-living supplemental benefit is provided on the portion of the benefit accrued after September 30, 2011 for Tier 1 General Employees who retired or entered the DROP prior to October 1, 2019.

G. Early Retirement:

1. Eligibility:

- a. Police Officers: Attainment of age 50 and completion of 10 years of Credited Service.
- b. AMSC: Attainment of age 55 and completion of 10 years of Credited Service.

2. Benefit:

- a. Police Officers: Accrued benefit based upon FMC and Credited Service as of Early Retirement Date, reduced 3% for each year that the benefit commencement date precedes Normal Retirement.
- b. AMSC: Accrued benefit based upon FMC and Credited Service as of Early Retirement Date, reduced 1/15 for each of the first five years and 1/30 for the next five years that the benefit commencement date precedes Normal Retirement.



**Outline of Principal Provisions of the Retirement Plan  
(as of October 1, 2020)**

H. Delayed Retirement:

1. Eligibility: Retirement subsequent to Normal Retirement Date.
2. Benefit: Accrued benefit based upon FMC and Credited Service as of Delayed Retirement Date.

I. Disability Retirement:

1. Eligibility: Totally and permanently disabled for a six month period while actively employed.
2. Benefit: Accrued benefit based upon FMC and Credited Service as of date of disability, actuarially reduced as for Early Retirement for early commencement.

J. Pre-Retirement Death Benefit:

The beneficiary shall receive the member's accumulated Employee Contributions.

K. Benefit Upon Termination of Service:

1. Benefit payable at Normal Retirement equal to the greater of:
  - a. Accrued benefit based upon FMC and Credited Service as of date of termination times the vesting percentage shown below, or
  - b. Benefit which can be supported by the accumulated Member Contributions with interest to Normal Retirement Date.

No supplemental benefit shall be payable to vested terminees.

2. Vesting Schedule:

All employees except AMSC:

<u>Years of Credited Service</u>	<u>Vesting Percentage</u>
Less than 10	0%
10 or more years	100%

AMSC:

<u>Years of Credited Service</u>	<u>Vesting Percentage</u>
Less than 5	0%
5 or more years	100%

AMSC members who have completed three (3) years of continuous Credited Service as of as of June 18, 2019 are 100% vested.

**Outline of Principal Provisions of the Retirement Plan  
(as of October 1, 2020)**

K. Benefit Upon Termination of Service (cont'd):

3. Refund Option:

A terminated member may elect to receive a refund of Accumulated Contributions without interest in lieu of receiving any other Plan benefits.

L. Member Contributions:

Members contribute 7.0% (3.0% for Tier 2 General Employees and 7.5% for Police Officers) of member's basic annual compensation.

Should the City contribution for General Employees be actuarially determined to exceed 7.0%, not including expenses, both the City and the General Employees (other than Tier 2 General Employees and AMSC) will share equally in the amount in excess of 7.0%. General Employees (other than Tier 2 General Employees and AMSC) Contributions are capped at 10% of basic annual compensation as of October 1, 2016.

Should the City contribution for Police Officers be actuarially determined to exceed 7.5%, not including expenses, both the City and the Police Officers will share equally in the amount in excess of 7.5% but not more than 12.0%.

M. Normal Form of Retirement Income:

The normal form of payment shall be a life annuity with a guarantee of a refund of accumulated Employee Contributions.

N. Deferred Retirement Option Plan (DROP):

1. Eligibility: Attainment of normal retirement date.
2. The maximum period of participation in the DROP is sixty (60) months.
3. A member's account in the DROP shall be credited monthly with interest in an amount equal to 50% of the net (gross return minus investment expense) yearly interest earned by the Plan for the preceding fiscal year, up to a maximum of 5% and a minimum of 0%.
4. No payment may be made from the DROP until the member actually separates from service with the City. The DROP account balance may be distributed in a lump sum, periodic payments, an annuity or a combination thereof.

O. Changes Since Previous Actuarial Valuation:

None.

## SECTION C

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### **ACTUARIAL ASSUMPTIONS AND COST METHODS USED FOR FUNDING**

**Actuarial Assumptions and Methods Used in the Valuation  
(as of October 1, 2020)**

A. Mortality

General Employees including AMSC Mortality Assumptions:

For healthy participants during employment, PUB-2010 Headcount Weighted General Below Median Employee Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For healthy participants post employment, PUB-2010 Headcount Weighted General Below Median Healthy Retiree Mortality Table, separate rates for males and females, set back 1 year for males, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For disabled participants, PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table, separate rates for males and females, both set forward 3 years, without projected mortality improvements.

Sample Ages (2020)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	32.58	35.02	28.63
60	27.74	30.00	24.55	27.84
62	25.85	28.02	22.93	26.02

Sample Ages (2040)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	34.22	36.50	30.64
60	29.30	31.44	26.40	29.51
62	27.37	29.43	24.72	27.63

Police Officer Mortality Assumptions:

For healthy participants during employment, PUB-2010 Headcount Weighted Safety Employee Female Mortality Table and Safety Below Median Employee Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For healthy participants post employment, PUB-2010 Headcount Weighted Safety Healthy Retiree Female Mortality Table and Safety Below Median Healthy Retiree Male Mortality Table, both set forward 1 year, with fully generational mortality improvements projected to each future decrement date with Scale MP-2018.

For disabled participants, 80% PUB-2010 Headcount Weighted General Disabled Retiree Mortality Table / 20% PUB-2010 Headcount Weighted Safety Disabled Retiree Mortality Table, separate rates for males and females, without projected mortality improvements.

**Actuarial Assumptions and Methods Used in the Valuation  
(as of October 1, 2020)**

A. Mortality (cont'd)

Police Officer Mortality Assumptions (cont'd):

Sample Ages (2020)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	30.45	34.32	27.59
60	25.51	29.26	23.01	26.39
62	23.58	27.25	21.28	24.55

  

Sample Ages (2040)	Pre-retirement Future Life Expectancy (Years)		Post-retirement Future Life Expectancy (Years)	
	Male	Female	Male	Female
	55	32.09	35.81	29.48
60	27.08	30.70	24.79	28.13
62	25.11	28.67	23.00	26.25

B. Investment Return to be Earned by Fund

7.375% (net of investment expenses), compounded annually - includes inflation at 2.75%.

C. Allowances for Expenses or Contingencies

Actual expenses paid in previous year.

D. Employee Withdrawal Rates

Withdrawal rates for males and for females were used in accordance with the following illustrative example based upon number of years of service:

Service	Withdrawal Rates Per 100 Employees	
	Police	General / AMSC
1 - 2	12.00	20.00
3 - 6	8.00	9.25
7 - 10	8.00	5.00
11 & Over	3.50	5.00

E. Disability Rates

1985 Disability Study, Class 1 with separate rates for females.

**Actuarial Assumptions and Methods Used in the Valuation  
(as of October 1, 2020)**

F. Marital Assumptions

100% of active members are assumed to be married. Where applicable, females are assumed to be three years younger than their male spouses.

G. Salary Increase Factors

Current salary is assumed to increase in accordance with the following table based upon number of years of service - includes wage inflation of 3.25%.

<u>Service</u>	<u>Police</u>	<u>General / AMSC</u>
0 - 9	5.25%	5.25%
10 - 14	3.75%	4.75%
15 - 19	3.75%	4.25%
20 & over	3.75%	3.75%

H. Increase in Covered Payroll

4.0% per year, limited to average annual increase over most recent ten years (0.7%) but not less than 0.0% for Police Officers. No increase in covered payroll is assumed for General Employees including AMSC.

I. Retirement Rates

Rates of Early Retirement for Police Officers were used in accordance with the following table.

<u>Years Preceding Normal Retirement</u>	<u>Police</u>
1 - 6	5%
7 - 10	10%

Rates of Normal Retirement were used in accordance with the following tables.

<u>Age</u>	<u>Police</u>	<u>General *</u>	<u>AMSC **</u>
55 - 59	25%	10%	10%
60 - 61	25%	10%	25%
62 - 64	40%	25%	35%
65 - 66	100%	25%	35%
67 & above	100%	100%	100%

<u>Service</u>	<u>Police</u>
25 years	100%

\* Rates are 25% for Tier 2 members for each year upon meeting 33 years of service until 100% at age 67.

\*\* Includes Early Retirement. Rates are 25% below the age of 62 and 35% between the ages of 62 and 66 upon meeting 33 years of service until 100% at age 67.

General Employees who retire prior to age sixty (60) but after attainment of ten (10) years of Credited Service (55 & 10) are assumed to receive an actuarially reduced benefit payable immediately upon retirement.

## Actuarial Assumptions and Methods Used in the Valuation (as of October 1, 2020)

### J. Cost of Living Increases

Future cost of living increases for General Employees (including Tier 1 and Tier 2 General Employees), AMSC and Police Officers are assumed to be 3.0% per annum.

### K. Valuation of Assets

The method used for determining the smoothed value of assets phases in the deviation between the expected and actual return on assets at the rate of 20% per year. The smoothed value of assets will be further adjusted to the extent necessary to fall within the corridor whose lower limit is 80% of the fair market value of Plan assets and whose upper limit is 120% of the fair market value of Plan assets.

### L. Cost Methods

#### Normal Retirement, Termination, Disability and Pre-Retirement Death Benefit: Entry-Age-Actuarial Cost Method

Under this method the normal cost for each active employee is the amount which is calculated to be a level percentage of pay that would be required annually from his date of hire to his retirement age to fund his estimated benefits, assuming the Plan had always been in effect. The normal cost for the Plan is the sum of the individual normal costs for all active employees. The actuarial accrued liability as of any valuation date for each active employee or inactive employee who is eligible to receive benefits under the Plan is the excess of the actuarial present value of estimated future benefits over the actuarial present value of current and future normal costs. The unfunded actuarial accrued liability as of any valuation date is the excess of the actuarial accrued liability over the smoothed value of assets of the Plan.

#### Vested Normal Retirement, Termination, Disability, and Death Benefits: Unit Credit Cost Method

Under this method, the actuarial present value of vested accrued benefits is an amount calculated to be the sum of the present values of each individual's vested accrued or earned benefit under the Plan as of the valuation date. Each individual's calculation is based on pay and service as of the valuation date.

### M. Changes Since Previous Actuarial Valuation

None.

**SECTION D**

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**GLOSSARY**

## GLOSSARY

<b><i>Actuarial Accrued Liability</i></b>	The difference between the Actuarial Present Value of Future Benefits, and the Actuarial Present Value of Future Normal Costs.
<b><i>Actuarial Assumptions</i></b>	Assumptions about future plan experience that affect costs or liabilities, such as: mortality, withdrawal, disablement, and retirement; future increases in salary; future rates of investment earnings; future investment and administrative expenses; characteristics of members not specified in the data, such as marital status; characteristics of future members; future elections made by members and other items.
<b><i>Actuarial Cost Method</i></b>	A procedure for allocating the Actuarial Present Value of Future Benefits between the Actuarial Present Value of Future Normal Costs and the Actuarial Accrued Liability.
<b><i>Actuarial Equivalent</i></b>	Of equal Actuarial Present Value, determined as of a given date and based on a given set of Actuarial Assumptions.
<b><i>Actuarial Present Value</i></b>	The amount of funds required to provide a payment or series of payments in the future. It is determined by discounting the future payments with an assumed interest rate and with the assumed probability each payment will be made.
<b><i>Actuarial Present Value of Future Benefits</i></b>	The Actuarial Present Value of amounts which are expected to be paid at various future times to active members, retired members, beneficiaries receiving benefits and inactive, non-retired members entitled to either a refund or a future retirement benefit. Expressed another way, it is the value that would have to be invested on the valuation date so that the amount invested plus investment earnings would provide sufficient assets to pay all projected benefits and expenses when due.
<b><i>Actuarial Valuation</i></b>	The determination, as of a valuation date, of the Normal Cost, Actuarial Accrued Liability, Actuarial Value of Assets, and related Actuarial Present Values for a plan. An Actuarial Valuation for a governmental retirement system typically also includes calculations of items needed for compliance with GASB No. 67.
<b><i>Actuarial Value of Assets</i></b>	The value of the assets as of a given date, used by the actuary for valuation purposes. This may be the market or fair value of plan assets or a smoothed value in order to reduce the year-to-year volatility of calculated results, such as the funded ratio and the actuarially required contribution.

<b><i>Amortization Method</i></b>	A method for determining the Amortization Payment. The most common methods used are level dollar and level percentage of payroll. Under the Level Dollar method, the Amortization Payment is one of a stream of payments, all equal, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the Amortization Payment is one of a stream of increasing payments, whose Actuarial Present Value is equal to the UAAL. Under the Level Percentage of Pay method, the stream of payments increases at the rate at which total covered payroll of all active members is assumed to increase.
<b><i>Amortization Payment</i></b>	That portion of the plan contribution which is designed to pay interest on and to amortize the Unfunded Actuarial Accrued Liability.
<b><i>Amortization Period</i></b>	The period used in calculating the Amortization Payment.
<b><i>Annual Required Contribution</i></b>	The employer's periodic required contributions, expressed as a dollar amount or a percentage of covered plan compensation. The annual required contribution consists of the Employer Normal Cost and Amortization Payment plus interest adjustment.
<b><i>Closed Amortization Period</i></b>	A specific number of years that is reduced by one each year, and declines to zero with the passage of time. For example if the amortization period is initially set at 30 years, it is 29 years at the end of one year, 28 years at the end of two years, etc.
<b><i>Employer Normal Cost</i></b>	The portion of the Normal Cost to be paid by the employer. This is equal to the Normal Cost less expected member contributions.
<b><i>Equivalent Single Amortization Period</i></b>	For plans that do not establish separate amortization bases (separate components of the UAAL), this is the same as the Amortization Period. For plans that do establish separate amortization bases, this is the period over which the UAAL would be amortized if all amortization bases were combined upon the current UAAL payment.
<b><i>Experience Gain/Loss</i></b>	A measure of the difference between actual experience and that expected based upon a set of Actuarial Assumptions, during the period between two actuarial valuations. To the extent that actual experience differs from that assumed, Unfunded Actuarial Accrued Liabilities emerge which may be larger or smaller than projected. Gains are due to favorable experience, e.g., the assets earn more than projected, salaries do not increase as fast as assumed, members retire later than assumed, etc. Favorable experience means actual results produce actuarial liabilities not as large as projected by the actuarial assumptions. Losses are the result of unfavorable experience, i.e., actual results that produce Unfunded Actuarial Accrued Liabilities which are larger than projected.
<b><i>Funded Ratio</i></b>	The ratio of the Actuarial Value of Assets to the Actuarial Accrued Liability.

<b>GASB</b>	Governmental Accounting Standards Board.
<b><i>GASB No. 67 and GASB No. 68</i></b>	These are the governmental accounting standards that set the accounting rules for public retirement plans and the employers that sponsor or contribute to them. Statement No. 67 sets the accounting rules for the plans themselves, while Statement No. 68 sets the accounting rules for the employers that sponsor or contribute to public retirement plans.
<b><i>Normal Cost</i></b>	The annual cost assigned, under the Actuarial Cost Method, to the current plan year.
<b><i>Open Amortization Period</i></b>	An open amortization period is one which is used to determine the Amortization Payment but which does not change over time. In other words, if the initial period is set as 30 years, the same 30-year period is used in determining the Amortization Period each year. In theory, if an Open Amortization Period is used to amortize the Unfunded Actuarial Accrued Liability, the UAAL will never completely disappear, but will become smaller each year, either as a dollar amount or in relation to covered payroll.
<b><i>Unfunded Actuarial Accrued Liability</i></b>	The difference between the Actuarial Accrued Liability and Actuarial Value of Assets.
<b><i>Valuation Date</i></b>	The date as of which the Actuarial Present Value of Future Benefits are determined. The benefits expected to be paid in the future are discounted to this date.