



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

October 30, 2018

VIA EMAIL

Ms. Grisell Aedo, Acting Retirement Director
City of Hialeah, Retirement Division
501 Palm Ave.
Hialeah, FL 33010

Re: City of Hialeah Employees' Retirement System
Section 112.664, Florida Statutes Compliance

Dear Grisell:

Please find enclosed the annual disclosures that satisfy the October 1, 2017 financial reporting requirements made under Section 112.664.

Our office will submit this information electronically to the Department of Management Services. However, it is important for you to be aware that this report must also be made available on the Plan or Plan Sponsor's website, if such website exists. A deadline for this website publication is not made clear in the law.

In addition to the enclosed report, the Plan or Plan Sponsor's website must provide a link to the Division of Retirement's Actuarial Summary Fact Sheet for the Plan, and also report the previous five years' assumed and actual rates of return, along with their respective asset allocations. The Board should contact its Investment Consultant for this information.

If there are any questions, concerns, or comments about any of the items contained in this report, please feel free to contact me.

Respectfully submitted,

Foster & Foster, Inc.

By: 

Bradley R. Heinrichs, FSA, EA, MAAA
Enrolled Actuary #17-6901

BRH/lke
Enclosures

cc via email: Stu Kaufman, Board Attorney

CITY OF HIALEAH
EMPLOYEES' RETIREMENT SYSTEM

SECTION 112.664, FLORIDA STATUTES
COMPLIANCE

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 me or under my direct supervision and I acknowledge responsibility for the results. To the best of my knowledge, the results are complete and accurate, and in my opinion, meet the requirements of Section 112.664(1), Florida Statutes, and Rule 60T-1.0035, Florida Administrative Code.

By:



Date: 10/30/2018

Bradley R. Heinrichs, FSA, EA, MAAA
Enrolled Actuary #17-6901



FOSTER & FOSTER
ACTUARIES AND CONSULTANTS

When reviewing the following schedules, please note the following:

- 1) The purpose of producing this report is solely to satisfy the requirements set forth by Section 112.664, Florida Statutes, and is mandatory for every Florida public pension fund, excluding the Florida Retirement System (FRS).
- 2) None of the schedules shown have any impact on the funding requirements of the Plan. These schedules are for statutory compliance purposes only.
- 3) In the schedules that follow, the columns labeled "ACTUAL" represent the final recorded GASB 67/68 results. The columns labeled "HYPOTHETICAL" illustrate what the results would have been if different assumptions were used.
- 4) It is our opinion that the Plan's actual assumptions utilized in the October 1, 2017 Actuarial Valuation Report, as adopted by the Board of Trustees, are reasonable individually and in the aggregate, and represent our best estimate of future Plan experience.
- 5) The "Number of Years Expected Benefit Payments Sustained" calculated in Section II: Asset Sustainability should not be interpreted as the number of years the Plan has left until it is insolvent. This calculation is required by 112.664, Florida Statutes, but the numeric result is irrelevant, since in its calculation we are to assume there will be no further contributions to the Fund. As long as the Actuarially Determined Contribution is made each year the Plan will never become insolvent.

SCHEDULE OF CHANGES IN NET PENSION LIABILITY
FISCAL YEAR SEPTEMBER 30, 2017

| | ACTUAL | HYPOTHETICAL | |
|---|----------------------------------|----------------------------------|-----------------------------------|
| | 8.00% RP-2000 Generational | 6.00% RP-2000 Generational | 10.00% RP-2000 Generational |
| <u>Total Pension Liability</u> | | | |
| Service Cost | 8,302,554 | 13,190,745 | 5,401,945 |
| Interest | 65,295,454 | 59,798,629 | 68,831,407 |
| Change in Annuity Savings Fund | 3,594,508 | 3,594,508 | 3,594,508 |
| Change in Annuity Reserve Fund | 48,248,469 | 48,248,469 | 48,248,469 |
| Changes of Benefit Terms | (15,079,464) | (22,864,205) | (10,229,362) |
| Differences Between Expected and Actual Experience | 17,047,994 | 22,493,625 | 12,816,901 |
| Changes of Assumptions | - | - | - |
| Contributions - Buy Back | 2,569,143 | 2,569,143 | 2,569,143 |
| Benefit Payments, Including Refunds of Employee Contributions | (67,397,153) | (67,397,153) | (67,397,153) |
| Net Change in Total Pension Liability | 62,581,505 | 59,633,761 | 63,835,858 |
| Total Pension Liability - Beginning | 856,668,657 | 1,040,015,857 | 726,840,064 |
| Total Pension Liability - Ending (a) | <u>\$ 919,250,162</u> | <u>\$ 1,099,649,618</u> | <u>\$ 790,675,922</u> |
| <u>Plan Fiduciary Net Position</u> | | | |
| Contributions - Employer | 29,197,532 | 29,197,532 | 29,197,532 |
| Contributions - State | 461,877 | 461,877 | 461,877 |
| Contributions - Employee | 2,152,895 | 2,152,895 | 2,152,895 |
| Contributions - Buy Back | 2,569,143 | 2,569,143 | 2,569,143 |
| Contributions - Annuity Savings Fund | 3,594,508 | 3,594,508 | 3,594,508 |
| Net Investment Income | 70,077,666 | 70,077,666 | 70,077,666 |
| Benefit Payments, Including Refunds of Employee Contributions | (67,397,153) | (67,397,153) | (67,397,153) |
| Revision in methodology to include Annuity Reserve Fund | 48,248,469 | 48,248,469 | 48,248,469 |
| Net Change in Plan Fiduciary Net Position | 88,904,937 | 88,904,937 | 88,904,937 |
| Plan Fiduciary Net Position - Beginning | 591,081,423 | 591,081,423 | 591,081,423 |
| Plan Fiduciary Net Position - Ending (b) | <u>\$ 679,986,360</u> | <u>\$ 679,986,360</u> | <u>\$ 679,986,360</u> |
| Net Pension Liability - Ending (a) - (b) | <u>\$ 239,263,802</u> | <u>\$ 419,663,258</u> | <u>\$ 110,689,562</u> |

PROJECTION OF THE NUMBER OF YEARS ASSETS WILL SUSTAIN BENEFIT PAYMENTS

Table 1
Plan Assumptions: 8.00% and RP-2000 Generational Mortality

| Fiscal Year Beginning 10/1 | Projected Beginning Fiduciary Net Position | Projected Total Contributions | Projected Benefit Payments* | Projected Administrative Expense | Projected Investment Earnings | Projected Ending Fiduciary Net Position |
|----------------------------|--|-------------------------------|-----------------------------|----------------------------------|-------------------------------|---|
| 2017 | 679,986,360 | - | 65,795,075 | - | 51,767,106 | 665,958,391 |
| 2018 | 665,958,391 | - | 62,748,640 | - | 50,766,726 | 653,976,477 |
| 2019 | 653,976,477 | - | 63,488,127 | - | 49,778,593 | 640,266,943 |
| 2020 | 640,266,943 | - | 64,129,423 | - | 48,656,179 | 624,793,699 |
| 2021 | 624,793,699 | - | 64,696,827 | - | 47,395,623 | 607,492,495 |
| 2022 | 607,492,495 | - | 65,210,212 | - | 45,990,991 | 588,273,274 |
| 2023 | 588,273,274 | - | 65,854,806 | - | 44,427,670 | 566,846,138 |
| 2024 | 566,846,138 | - | 66,481,614 | - | 42,688,426 | 543,052,950 |
| 2025 | 543,052,950 | - | 66,793,595 | - | 40,772,492 | 517,031,847 |
| 2026 | 517,031,847 | - | 66,887,377 | - | 38,687,053 | 488,831,523 |
| 2027 | 488,831,523 | - | 66,950,699 | - | 36,428,494 | 458,309,318 |
| 2028 | 458,309,318 | - | 66,859,604 | - | 33,990,361 | 425,440,075 |
| 2029 | 425,440,075 | - | 66,642,134 | - | 31,369,521 | 390,167,462 |
| 2030 | 390,167,462 | - | 66,262,321 | - | 28,562,904 | 352,468,045 |
| 2031 | 352,468,045 | - | 65,659,971 | - | 25,571,045 | 312,379,119 |
| 2032 | 312,379,119 | - | 64,990,122 | - | 22,390,725 | 269,779,722 |
| 2033 | 269,779,722 | - | 64,135,336 | - | 19,016,964 | 224,661,350 |
| 2034 | 224,661,350 | - | 63,179,132 | - | 15,445,743 | 176,927,961 |
| 2035 | 176,927,961 | - | 61,947,284 | - | 11,676,346 | 126,657,023 |
| 2036 | 126,657,023 | - | 60,686,556 | - | 7,705,100 | 73,675,567 |
| 2037 | 73,675,567 | - | 59,294,823 | - | 3,522,252 | 17,902,996 |
| 2038 | 17,902,996 | - | 57,809,675 | - | - | - |

*All DROP Balances paid in 2017.

Number of Years Expected Benefit Payments Sustained: 21.31

This projection assumes no further contributions, assumes no further benefit accruals, and assumes Market Value of Assets earn 8.00% interest.

It is important to note that as long as the Actuarially Determined Contribution is made each year, the Plan will never become insolvent. Furthermore, State and local laws mandate that the Actuarially Determined Contribution be made each year.

PROJECTION OF THE NUMBER OF YEARS ASSETS WILL SUSTAIN BENEFIT PAYMENTS

Table 2
Hypothetical Assumptions: 6.00% and RP-2000 Generational Mortality

| Fiscal Year Beginning 10/1 | Projected Beginning Fiduciary Net Position | Projected Total Contributions | Projected Benefit Payments* | Projected Administrative Expense | Projected Investment Earnings | Projected Ending Fiduciary Net Position |
|----------------------------|--|-------------------------------|-----------------------------|----------------------------------|-------------------------------|---|
| 2017 | 679,986,360 | - | 65,795,075 | - | 38,825,329 | 653,016,614 |
| 2018 | 653,016,614 | - | 62,748,640 | - | 37,298,538 | 627,566,512 |
| 2019 | 627,566,512 | - | 63,488,127 | - | 35,749,347 | 599,827,732 |
| 2020 | 599,827,732 | - | 64,129,423 | - | 34,065,781 | 569,764,090 |
| 2021 | 569,764,090 | - | 64,696,827 | - | 32,244,941 | 537,312,204 |
| 2022 | 537,312,204 | - | 65,210,212 | - | 30,282,426 | 502,384,418 |
| 2023 | 502,384,418 | - | 65,854,806 | - | 28,167,421 | 464,697,033 |
| 2024 | 464,697,033 | - | 66,481,614 | - | 25,887,374 | 424,102,793 |
| 2025 | 424,102,793 | - | 66,793,595 | - | 23,442,360 | 380,751,558 |
| 2026 | 380,751,558 | - | 66,887,377 | - | 20,838,472 | 334,702,653 |
| 2027 | 334,702,653 | - | 66,950,699 | - | 18,073,638 | 285,825,592 |
| 2028 | 285,825,592 | - | 66,859,604 | - | 15,143,747 | 234,109,735 |
| 2029 | 234,109,735 | - | 66,642,134 | - | 12,047,320 | 179,514,921 |
| 2030 | 179,514,921 | - | 66,262,321 | - | 8,783,026 | 122,035,626 |
| 2031 | 122,035,626 | - | 65,659,971 | - | 5,352,338 | 61,727,993 |
| 2032 | 61,727,993 | - | 64,990,122 | - | - | - |

*All DROP Balances paid in 2017.

Number of Years Expected Benefit Payments Sustained: 15.95

This projection assumes no further contributions, assumes no further benefit accruals, and assumes Market Value of Assets earn 6.00% interest.

It is important to note that as long as the Actuarially Determined Contribution is made each year, the Plan will never become insolvent. Furthermore, State and local laws mandate that the Actuarially Determined Contribution be made each year.

PROJECTION OF THE NUMBER OF YEARS ASSETS WILL SUSTAIN BENEFIT PAYMENTS

Table 3
Hypothetical Assumptions: 10.00% and RP-2000 Generational Mortality

| Fiscal Year Beginning 10/1 | Projected Beginning Fiduciary Net Position | Projected Total Contributions | Projected Benefit Payments* | Projected Administrative Expense | Projected Investment Earnings | Projected Ending Fiduciary Net Position |
|----------------------------|--|-------------------------------|-----------------------------|----------------------------------|-------------------------------|---|
| 2017 | 679,986,360 | - | 65,795,075 | - | 64,708,882 | 678,900,167 |
| 2018 | 678,900,167 | - | 62,748,640 | - | 64,752,585 | 680,904,112 |
| 2019 | 680,904,112 | - | 63,488,127 | - | 64,916,005 | 682,331,990 |
| 2020 | 682,331,990 | - | 64,129,423 | - | 65,026,728 | 683,229,295 |
| 2021 | 683,229,295 | - | 64,696,827 | - | 65,088,088 | 683,620,556 |
| 2022 | 683,620,556 | - | 65,210,212 | - | 65,101,545 | 683,511,889 |
| 2023 | 683,511,889 | - | 65,854,806 | - | 65,058,449 | 682,715,532 |
| 2024 | 682,715,532 | - | 66,481,614 | - | 64,947,473 | 681,181,391 |
| 2025 | 681,181,391 | - | 66,793,595 | - | 64,778,459 | 679,166,255 |
| 2026 | 679,166,255 | - | 66,887,377 | - | 64,572,257 | 676,851,135 |
| 2027 | 676,851,135 | - | 66,950,699 | - | 64,337,579 | 674,238,015 |
| 2028 | 674,238,015 | - | 66,859,604 | - | 64,080,821 | 671,459,232 |
| 2029 | 671,459,232 | - | 66,642,134 | - | 63,813,817 | 668,630,915 |
| 2030 | 668,630,915 | - | 66,262,321 | - | 63,549,975 | 665,918,569 |
| 2031 | 665,918,569 | - | 65,659,971 | - | 63,308,858 | 663,567,456 |
| 2032 | 663,567,456 | - | 64,990,122 | - | 63,107,240 | 661,684,574 |
| 2033 | 661,684,574 | - | 64,135,336 | - | 62,961,691 | 660,510,929 |
| 2034 | 660,510,929 | - | 63,179,132 | - | 62,892,136 | 660,223,933 |
| 2035 | 660,223,933 | - | 61,947,284 | - | 62,925,029 | 661,201,678 |
| 2036 | 661,201,678 | - | 60,686,556 | - | 63,085,840 | 663,600,962 |
| 2037 | 663,600,962 | - | 59,294,823 | - | 63,395,355 | 667,701,494 |
| 2038 | 667,701,494 | - | 57,809,675 | - | 63,879,666 | 673,771,485 |
| 2039 | 673,771,485 | - | 56,170,766 | - | 64,568,610 | 682,169,329 |
| 2040 | 682,169,329 | - | 54,550,276 | - | 65,489,419 | 693,108,472 |
| 2041 | 693,108,472 | - | 52,816,745 | - | 66,670,010 | 706,961,737 |
| 2042 | 706,961,737 | - | 51,017,468 | - | 68,145,300 | 724,089,569 |
| 2043 | 724,089,569 | - | 49,143,294 | - | 69,951,792 | 744,898,067 |
| 2044 | 744,898,067 | - | 47,206,308 | - | 72,129,491 | 769,821,250 |
| 2045 | 769,821,250 | - | 45,260,268 | - | 74,719,112 | 799,280,094 |
| 2046 | 799,280,094 | - | 43,275,495 | - | 77,764,235 | 833,768,834 |
| 2047 | 833,768,834 | - | 41,277,212 | - | 81,313,023 | 873,804,645 |
| 2048 | 873,804,645 | - | 39,259,200 | - | 85,417,505 | 919,962,950 |
| 2049 | 919,962,950 | - | 37,236,146 | - | 90,134,488 | 972,861,292 |
| 2050 | 972,861,292 | - | 35,210,928 | - | 95,525,583 | 1,033,175,947 |
| 2051 | 1,033,175,947 | - | 33,190,417 | - | 101,658,074 | 1,101,643,604 |
| 2052 | 1,101,643,604 | - | 31,178,364 | - | 108,605,442 | 1,179,070,682 |
| 2053 | 1,179,070,682 | - | 29,184,480 | - | 116,447,844 | 1,266,334,046 |
| 2054 | 1,266,334,046 | - | 27,215,819 | - | 125,272,614 | 1,364,390,841 |
| 2055 | 1,364,390,841 | - | 25,282,330 | - | 135,174,968 | 1,474,283,479 |
| 2056 | 1,474,283,479 | - | 23,390,923 | - | 146,258,802 | 1,597,151,358 |
| 2057 | 1,597,151,358 | - | 21,553,920 | - | 158,637,440 | 1,734,234,878 |
| 2058 | 1,734,234,878 | - | 19,779,788 | - | 172,434,498 | 1,886,889,588 |
| 2059 | 1,886,889,588 | - | 18,077,778 | - | 187,785,070 | 2,056,596,880 |
| 2060 | 2,056,596,880 | - | 16,456,517 | - | 204,836,862 | 2,244,977,225 |
| 2061 | 2,244,977,225 | - | 14,922,243 | - | 223,751,610 | 2,453,806,592 |
| 2062 | 2,453,806,592 | - | 13,479,273 | - | 244,706,696 | 2,685,034,015 |
| 2063 | 2,685,034,015 | - | 12,129,977 | - | 267,896,903 | 2,940,800,941 |
| 2064 | 2,940,800,941 | - | 10,873,495 | - | 293,536,419 | 3,223,463,865 |
| 2065 | 3,223,463,865 | - | 9,708,156 | - | 321,860,979 | 3,535,616,688 |

PROJECTION OF THE NUMBER OF YEARS ASSETS WILL SUSTAIN BENEFIT PAYMENTS

Table 3
Hypothetical Assumptions: 10.00% and RP-2000 Generational Mortality

| Fiscal Year Beginning 10/1 | Projected Beginning Fiduciary Net Position | Projected Total Contributions | Projected Benefit Payments* | Projected Administrative Expense | Projected Investment Earnings | Projected Ending Fiduciary Net Position |
|----------------------------|--|-------------------------------|-----------------------------|----------------------------------|-------------------------------|---|
| 2066 | 3,535,616,688 | - | 8,631,463 | - | 353,130,096 | 3,880,115,321 |
| 2067 | 3,880,115,321 | - | 7,641,765 | - | 387,629,444 | 4,260,103,000 |
| 2068 | 4,260,103,000 | - | 6,736,706 | - | 425,673,465 | 4,679,039,759 |
| 2069 | 4,679,039,759 | - | 5,912,484 | - | 467,608,352 | 5,140,735,627 |
| 2070 | 5,140,735,627 | - | 5,165,423 | - | 513,815,292 | 5,649,385,496 |
| 2071 | 5,649,385,496 | - | 4,491,419 | - | 564,713,979 | 6,209,608,056 |
| 2072 | 6,209,608,056 | - | 3,886,336 | - | 620,766,489 | 6,826,488,209 |
| 2073 | 6,826,488,209 | - | 3,344,879 | - | 682,481,577 | 7,505,624,907 |
| 2074 | 7,505,624,907 | - | 2,862,275 | - | 750,419,377 | 8,253,182,009 |
| 2075 | 8,253,182,009 | - | 2,433,385 | - | 825,196,532 | 9,075,945,156 |
| 2076 | 9,075,945,156 | - | 2,054,392 | - | 907,491,796 | 9,981,382,560 |
| 2077 | 9,981,382,560 | - | 1,721,666 | - | 998,052,173 | 10,977,713,067 |
| 2078 | 10,977,713,067 | - | 1,430,738 | - | 1,097,699,770 | 12,073,982,099 |
| 2079 | 12,073,982,099 | - | 1,177,766 | - | 1,207,339,322 | 13,280,143,655 |
| 2080 | 13,280,143,655 | - | 960,033 | - | 1,327,966,364 | 14,607,149,986 |
| 2081 | 14,607,149,986 | - | 774,582 | - | 1,460,676,270 | 16,067,051,674 |
| 2082 | 16,067,051,674 | - | 618,101 | - | 1,606,674,262 | 17,673,107,835 |
| 2083 | 17,673,107,835 | - | 487,543 | - | 1,767,286,406 | 19,439,906,698 |
| 2084 | 19,439,906,698 | - | 380,194 | - | 1,943,971,660 | 21,383,498,164 |
| 2085 | 21,383,498,164 | - | 293,117 | - | 2,138,335,161 | 23,521,540,208 |
| 2086 | 23,521,540,208 | - | 223,465 | - | 2,352,142,848 | 25,873,459,591 |
| 2087 | 25,873,459,591 | - | 168,170 | - | 2,587,337,551 | 28,460,628,972 |
| 2088 | 28,460,628,972 | - | 125,049 | - | 2,846,056,645 | 31,306,560,568 |
| 2089 | 31,306,560,568 | - | 91,850 | - | 3,130,651,464 | 34,437,120,182 |
| 2090 | 34,437,120,182 | - | 66,717 | - | 3,443,708,682 | 37,880,762,147 |
| 2091 | 37,880,762,147 | - | 47,906 | - | 3,788,073,819 | 41,668,788,060 |
| 2092 | 41,668,788,060 | - | 34,048 | - | 4,166,877,104 | 45,835,631,116 |
| 2093 | 45,835,631,116 | - | 23,957 | - | 4,583,561,914 | 50,419,169,073 |
| 2094 | 50,419,169,073 | - | 16,681 | - | 5,041,916,073 | 55,461,068,465 |
| 2095 | 55,461,068,465 | - | 11,489 | - | 5,546,106,272 | 61,007,163,248 |
| 2096 | 61,007,163,248 | - | 7,797 | - | 6,100,715,935 | 67,107,871,386 |
| 2097 | 67,107,871,386 | - | 5,227 | - | 6,710,786,877 | 73,818,653,036 |
| 2098 | 73,818,653,036 | - | 3,456 | - | 7,381,865,131 | 81,200,514,711 |
| 2099 | 81,200,514,711 | - | 2,253 | - | 8,120,051,358 | 89,320,563,816 |
| 2100 | 89,320,563,816 | - | 1,446 | - | 8,932,056,309 | 98,252,618,679 |
| 2101 | 98,252,618,679 | - | 917 | - | 9,825,261,822 | 108,077,879,584 |
| 2102 | 108,077,879,584 | - | 573 | - | 10,807,787,930 | 118,885,666,941 |
| 2103 | 118,885,666,941 | - | 352 | - | 11,888,566,677 | 130,774,233,266 |
| 2104 | 130,774,233,266 | - | 213 | - | 13,077,423,316 | 143,851,656,369 |
| 2105 | 143,851,656,369 | - | 127 | - | 14,385,165,631 | 158,236,821,873 |
| 2106 | 158,236,821,873 | - | 74 | - | 15,823,682,184 | 174,060,503,983 |
| 2107 | 174,060,503,983 | - | 43 | - | 17,406,050,396 | 191,466,554,336 |
| 2108 | 191,466,554,336 | - | 25 | - | 19,146,655,432 | 210,613,209,743 |
| 2109 | 210,613,209,743 | - | 14 | - | 21,061,320,974 | 231,674,530,703 |
| 2110 | 231,674,530,703 | - | 8 | - | 23,167,453,070 | 254,841,983,765 |
| 2111 | 254,841,983,765 | - | 4 | - | 25,484,198,376 | 280,326,182,137 |
| 2112 | 280,326,182,137 | - | 2 | - | 28,032,618,214 | 308,358,800,349 |

PROJECTION OF THE NUMBER OF YEARS ASSETS WILL SUSTAIN BENEFIT PAYMENTS

Table 3
Hypothetical Assumptions: 10.00% and RP-2000 Generational Mortality

| Fiscal Year Beginning 10/1 | Projected Beginning Fiduciary Net Position | Projected Total Contributions | Projected Benefit Payments* | Projected Administrative Expense | Projected Investment Earnings | Projected Ending Fiduciary Net Position |
|----------------------------|--|-------------------------------|-----------------------------|----------------------------------|-------------------------------|---|
| 2113 | 308,358,800,349 | - | 1 | - | 30,835,880,035 | 339,194,680,383 |
| 2114 | 339,194,680,383 | - | - | - | 33,919,468,038 | 373,114,148,421 |

*All DROP Balances paid in 2017.

Number of Years Expected Benefit Payments Sustained: 999.99

This projection assumes no further contributions, assumes no further benefit accruals, and assumes Market Value of Assets earn 10.00% interest.

It is important to note that as long as the Actuarially Determined Contribution is made each year, the Plan will never become insolvent. Furthermore, State and local laws mandate that the Actuarially Determined Contribution be made each year.

**ACTUAL AND HYPOTHETICAL CONTRIBUTIONS APPLICABLE TO THE FISCAL YEAR
ENDING SEPTEMBER 30, 2019**

Valuation Date: 10/1/2017

| | ACTUAL | HYPOTHETICAL | |
|--|----------------------------------|----------------------------------|-----------------------------------|
| | 8.00% RP-2000 Generational | 6.00% RP-2000 Generational | 10.00% RP-2000 Generational |
| Total Required Contribution (Fixed \$) | \$36,857,756 | \$51,114,441 | \$24,067,113 |
| Total Required Contribution (% of Payroll) | 69.21% | 95.98% | 45.19% |
| Expected Member Contribution | 2,926,442 | 2,926,442 | 2,926,442 |
| Expected State Money | 461,877 | 461,877 | 461,877 |
| Expected Sponsor Contribution (Fixed \$) | \$33,469,437 | \$47,726,122 | \$20,678,794 |
| Expected Sponsor Contribution (% of Payroll) | 62.85% | 89.62% | 38.83% |
| <u>ASSETS</u> | | | |
| Actuarial Value ¹ | 679,218,799 | 679,218,799 | 679,218,799 |
| Market Value ¹ | 679,986,360 | 679,986,360 | 679,986,360 |
| <u>LIABILITIES</u> | | | |
| Present Value of Benefits | | | |
| Active Members | | | |
| Retirement Benefits | 204,447,909 | 297,647,538 | 147,164,160 |
| Disability Benefits | 12,527,345 | 17,026,738 | 9,554,472 |
| Death Benefits | 2,916,171 | 4,121,548 | 2,164,534 |
| Vested Benefits | 10,920,803 | 17,760,544 | 7,072,545 |
| Refund of Contributions | 1,182,498 | 1,335,245 | 1,055,123 |
| Service Retirees | 542,763,779 | 648,875,913 | 465,238,345 |
| DROP Retirees ¹ | 33,902,473 | 40,725,508 | 29,064,605 |
| Beneficiaries | 7,139,929 | 8,097,218 | 6,397,514 |
| Disability Retirees | 43,263,750 | 49,804,232 | 38,211,297 |
| Terminated Vested | 10,240,580 | 14,222,218 | 7,718,125 |
| Annuity Savings/Reserve | 125,780,204 | 125,780,204 | 125,780,204 |
| Total: | 995,085,441 | 1,225,396,906 | 839,420,924 |
| Present Value of Future Salaries | 401,730,719 | 450,211,073 | 362,866,677 |
| Total Normal Cost | 7,523,218 | 12,077,240 | 4,845,801 |
| Present Value of Future | | | |
| Normal Costs (Entry Age Normal) | 56,158,561 | 101,348,156 | 32,600,988 |
| Total Actuarial Accrued Liability ¹ | 938,926,880 | 1,124,048,750 | 806,819,936 |
| Unfunded Actuarial Accrued Liability (UAAL) | 259,708,081 | 444,829,951 | 127,601,137 |

**ACTUAL AND HYPOTHETICAL CONTRIBUTIONS APPLICABLE TO THE FISCAL YEAR
ENDING SEPTEMBER 30, 2019**

Valuation Date: 10/1/2017

| | ACTUAL | HYPOTHETICAL | |
|--|----------------------------------|----------------------------------|-----------------------------------|
| | 8.00% RP-2000 Generational | 6.00% RP-2000 Generational | 10.00% RP-2000 Generational |
| <u>PENSION COST</u> | | | |
| Normal Cost ² | 8,282,917 | 12,989,727 | 5,458,916 |
| Administrative Expenses ² | 0 | 0 | 0 |
| Payment Required to Amortize UAAL ² | <u>28,574,839</u> | <u>38,124,714</u> | <u>18,608,197</u> |
| Total Required Contribution | \$36,857,756 | \$51,114,441 | \$24,067,113 |

¹ The asset values and liabilities for DROP Members include accumulated DROP Balances as of 9/30/2017.

² Contributions developed as of 10/1/2017 are adjusted for 15 months of interest.