

CITY OF CAPE CORAL  
MUNICIPAL FIREFIGHTERS' RETIREMENT PLAN

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: 5/1/2017

Douglas H. Lozen, EA, MAAA  
Enrolled Actuary #17-7778



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, 2016 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.

**GASB 67: SCHEDULE OF CHANGES IN NET PENSION LIABILITY**  
FISCAL YEAR SEPTEMBER 30, 2016

	ACTUAL	HYPOTHETICAL	
	7.70% RP-2000 Generational	5.70% RP-2000 Generational	9.70% RP-2000 Generational
<u>Total Pension Liability</u>			
Service Cost	4,009,132	6,927,133	2,733,056
Interest	13,798,633	14,177,039	14,488,346
Changes of Benefit Terms	-	-	-
Differences Between Expected and Actual Experience	(260,997)	(581,811)	(365,511)
Changes of Assumptions	8,638,016	(120,158)	(71,287)
Contributions - Buy Back	179,583	179,583	179,583
Benefit Payments, Including Refunds of Employee Contributions	(7,159,967)	(7,159,967)	(7,159,967)
Net Change in Total Pension Liability	19,204,400	13,421,819	9,804,220
Total Pension Liability - Beginning	177,617,730	243,210,043	149,445,353
Total Pension Liability - Ending (a)	<u>\$ 196,822,130</u>	<u>\$ 256,631,862</u>	<u>\$ 159,249,573</u>
<u>Plan Fiduciary Net Position</u>			
Contributions - Employer	8,424,472	8,424,472	8,424,472
Contributions - State	1,449,699	1,449,699	1,449,699
Contributions - Employee	1,292,651	1,292,651	1,292,651
Contributions - Buy Back	179,583	179,583	179,583
Net Investment Income	13,139,913	13,139,913	13,139,913
Benefit Payments, Including Refunds of Employee Contributions	(7,159,967)	(7,159,967)	(7,159,967)
Administrative Expenses	(152,949)	(152,949)	(152,949)
Net Change in Plan Fiduciary Net Position	17,173,402	17,173,402	17,173,402
Plan Fiduciary Net Position - Beginning	130,930,119	130,930,119	130,930,119
Plan Fiduciary Net Position - Ending (b)	<u>\$ 148,103,521</u>	<u>\$ 148,103,521</u>	<u>\$ 148,103,521</u>
Net Pension Liability - Ending (a) - (b)	<u>\$ 48,718,609</u>	<u>\$ 108,528,341</u>	<u>\$ 11,146,052</u>

**GASB 68: PENSION EXPENSE**  
FISCAL YEAR SEPTEMBER 30, 2016

	ACTUAL	HYPOTHETICAL	
	7.70% RP-2000 Generational	5.70% RP-2000 Generational	9.70% RP-2000 Generational
Pension Expense	<u>\$ 9,645,921</u>	<u>\$ 13,019,492</u>	<u>\$ 6,243,677</u>

## PROJECTION OF THE NUMBER OF YEARS ASSETS WILL SUSTAIN BENEFIT PAYMENTS

Table 1  
Plan Assumptions: 7.70% 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
2016	147,951,778	-	22,764,539	-	10,515,852	135,703,091
2017	135,703,091	-	9,779,280	-	10,072,636	135,996,447
2018	135,996,447	-	10,178,714	-	10,079,846	135,897,579
2019	135,897,579	-	10,626,723	-	10,054,985	135,325,841
2020	135,325,841	-	10,948,678	-	9,998,566	134,375,729
2021	134,375,729	-	11,387,193	-	9,908,524	132,897,060
2022	132,897,060	-	11,801,549	-	9,778,714	130,874,225
2023	130,874,225	-	12,241,454	-	9,606,019	128,238,790
2024	128,238,790	-	12,502,230	-	9,393,051	125,129,611
2025	125,129,611	-	12,848,021	-	9,140,331	121,421,921
2026	121,421,921	-	13,195,031	-	8,841,479	117,068,369
2027	117,068,369	-	13,572,321	-	8,491,730	111,987,778
2028	111,987,778	-	13,907,338	-	8,087,626	106,168,066
2029	106,168,066	-	14,307,376	-	7,624,107	99,484,797
2030	99,484,797	-	14,897,301	-	7,086,783	91,674,279
2031	91,674,279	-	15,266,516	-	6,471,159	82,878,922
2032	82,878,922	-	15,616,952	-	5,780,424	73,042,394
2033	73,042,394	-	16,001,491	-	5,008,207	62,049,110
2034	62,049,110	-	16,346,878	-	4,148,427	49,850,659
2035	49,850,659	-	16,593,217	-	3,199,662	36,457,104
2036	36,457,104	-	16,845,172	-	2,158,658	21,770,590
2037	21,770,590	-	17,021,221	-	1,021,018	5,770,387
2038	5,770,387	-	17,182,595	-	-	-

\*All DROP Balances paid in 2016.

Number of Years Expected Benefit Payments Sustained: 22.34

This projection assumes no further contributions, assumes no further benefit accruals, and assumes Market Value of Assets earn 7.70% 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: 5.70% 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
2016	147,951,778	-	22,764,539	-	7,784,462	132,971,701
2017	132,971,701	-	9,779,280	-	7,300,677	130,493,098
2018	130,493,098	-	10,178,714	-	7,148,013	127,462,397
2019	127,462,397	-	10,626,723	-	6,962,495	123,798,169
2020	123,798,169	-	10,948,678	-	6,744,458	119,593,949
2021	119,593,949	-	11,387,193	-	6,492,320	114,699,076
2022	114,699,076	-	11,801,549	-	6,201,503	109,099,030
2023	109,099,030	-	12,241,454	-	5,869,763	102,727,339
2024	102,727,339	-	12,502,230	-	5,499,145	95,724,254
2025	95,724,254	-	12,848,021	-	5,090,114	87,966,347
2026	87,966,347	-	13,195,031	-	4,638,023	79,409,339
2027	79,409,339	-	13,572,321	-	4,139,521	69,976,539
2028	69,976,539	-	13,907,338	-	3,592,304	59,661,505
2029	59,661,505	-	14,307,376	-	2,992,946	48,347,075
2030	48,347,075	-	14,897,301	-	2,331,210	35,780,984
2031	35,780,984	-	15,266,516	-	1,604,420	22,118,888
2032	22,118,888	-	15,616,952	-	815,693	7,317,629
2033	7,317,629	-	16,001,491	-	-	-

\*All DROP Balances paid in 2016.

Number of Years Expected Benefit Payments Sustained: 17.46

This projection assumes no further contributions, assumes no further benefit accruals, and assumes Market Value of Assets earn 5.70% 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: 9.70% 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
2016	147,951,778	-	22,764,539	-	13,247,242	138,434,481
2017	138,434,481	-	9,779,280	-	12,953,850	141,609,051
2018	141,609,051	-	10,178,714	-	13,242,410	144,672,747
2019	144,672,747	-	10,626,723	-	13,517,860	147,563,884
2020	147,563,884	-	10,948,678	-	13,782,686	150,397,892
2021	150,397,892	-	11,387,193	-	14,036,317	153,047,016
2022	153,047,016	-	11,801,549	-	14,273,185	155,518,652
2023	155,518,652	-	12,241,454	-	14,491,599	157,768,797
2024	157,768,797	-	12,502,230	-	14,697,215	159,963,782
2025	159,963,782	-	12,848,021	-	14,893,358	162,009,119
2026	162,009,119	-	13,195,031	-	15,074,926	163,889,014
2027	163,889,014	-	13,572,321	-	15,238,977	165,555,670
2028	165,555,670	-	13,907,338	-	15,384,394	167,032,726
2029	167,032,726	-	14,307,376	-	15,508,267	168,233,617
2030	168,233,617	-	14,897,301	-	15,596,142	168,932,458
2031	168,932,458	-	15,266,516	-	15,646,022	169,311,964
2032	169,311,964	-	15,616,952	-	15,665,838	169,360,850
2033	169,360,850	-	16,001,491	-	15,651,930	169,011,289
2034	169,011,289	-	16,346,878	-	15,601,271	168,265,682
2035	168,265,682	-	16,593,217	-	15,517,000	167,189,465
2036	167,189,465	-	16,845,172	-	15,400,387	165,744,680
2037	165,744,680	-	17,021,221	-	15,251,705	163,975,164
2038	163,975,164	-	17,182,595	-	15,072,235	161,864,804
2039	161,864,804	-	17,300,123	-	14,861,830	159,426,511
2040	159,426,511	-	17,374,087	-	14,621,728	156,674,152
2041	156,674,152	-	17,422,214	-	14,352,415	153,604,353
2042	153,604,353	-	17,439,436	-	14,053,810	150,218,727
2043	150,218,727	-	17,416,293	-	13,726,526	146,528,960
2044	146,528,960	-	17,357,507	-	13,371,470	142,542,923
2045	142,542,923	-	17,264,667	-	12,989,327	138,267,583
2046	138,267,583	-	17,127,795	-	12,581,257	133,721,045
2047	133,721,045	-	16,950,310	-	12,148,851	128,919,586
2048	128,919,586	-	16,725,642	-	11,694,006	123,887,950
2049	123,887,950	-	16,453,217	-	11,219,150	118,653,883
2050	118,653,883	-	16,130,012	-	10,727,121	113,250,992
2051	113,250,992	-	15,754,432	-	10,221,256	107,717,816
2052	107,717,816	-	15,325,480	-	9,705,342	102,097,678
2053	102,097,678	-	14,843,508	-	9,183,565	96,437,735
2054	96,437,735	-	14,310,256	-	8,660,413	90,787,892
2055	90,787,892	-	13,729,367	-	8,140,551	85,199,076
2056	85,199,076	-	13,105,141	-	7,628,711	79,722,646
2057	79,722,646	-	12,442,613	-	7,129,630	74,409,663
2058	74,409,663	-	11,748,313	-	6,647,944	69,309,294
2059	69,309,294	-	11,031,740	-	6,187,962	64,465,516
2060	64,465,516	-	10,305,300	-	5,753,348	59,913,564
2061	59,913,564	-	9,581,879	-	5,346,895	55,678,580
2062	55,678,580	-	8,874,064	-	4,970,430	51,774,946
2063	51,774,946	-	8,191,292	-	4,624,892	48,208,546
2064	48,208,546	-	7,538,782	-	4,310,598	44,980,362
2065	44,980,362	-	6,923,641	-	4,027,299	42,084,020
2066	42,084,020	-	6,353,766	-	3,773,992	39,504,246
2067	39,504,246	-	5,829,310	-	3,549,190	37,224,126

## PROJECTION OF THE NUMBER OF YEARS ASSETS WILL SUSTAIN BENEFIT PAYMENTS

Table 3  
Hypothetical Assumptions: 9.70% 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
2068	37,224,126	-	5,347,983	-	3,351,363	35,227,506
2069	35,227,506	-	4,908,737	-	3,178,994	33,497,763
2070	33,497,763	-	4,506,991	-	3,030,694	32,021,466
2071	32,021,466	-	4,137,451	-	2,905,416	30,789,431
2072	30,789,431	-	3,793,771	-	2,802,577	29,798,237
2073	29,798,237	-	3,470,003	-	2,722,134	29,050,368
2074	29,050,368	-	3,162,017	-	2,664,528	28,552,879
2075	28,552,879	-	2,867,765	-	2,630,543	28,315,657
2076	28,315,657	-	2,584,154	-	2,621,287	28,352,790
2077	28,352,790	-	2,309,638	-	2,638,203	28,681,355
2078	28,681,355	-	2,046,428	-	2,682,840	29,317,767
2079	29,317,767	-	1,796,172	-	2,756,709	30,278,304
2080	30,278,304	-	1,559,802	-	2,861,345	31,579,847
2081	31,579,847	-	1,338,157	-	2,998,345	33,240,035
2082	33,240,035	-	1,132,498	-	3,169,357	35,276,894
2083	35,276,894	-	944,819	-	3,376,035	37,708,110
2084	37,708,110	-	778,004	-	3,619,953	40,550,059
2085	40,550,059	-	631,513	-	3,902,727	43,821,273
2086	43,821,273	-	504,721	-	4,226,185	47,542,737
2087	47,542,737	-	398,057	-	4,592,340	51,737,020
2088	51,737,020	-	309,618	-	5,003,474	56,430,876
2089	56,430,876	-	237,554	-	5,462,274	61,655,596
2090	61,655,596	-	179,657	-	5,971,879	67,447,818
2091	67,447,818	-	133,880	-	6,535,945	73,849,883
2092	73,849,883	-	98,135	-	7,158,679	80,910,427
2093	80,910,427	-	70,831	-	7,844,876	88,684,472
2094	88,684,472	-	50,212	-	8,599,959	97,234,219
2095	97,234,219	-	34,778	-	9,430,033	106,629,474
2096	106,629,474	-	23,726	-	10,341,908	116,947,656
2097	116,947,656	-	15,945	-	11,343,149	128,274,860
2098	128,274,860	-	10,552	-	12,442,150	140,706,458
2099	140,706,458	-	6,881	-	13,648,193	154,347,770
2100	154,347,770	-	4,421	-	14,971,519	169,314,868
2101	169,314,868	-	2,803	-	16,423,406	185,735,471
2102	185,735,471	-	1,759	-	18,016,255	203,749,967
2103	203,749,967	-	1,092	-	19,763,694	223,512,569
2104	223,512,569	-	671	-	21,680,687	245,192,585
2105	245,192,585	-	406	-	23,783,661	268,975,840
2106	268,975,840	-	236	-	26,090,645	295,066,249
2107	295,066,249	-	133	-	28,621,420	323,687,536
2108	323,687,536	-	80	-	31,397,687	355,085,143
2109	355,085,143	-	35	-	34,443,257	389,528,365
2110	389,528,365	-	7	-	37,784,251	427,312,609
2111	427,312,609	-	4	-	41,449,323	468,761,928
2112	468,761,928	-	2	-	45,469,907	514,231,833
2113	514,231,833	-	1	-	49,880,488	564,112,320
2114	564,112,320	-	-	-	54,718,895	618,831,215

\*All DROP Balances paid in 2016.

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 9.70% 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, 2018

Valuation Date: 10/1/2016

	ACTUAL	HYPOTHETICAL	
	7.70% RP-2000 Generational	5.70% RP-2000 Generational	9.70% RP-2000 Generational
Total Required Contribution (Fixed \$)	\$13,062,098	\$19,243,335	\$8,302,395
Total Required Contribution (% of Payroll)	86.6%	127.6%	55.1%
Expected Member Contribution	1,565,723	1,550,646	1,580,799
Expected State Money	1,341,144	1,341,144	1,341,144
Expected Sponsor Contribution (Fixed \$)	\$10,155,231	\$16,351,545	\$5,380,452
Expected Sponsor Contribution (% of Payroll)	67.4%	108.5%	35.7%

**ASSETS**

Actuarial Value <sup>1</sup>	150,360,113	150,360,113	150,360,113
Market Value <sup>1</sup>	147,951,778	147,951,778	147,951,778

**LIABILITIES**

Present Value of Benefits			
Active Members			
Retirement Benefits	79,735,703	127,970,638	53,045,532
Disability Benefits	1,661,141	2,417,676	1,199,203
Death Benefits	1,722,632	3,032,423	1,054,723
Vested Benefits	2,915,185	5,441,505	1,654,096
Refund of Contributions	375,853	403,227	351,521
Service Retirees	94,205,340	120,317,750	76,580,410
DROP Retirees <sup>1</sup>	41,674,423	50,546,847	35,934,630
Beneficiaries	1,965,334	2,464,486	1,626,672
Disability Retirees	9,984,983	12,823,754	8,139,735
Terminated Vested	534,944	811,415	372,711
Excess State Monies Reserve	0	0	0
Total:	234,775,538	326,229,721	179,959,233
Present Value of Future Salaries	133,123,792	150,902,517	118,779,073
Present Value of Future Member Contributions	13,312,379	15,090,252	11,877,907
Total Normal Cost	4,230,461	6,947,210	2,698,811
Present Value of Future Normal Costs (Entry Age Normal)	35,192,784	65,786,450	19,936,515
Total Actuarial Accrued Liability <sup>1</sup>	199,582,754	260,443,271	160,022,718
Unfunded Actuarial Accrued Liability (UAAL)	49,222,641	110,083,158	9,662,605



ACTUAL AND HYPOTHETICAL CONTRIBUTIONS APPLICABLE TO THE FISCAL YEAR  
ENDING SEPTEMBER 30, 2018

Valuation Date: 10/1/2016

	ACTUAL	HYPOTHETICAL	
	7.70% RP-2000 Generational	5.70% RP-2000 Generational	9.70% RP-2000 Generational
<b><u>PENSION COST</u></b>			
Normal Cost <sup>2</sup>	4,722,834	7,681,096	3,041,931
Administrative Expenses <sup>2</sup>	170,750	169,106	172,395
Payment Required To Amortize UAAL <sup>2</sup>	8,168,514	11,393,133	5,088,069
Total Required Contribution	\$13,062,098	\$19,243,335	\$8,302,395

<sup>1</sup> The asset values and liabilities for DROP Members include accumulated DROP Balances as of 9/30/2016.

<sup>2</sup> Contributions developed as of 10/1/2016 displayed above have been adjusted to account for assumed salary increase and interest components.