

CITY OF DELRAY BEACH FIREFIGHTERS' RETIREMENT SYSTEM

Chapter 112.664, F.S. Compliance Report

In Connection with the October 1, 2017 Funding Actuarial
Valuation Report

And the Plan's Financial Reporting for the Year Ending
September 30, 2017



November 30, 2018

Board of Trustees
City of Delray Beach Firefighters' Retirement System
Delray Beach, Florida

Dear Board Members:

Gabriel, Roeder, Smith & Company (GRS) has been engaged by the City of Delray Beach Firefighters' Retirement System (System) to prepare a disclosure report to satisfy the requirements set forth in Ch. 112.664, F.S. and as further required pursuant to Ch. 60T-1.0035, F.A.C.

This report was prepared at the request of the Board and is intended for use by the Retirement Board and those designated or approved by the Board. This report may be provided to parties other than the System 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 Ch. 112.664, F.S. as well as supplement this information with additional exhibits. This report should not be relied on for any purpose other than the purpose described above.

The findings in this report are based on data or other information through September 30, 2017. 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, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal and year-to-year consistency, but did not otherwise audit the data. We are not responsible for the accuracy or completeness of the information provided by the City.

Except as otherwise indicated as required for the disclosures contained herein, this report was prepared using certain assumptions selected by the Board as described in our October 1, 2017 actuarial valuation report. This report is also based on the Plan Provisions, census data, and financial information as summarized in our October 1, 2017 actuarial valuation report. Please refer to the October 1, 2017 actuarial valuation report, dated September 25, 2018, for summaries and descriptions of this information.

The use of an investment return assumption that is 2% higher than the investment return assumption used to determine the funding requirements does not represent an estimate of future Plan experience nor does it reflect an observation of future return estimates inherent in financial market data. The use of this investment return assumption is provided as a counterpart to the Chapter 112.664, Florida Statutes requirement to utilize an investment return assumption that is 2% lower than the assumption used to determine the funding requirements. The inclusion of the additional exhibits showing the effect of using a 2% higher investment return assumption shows a more complete assessment of the range of possible results as opposed to showing a one-sided range as required by Florida Statutes.

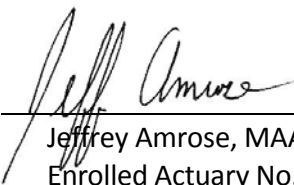
This report has been prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Retirement Plan as of the valuation date. All calculations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

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

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 complete 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 & COMPANY

By 
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Enrolled Actuary No. 17-6599
Senior Consultant & Actuary


By 
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Enrolled Actuary No. 17-8010
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CH. 112.664, FLORIDA STATUTES

RESULTS

**Schedule of Changes in the Employers' Net Pension Liability
Using Financial Reporting Assumptions per GASB Statement No. 67**

Fiscal year ending September 30,	2017
1. Total pension liability	
a. Service Cost	\$ 2,278,992
b. Interest	11,308,126
c. Benefit Changes	-
d. Difference between actual & expected experience & Other	4,638,688
e. Assumption Changes	-
f. Benefit Payments	(8,142,089)
g. Contribution Refunds	(6,673)
h. Net Change in Total Pension Liability	10,077,044
i. Total Pension Liability - Beginning	143,146,963
j. Total Pension Liability - Ending	\$ 153,224,007
 2. Plan Fiduciary Net Position	
a. Contributions - Employer and Non-Employer	\$ 5,721,499
b. Contributions - State	1,134,704
c. Contributions - Member	903,846
d. Net Investment Income	10,685,983
e. Benefit Payments	(8,142,089)
f. Contribution Refunds	(6,673)
g. Administrative Expense	(146,391)
h. Other	-
i. Net Change in Plan Fiduciary Net Position	10,150,879
j. Plan Fiduciary Net Position - Beginning	98,775,917
k. Plan Fiduciary Net Position - Ending	\$ 108,926,796
 3. Net Pension Liability / (Asset)	44,297,211
 Certain Key Assumptions	
Valuation Date	10/01/2016
Measurement Date	09/30/2017
Investment Return Assumption	8.00%
Mortality Table	FRS Mortality - Special Risk

**Schedule of Changes in the Employers' Net Pension Liability
Using Assumptions required under 112.664(1)(a), F.S.**

Fiscal year ending September 30,	<u>2017</u>
1. Total pension liability	
a. Service Cost	\$ 2,278,992
b. Interest	11,308,126
c. Benefit Changes	-
d. Difference between actual & expected experience & Other	4,638,688
e. Assumption Changes	-
f. Benefit Payments	(8,142,089)
g. Contribution Refunds	(6,673)
h. Net Change in Total Pension Liability	<u>10,077,044</u>
i. Total Pension Liability - Beginning	<u>143,146,963</u>
j. Total Pension Liability - Ending	<u>\$ 153,224,007</u>
2. Plan Fiduciary Net Position	
a. Contributions - Employer and Non-Employer	\$ 5,721,499
b. Contributions - State	1,134,704
c. Contributions - Member	903,846
d. Net Investment Income	10,685,983
e. Benefit Payments	(8,142,089)
f. Contribution Refunds	(6,673)
g. Administrative Expense	(146,391)
h. Other	-
i. Net Change in Plan Fiduciary Net Position	<u>10,150,879</u>
j. Plan Fiduciary Net Position - Beginning	<u>98,775,917</u>
k. Plan Fiduciary Net Position - Ending	<u>\$ 108,926,796</u>
3. Net Pension Liability / (Asset)	44,297,211
Certain Key Assumptions	
Valuation Date	10/01/2016
Measurement Date	09/30/2017
Investment Return Assumption	8.00%
Mortality Table	FRS Mortality - Special Risk

**Schedule of Changes in the Employers' Net Pension Liability
Using Assumptions required under 112.664(1)(b), F.S.**

Fiscal year ending September 30,	<u>2017</u>
1. Total pension liability	
a. Service Cost	\$ 3,551,755
b. Interest	10,345,271
c. Benefit Changes	-
d. Difference between actual & expected experience & Other	-
e. Assumption Changes	-
f. Benefit Payments	(8,142,089)
g. Contribution Refunds	(6,673)
h. Net Change in Total Pension Liability	<u>5,748,264</u>
i. Total Pension Liability - Beginning	<u>172,943,806</u>
j. Total Pension Liability - Ending	<u>\$ 178,692,070</u>
2. Plan Fiduciary Net Position	
a. Contributions - Employer and Non-Employer	\$ 5,721,499
b. Contributions - State	1,134,704
c. Contributions - Member	903,846
d. Net Investment Income	10,685,983
e. Benefit Payments	(8,142,089)
f. Contribution Refunds	(6,673)
g. Administrative Expense	(146,391)
h. Other	-
i. Net Change in Plan Fiduciary Net Position	<u>10,150,879</u>
j. Plan Fiduciary Net Position - Beginning	<u>98,775,917</u>
k. Plan Fiduciary Net Position - Ending	<u>\$ 108,926,796</u>
3. Net Pension Liability / (Asset)	69,765,274
Certain Key Assumptions	
Valuation Date	10/01/2016
Measurement Date	09/30/2017
Investment Return Assumption	6.00%
Mortality Table	FRS Mortality - Special Risk

Schedule of Changes in the Employers' Net Pension Liability

Using Assumptions under 112.664(1)(b), F.S. except 2% higher investment return assumption

Fiscal year ending September 30,	<u>2017</u>
1. Total pension liability	
a. Service Cost	\$ 1,471,618
b. Interest	11,163,684
c. Benefit Changes	-
d. Difference between actual & expected experience & Other	-
e. Assumption Changes	-
f. Benefit Payments	(8,142,089)
g. Contribution Refunds	(6,673)
h. Net Change in Total Pension Liability	<u>4,486,540</u>
i. Total Pension Liability - Beginning	<u>114,239,607</u>
j. Total Pension Liability - Ending	<u>\$ 118,726,147</u>
2. Plan Fiduciary Net Position	
a. Contributions - Employer and Non-Employer	\$ 5,721,499
b. Contributions - State	1,134,704
c. Contributions - Member	903,846
d. Net Investment Income	10,685,983
e. Benefit Payments	(8,142,089)
f. Contribution Refunds	(6,673)
g. Administrative Expense	(146,391)
h. Other	-
i. Net Change in Plan Fiduciary Net Position	<u>10,150,879</u>
j. Plan Fiduciary Net Position - Beginning	<u>98,775,917</u>
k. Plan Fiduciary Net Position - Ending	<u>\$ 108,926,796</u>
3. Net Pension Liability / (Asset)	9,799,351
Certain Key Assumptions	
Valuation Date	10/01/2016
Measurement Date	09/30/2017
Investment Return Assumption	10.00%
Mortality Table	FRS Mortality - Special Risk

Asset and Benefit Payment Projection
Not Reflecting Any Contributions from the Employer, State or Employee
Using Assumptions from the Plan's Latest Actuarial Valuation

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2018	96,312,093	6,695,934	7,908,759	95,099,268
2019	95,099,268	6,590,140	8,401,576	93,287,832
2020	93,287,832	6,451,806	8,594,798	91,144,840
2021	91,144,840	6,291,328	8,735,792	88,700,376
2022	88,700,376	6,108,519	8,889,881	85,919,014
2023	85,919,014	5,896,730	9,169,611	82,646,133
2024	82,646,133	5,651,713	9,382,933	78,914,913
2025	78,914,913	5,371,457	9,651,690	74,634,680
2026	74,634,680	5,051,187	9,926,284	69,759,583
2027	69,759,583	4,687,357	10,212,776	64,234,164
2028	64,234,164	4,274,308	10,556,372	57,952,100
2029	57,952,100	3,813,636	10,700,450	51,065,286
2030	51,065,286	3,308,559	10,859,976	43,513,869
2031	43,513,869	2,758,803	10,922,833	35,349,839
2032	35,349,839	2,163,131	11,027,111	26,485,859
2033	26,485,859	1,521,090	11,010,625	16,996,324
2034	16,996,324	833,375	11,002,985	6,826,714
2035	6,826,714	96,860	10,981,421	-
2036	-	-	10,951,920	-
2037	-	-	10,901,437	-
2038	-	-	10,829,615	-
2039	-	-	10,754,113	-
2040	-	-	10,658,450	-
2041	-	-	10,540,681	-
2042	-	-	10,404,256	-
2043	-	-	10,249,575	-

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 Employer, Employee or State, contrary to Florida Statutes and Plan provisions: 17.58

Certain Key Assumptions

Valuation Investment Return Assumption 7.25%
 Valuation Mortality Table FRS Mortality - Special Risk

Note: As required in Section 112.664(1)(c) of the Florida Statutes, the projection of the Fund assets do not include contributions from the Employer, Employee or State, which is contrary to Florida Statutes and Plan provisions. For this reason, these projections should not be viewed as a representation of the amount of time the Fund can sustain benefit payments. Under the GASB standards which DO include contributions from the employer, employee and State, the Fund is expected to be able to sustain the benefit payment demands in the near-term and long-term future.

Asset and Benefit Payment Projection
Not Reflecting Any Contributions from the Employer, State or Employee
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)
2018	96,312,093	6,695,934	7,908,759	95,099,268
2019	95,099,268	6,590,140	8,401,576	93,287,832
2020	93,287,832	6,451,806	8,594,798	91,144,840
2021	91,144,840	6,291,328	8,735,792	88,700,376
2022	88,700,376	6,108,519	8,889,881	85,919,014
2023	85,919,014	5,896,730	9,169,611	82,646,133
2024	82,646,133	5,651,713	9,382,933	78,914,913
2025	78,914,913	5,371,457	9,651,690	74,634,680
2026	74,634,680	5,051,187	9,926,284	69,759,583
2027	69,759,583	4,687,357	10,212,776	64,234,164
2028	64,234,164	4,274,308	10,556,372	57,952,100
2029	57,952,100	3,813,636	10,700,450	51,065,286
2030	51,065,286	3,308,559	10,859,976	43,513,869
2031	43,513,869	2,758,803	10,922,833	35,349,839
2032	35,349,839	2,163,131	11,027,111	26,485,859
2033	26,485,859	1,521,090	11,010,625	16,996,324
2034	16,996,324	833,375	11,002,985	6,826,714
2035	6,826,714	96,860	10,981,421	-
2036	-	-	10,951,920	-
2037	-	-	10,901,437	-
2038	-	-	10,829,615	-
2039	-	-	10,754,113	-
2040	-	-	10,658,450	-
2041	-	-	10,540,681	-
2042	-	-	10,404,256	-
2043	-	-	10,249,575	-

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 Employer, Employee or State, contrary to Florida Statutes and Plan provisions: 17.58

Certain Key Assumptions

Valuation Investment Return Assumption	7.25%
Valuation Mortality Table	FRS Mortality - Special Risk

Note: As required in Section 112.664(1)(c) of the Florida Statutes, the projection of the Fund assets do not include contributions from the Employer, Employee or State, which is contrary to Florida Statutes and Plan provisions. For this reason, these projections should not be viewed as a representation of the amount of time the Fund can sustain benefit payments. Under the GASB standards which DO include contributions from the employer, employee and State, the Fund is expected to be able to sustain the benefit payment demands in the near-term and long-term future.

Asset and Benefit Payment Projection
Not Reflecting Any Contributions from the Employer, State or Employee
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)
2018	96,312,093	4,848,780	7,908,759	93,252,114
2019	93,252,114	4,675,195	8,401,576	89,525,733
2020	89,525,733	4,474,488	8,594,798	85,405,423
2021	85,405,423	4,254,470	8,735,792	80,924,101
2022	80,924,101	4,015,156	8,889,881	76,049,376
2023	76,049,376	3,751,890	9,169,611	70,631,655
2024	70,631,655	3,461,860	9,382,933	64,710,582
2025	64,710,582	3,143,949	9,651,690	58,202,841
2026	58,202,841	2,795,084	9,926,284	51,071,641
2027	51,071,641	2,413,176	10,212,776	43,272,041
2028	43,272,041	1,994,677	10,556,372	34,710,346
2029	34,710,346	1,541,406	10,700,450	25,551,302
2030	25,551,302	1,056,369	10,859,976	15,747,695
2031	15,747,695	540,030	10,922,833	5,364,892
2032	5,364,892	-	11,027,111	-
2033	-	-	11,010,625	-
2034	-	-	11,002,985	-
2035	-	-	10,981,421	-
2036	-	-	10,951,920	-
2037	-	-	10,901,437	-
2038	-	-	10,829,615	-
2039	-	-	10,754,113	-
2040	-	-	10,658,450	-
2041	-	-	10,540,681	-
2042	-	-	10,404,256	-
2043	-	-	10,249,575	-

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 Employer, Employee or State, contrary to Florida Statutes and Plan provisions: 14.50

Certain Key Assumptions

Valuation Investment Return Assumption 5.25%
 Valuation Mortality Table FRS Mortality - Special Risk

Note: As required in Section 112.664(1)(c) of the Florida Statutes, the projection of the Fund assets do not include contributions from the Employer, Employee or State, which is contrary to Florida Statutes and Plan provisions. For this reason, these projections should not be viewed as a representation of the amount of time the Fund can sustain benefit payments. Under the GASB standards which DO include contributions from the employer, employee and State, the Fund is expected to be able to sustain the benefit payment demands in the near-term and long-term future.

Asset and Benefit Payment Projection

Not Reflecting Any Contributions from the Employer, State or Employee

Using Assumptions under 112.664(1)(b), F.S. except 2% higher investment return assumption

FYE	Market Value of Assets (BOY)	Expected Investment Return	Projected Benefit Payments	Market Value of Assets (EOY)
2018	96,312,093	8,543,088	7,908,759	96,946,422
2019	96,946,422	8,578,971	8,401,576	97,123,817
2020	97,123,817	8,586,444	8,594,798	97,115,463
2021	97,115,463	8,579,150	8,735,792	96,958,821
2022	96,958,821	8,557,534	8,889,881	96,626,474
2023	96,626,474	8,513,854	9,169,611	95,970,717
2024	95,970,717	8,443,331	9,382,933	95,031,115
2025	95,031,115	8,343,987	9,651,690	93,723,412
2026	93,723,412	8,210,325	9,926,284	92,007,453
2027	92,007,453	8,038,349	10,212,776	89,833,026
2028	89,833,026	7,821,323	10,556,372	87,097,977
2029	87,097,977	7,561,667	10,700,450	83,959,194
2030	83,959,194	7,263,952	10,859,976	80,363,170
2031	80,363,170	6,928,412	10,922,833	76,368,749
2032	76,368,749	6,554,105	11,027,111	71,895,743
2033	71,895,743	6,141,115	11,010,625	67,026,233
2034	67,026,233	5,691,038	11,002,985	61,714,286
2035	61,714,286	5,200,681	10,981,421	55,933,546
2036	55,933,546	4,667,327	10,951,920	49,648,953
2037	49,648,953	4,088,337	10,901,437	42,835,853
2038	42,835,853	3,461,447	10,829,615	35,467,685
2039	35,467,685	2,783,383	10,754,113	27,496,955
2040	27,496,955	2,050,515	10,658,450	18,889,020
2041	18,889,020	1,259,728	10,540,681	9,608,067
2042	9,608,067	407,549	10,404,256	-
2043	-	-	10,249,575	-

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

Employer, Employee or State, contrary to Florida Statutes and Plan provisions: 24.92

Certain Key Assumptions

Valuation Investment Return Assumption	9.25%
Valuation Mortality Table	FRS Mortality - Special Risk

Note: As required in Section 112.664(1)(c) of the Florida Statutes, the projection of the Fund assets do not include contributions from the Employer, Employee or State, which is contrary to Florida Statutes and Plan provisions. For this reason, these projections should not be viewed as a representation of the amount of time the Fund can sustain benefit payments. Under the GASB standards which DO include contributions from the employer, employee and State, the Fund is expected to be able to sustain the benefit payment demands in the near-term and long-term future.

ACTUARIALLY DETERMINED CONTRIBUTION

	Plan's Latest Actuarial Valuation	112.664(1)(a) F.S. Assumptions	112.664(1)(b) F.S. Assumptions	112.664(1)(b) F.S. except 2% higher investment return assumption
A. Valuation Date	October 1, 2017	October 1, 2017	October 1, 2017	October 1, 2017
B. Actuarially Determined Contribution (ADC) to Be Paid During Fiscal Year Ending	9/30/2019	9/30/2019	9/30/2019	9/30/2019
C. Assumed Dates of Employer Contributions	Biweekly	Biweekly	Biweekly	Biweekly
D. Annual Payment to Amortize Unfunded Actuarial Liability	\$ 5,171,663	\$ 5,171,663	\$ 6,736,399	\$ 2,290,476
E. Employer Normal Cost	1,990,286	1,990,286	3,684,970	1,017,316
F. ADC if Paid on Valuation Date: D + E	7,161,949	7,161,949	10,421,369	3,307,792
G. ADC Adjusted for Frequency of Payments	7,422,501	7,422,501	10,698,473	3,459,884
H. ADC as % of Covered Payroll	74.52 %	74.52 %	107.41 %	34.74 %
I. Assumed Rate of Increase in Covered Payroll to Contribution Year	5.55 %	5.55 %	5.55 %	5.55 %
J. Covered Payroll for Contribution Year	10,513,233	10,513,233	10,513,233	10,513,233
K. ADC for Contribution Year: H x J	7,834,461	7,834,461	11,292,263	3,652,297
L. Estimated Credit for State Revenue in Contribution Year	1,134,704	1,134,704	1,134,704	1,134,704
M. Required Employer Contribution (REC) in Contribution Year	6,699,757	6,699,757	10,157,559	2,517,593
N. REC as % of Covered Payroll in Contribution Year: M ÷ J	63.73 %	63.73 %	96.62 %	23.95 %
O. Expected Member Contributions	946,191	946,191	946,191	946,191
P. Total Contribution (Including Members) in Contribution Year	8,780,652	8,780,652	12,238,454	4,598,488
Q. Total Contribution as % of Covered Payroll in Contribution Year: P ÷ J	83.52 %	83.52 %	116.41 %	43.74 %
R. Certain Key Assumptions				
Investment Return Assumption	7.25 %	7.25 %	5.25 %	9.25 %
Mortality Table	FRS Mortality - Special Risk	FRS Mortality - Special Risk	FRS Mortality - Special Risk	FRS Mortality - Special Risk