

**CITY OF CHARLESTON, WEST VIRGINIA
FIREMEN'S PENSION AND RELIEF FUND
ACTUARIAL VALUATION REPORT
FOR THE YEAR BEGINNING JULY 1, 2015**

September 9, 2016

Mr. Victor Grigoraci
City Treasurer
501 Virginia Street, East
Charleston, WV 25301

Deputy Chief Robert "Scott" S. Fisher
Pension Board Secretary
City of Charleston Firemen's Pension and Relief
Fund

**Subject: City of Charleston Firemen's Pension and Relief Fund
Actuarial Valuation Report for the Year Beginning July 1, 2015**

Dear Mr. Grigoraci and Deputy Chief Fisher:

Upon the request of the Municipal Pensions Oversight Board, we have performed an actuarial valuation as of July 1, 2015, for the City of Charleston, West Virginia Firemen's Pension and Relief Fund ("Fund" or "Plan"). This actuarial valuation has been performed in accordance with the West Virginia Code Chapter 8, Article 22, Sections 16 through 28, inclusive.

In accordance with West Virginia Code §8-22-20, this actuarial valuation report provides information on:

- The sponsor's funding requirements for the plan year ending June 30, 2017
- The Fund's eligibility to receive an allocation of the premium tax for the plan year ending June 30, 2017
- The Fund's eligibility to provide supplemental benefits for the plan year beginning July 1, 2017

West Virginia Code §8-22-20(c)(4) requires a review of the actuarial assumptions and methods at least once every five years and that the Actuary shall provide a report to the oversight board with recommendations on any changes to the actuarial process. Consequently, an experience review was performed for the period July 1, 2009, through June 30, 2014. The assumptions and methods were recommended by the actuary, in the report *2016 Experience Review for the Years July 1, 2009, to July 1, 2014*, and approved by the Municipal Pensions Oversight Board, and are first being applied in this valuation. For a more detailed explanation of how the new assumptions affect your pension plan, please see the section Additional Remarks on the Actuarial Valuation Results in the Executive Summary.

This report is based on the sponsor's election to finance benefit obligations using the Conservation funding policy as defined in West Virginia Code §8-22-20 (f)(1).

This valuation is based upon:

Plan Member Data – Data for active members and persons receiving benefits from the Fund as of June 30, 2015, was provided by the Fund's staff. We have tested this data for reasonableness.

Asset Values – A reconciliation of market value of assets during the plan year ended June 30, 2015, and assets held as of June 30, 2015, by investment category, were provided by the Fund.

Plan Provisions – A summary of the key plan provisions valued are set forth in Section VI of the report: Summary of Principal Plan Provisions.

Actuarial Methods – Fund liabilities were measured using the Entry-Age Normal Actuarial Cost Method. The actuarial valuation was based on the market value of assets. The actuarial methods used in the valuation are set forth in Section V of the report: Actuarial Assumptions and Methods.

Actuarial Assumptions – The actuarial assumptions used include a discount rate of 4.50%. The assumptions used in the valuation are set forth in Section V of the report: Actuarial Assumptions and Methods.

The actuarial valuation results disclosed in this report are based on the data and actuarial assumptions and methods described above, and upon the provisions of the Plan as of the valuation date. Based on these items, we certify these results to be true and correct.

To the best of our knowledge, this actuarial statement is complete and accurate, and has been prepared in accordance with generally accepted actuarial principles and practices.

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

This report should not be relied on for any purpose other than the purpose stated.

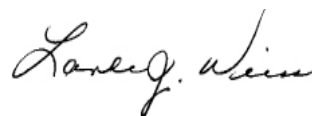
The signing actuaries are independent of the plan sponsor.

Alex Rivera and Lance Weiss are members of the American Academy of Actuaries (MAAA) and meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein.

Sincerely,



Alex Rivera, FSA, EA, MAAA, FCA
Senior Consultant



Lance Weiss, EA, MAAA, FCA
Senior Consultant

**City of Charleston Firemen’s Pension and Relief Fund
Actuarial Study as of July 1, 2015**

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SECTION I

ACTUARIAL VALUATION RESULTS AS OF
JULY 1, 2015

City of Charleston Firemen's Pension and Relief Fund

Actuarial Study as of July 1, 2015

Executive Summary

Upon the request of the Municipal Pensions Oversight Board, we have performed an actuarial valuation as of July 1, 2015, for the City of Charleston, West Virginia Firemen's Pension and Relief Fund ("Fund" or "Plan").

In accordance with West Virginia Code §8-22-20, this actuarial valuation report provides information on:

- The sponsor's funding requirements for the plan year ending June 30, 2017
- The Fund's eligibility to receive an allocation of the premium tax for the plan year ending June 30, 2017
- The Fund's eligibility to provide supplemental benefits for the plan year beginning July 1, 2017

This report is based on the sponsor's election to finance benefit obligations using the Conservation funding policy as defined in West Virginia Code §8-22-20 (f)(1).

The key features of the Conservation funding policy, effective for plan years beginning after April 1, 2011, are summarized below:

- The current local Plan is closed to new employees
- New employees are covered in the multiple employer statewide plan - *Municipal Police Officers and Firefighters Retirement System* ("MPFRS")
- Benefits and expenses in the closed local Plan are financed by contributions made to two asset accounts:
 - The first asset account (Benefit Payment Account) is used to finance benefits and expenses for the fiscal year on a pay-as-you-go basis. Sources to pay current year benefits and expenses include minimum employee contributions of 6.5% of pay, a portion of the premium tax allocation not assigned to the accumulation account as defined below, and employer contributions.
 - The second account (Accumulation Account) cannot be used to pay benefits and expenses until assets exceed actuarial liabilities. Contributions to the accumulation account include employee contributions of 1.5% of pay and a percentage of the premium tax allocation. The percentage of the premium tax allocation is based on the amounts needed to produce 100% funding of liabilities in 35 years when considering assets from both the Benefit Payment Account and the Accumulation Account. This account also includes the Fund's assets prior to the adoption of the Conservation funding policy.

We understand employer contributions will be made from the City's General Fund and will be used directly to pay benefits not covered by member contributions or the premium tax allocation. We also understand that the Plan's assets will accumulate in the closed Pension and Relief Fund and no benefits or expenses will be paid from this trust until the funded ratio exceeds 100%.

City of Charleston Firemen's Pension and Relief Fund Actuarial Study as of July 1, 2015

The following table provides the Plan's funded status as of July 1, 2015:

Assets	\$13,888,494
Actuarial Liabilities	\$176,567,385
Unfunded Liabilities	\$162,678,891
Funded Ratio	7.87%

The following table provides the actual employer contributions, employee contributions, and premium tax allocation for the plan year ended June 30, 2016. The premium tax allocation was based on the results of the July 1, 2014, actuarial valuation.

Plan year ending 2016	Benefit Payment Account	Accumulation Account	Total
Employee Contributions	\$471,403	\$108,785	\$580,188
Premium Tax Allocations	\$1,264,883	\$312,670	\$1,577,553
Employer Contributions	\$5,300,144	\$0	\$5,300,144
Total	\$7,036,430	\$421,455	\$7,457,885

The following table provides the estimated employer contributions, employee contributions and premium tax allocation for the plan year ending June 30, 2017. We have assumed that approximately 52.81% of the premium tax allocation of \$1,710,329 is deposited into the Accumulation Account and the remainder will be used for Benefit Payments. The basis of the premium tax allocation between the Benefit Payment Account and the Accumulation Account is developed from the projection on page nine of the report.

Plan year ending 2017	Benefit Payment Account	Accumulation Account	Total
Employee Contributions	\$465,633	\$107,454	\$573,087
Premium Tax Allocations	\$807,089	\$903,240	\$1,710,329
Employer Contributions	\$6,013,941	\$0	\$6,013,941
Total	\$7,286,663	\$1,010,694	\$8,297,357

City of Charleston Firemen's Pension and Relief Fund

Actuarial Study as of July 1, 2015

Commentary of Premium Tax Allocation

Under §8-22-19 of the West Virginia Code, the plan sponsor is required to deposit the statutory contribution on a monthly basis at a rate of one-twelfth of the annual requirement, in order to receive the premium tax allocation from Municipal Pension Security Fund. However, revenues which are specifically collected for the Fund must be deposited within five days of receipt.

Based upon discussions with the Municipal Pensions Oversight Board (“MPOB”), we understand the annual premium tax allocation is determined by September 1st each year. Municipalities can begin invoicing the MPOB for their share of the premium tax allocation after receiving their state provided actuarial study and after the municipality has made employer contributions to the Benefit Payment Account (for plans not using the Conservation funding policy, the employer contributions must have been paid into the Pension and Relief Fund). Each municipal treasurer shall use the invoice template provided by the MPOB to begin drawing down the state allocation for the municipal pension plan. This July 1, 2015 Actuarial Report from GRS is to be used by municipal pension plans to draw down the September 1, 2016 State Premium Tax Allocation which is allocated in Fiscal Year 2017. *The actuarial valuation and projection results assume the sponsor will make the statutory contributions on a timely basis, and will be eligible to receive the premium tax allocation.*

Commentary on Solvency Projections and Supplemental Benefits

Under § 8-22-26a of the West Virginia Code, all retirees, surviving spouses, and disabled pensioners are eligible for Supplemental Benefits that provide automatic cost-of-living benefits commencing on the first day of July following two years of retirement. The benefit equals the percentage increase in the Consumer Price Index, limited to 4.0 percent (2.0 percent for certain disabled pensioners), multiplied by the sum of the allowable amount (first \$15,000 of initial benefits paid) and the accumulated supplemental pensions paid in prior years.

The Court of Appeals decision requires that Supplemental Benefits be provided on “the allowable amount of the first \$15,000 of the total annual pension paid in addition to the accumulated supplemental pension from the previous years.” The decision implies that compound cost-of-living increases should be applied to both the allowable amount of \$15,000 and the accumulated supplemental pension amounts for prior years. Additional Supplemental Benefits are payable only if the Plan satisfies the minimum standard for actuarial soundness as defined in West Virginia Code § 8-22-20. This minimum standard requires that the fund remain “solvent” over the next 15-year projection period. Based on discussions with the West Virginia Municipal Pensions Oversight Board, and our understanding of the administrative practices of other local police and fire pension funds in West Virginia, the “solvency” requirement generally means that the fund’s market value of assets is projected to be greater than zero for all plan years prior to the end of the 15-year projection period. The projection is based on the most recent actuarial valuation and assumes the plan sponsor will make contributions according to the funding policy elected by the sponsor as defined by the West Virginia Code. *Although the 15-year solvency test may satisfy the minimum standard for actuarial soundness under the statutes, it is not necessarily consistent with generally accepted actuarial principles.*

The City of Charleston has elected to fund benefits using the Conservation funding policy as defined in the West Virginia Code Section 8-22-20(f)(1). Under this funding methodology, the fund’s market value of assets is projected to be greater than zero for all plan years prior to the end of the 15-year

City of Charleston Firemen's Pension and Relief Fund

Actuarial Study as of July 1, 2015

projection period. Accordingly, this contribution methodology satisfies the minimum standard for actuarial soundness.

The Supplemental benefits for plan year beginning July 1, 2017 will be based on the Consumer Price Index for calendar year 2016, and the projected results of the July 1, 2015 actuarial valuation.

Additional Remarks on the Actuarial Valuation Results

Following are additional remarks on the actuarial valuation results as of July 1, 2015:

- The assumptions and methods were recommended by the actuary, in the report *2016 Experience Review for the Years July 1, 2009, to July 1, 2014*, and approved by the Municipal Pensions Oversight Board. The change in assumptions increased liabilities by \$19,243,959. The assumption update is summarized below, and the assumptions are fully disclosed in Section V of the report.
 - The interest rate used to discount liabilities changed from 5.00% for the July 1, 2014 actuarial valuation to 4.50% for the July 1, 2015 actuarial valuation. The interest rate assumption was developed by reviewing the Plan's current funded ratio, the 15-year projected funded ratio, the ratio of assets to benefits, the percentage of assets allocated to equities, and the funding policy selected. The details of the methodology used to select the discount rate are presented in Section V of the report. As of July 1, 2015, the Plan's funded ratio of 9% (using a testing interest rate of 5.5% for all plans using the Conservation funding policy), ratio of assets to benefits of 1.96, equity allocation of 54%, and 15-year projected funded ratio of 24%, resulted in a discount rate assumption of 4.50%.
 - The post-retirement mortality assumption was updated from the 1994 Group Annuity Mortality table to the RP-2014 Blue Collar Total Healthy Annuitant Mortality table, with projected generational mortality improvement using the MP-2014 2-dimensional mortality improvement scales. The disabled mortality assumption was changed to the RP-2014 Blue Collar Total Healthy Annuitant Mortality table, set forward 4 years, with projected generational mortality improvement using the MP-2014 2-dimensional mortality improvement scales. The pre-retirement mortality was updated to the RP-2014 Blue Collar Total Employee Mortality table, with generational mortality improvement using the MP-2014 2-dimensional mortality improvement scales.
 - The wage inflation assumption used to project compensation was decreased from 4.0% to 3.75%.
 - The service based compensation increase assumption was updated based on observed experience.
 - General inflation, post-retirement COLA and the increase in State Insurance Premium Tax Allocation changed from 3.00% to 2.75%.
 - Turnover, retirement rates and disability assumptions were updated based on observed experience.
- The sponsor changed from the Alternative funding policy to the Conservation funding policy effective for the plan year beginning on July 1, 2011.

City of Charleston Firemen's Pension and Relief Fund

Actuarial Study as of July 1, 2015

- The Fund experienced an approximate annualized return of 4.7% on the market value of assets during the plan year ended June 30, 2015, which compares to the expected annualized return of 5.00%. The difference in actual versus expected return produced an asset (gain)/loss of \$37,061.

- An actuarial valuation is based on the expectation of certain events such as salary increases, retirement, disability, mortality, termination, and cost of living increases. Demographic or liability experience (gains)/losses are generated when the actual occurrence of such events differs from the expectation. During the plan year ending June 30, 2015, the fund experienced a net liability (gain)/loss of (\$1,092,324) due to these events.

Following are additional remarks on the actuarial valuation projections:

- Employer contributions are expected to increase from \$6,013,941 for the plan year ending June 30, 2017, to \$11,490,483 for the plan year ending June 30, 2037.

- In 20 years, the funded ratio is projected to increase from 7.9% in 2015 to 36% in 2035, and ultimately to 100% in 2046. This policy defers contributions and produces virtually no significant growth in the funded ratio until the last 10 years of the projection period. This policy is not consistent with generally accepted actuarial principles.

City of Charleston Firemen's Pension and Relief Fund
Actuarial Study as of July 1, 2015

Summary of Key Valuation Results

Schedule A

Valuation Date	July 1, 2014		July 1, 2015	
Valuation Interest Rate	5.00%		4.50%	
Cost-of-Living Adjustment	3.00%		2.75%	
Wage Inflation	4.00%		3.75%	
Covered Payroll	\$7,364,910		\$7,273,171	
Average Pay	\$51,145		\$54,277	
Expected Benefit Payments	\$6,706,149		\$7,069,237	
1. Actuarial Accrued Liability	<u>No.</u>		<u>No.</u>	
(a) Actives	144	\$49,538,110	134	\$58,159,750
(b) Retirees	147	\$81,340,010	140	\$86,692,378
(c) Surviving Spouses	45	\$8,157,523	49	\$10,182,363
(d) Disabled Members	36	\$15,624,421	41	\$20,547,703
(e) Deferred Vested Members	0	\$0	2	\$985,191
(f) Total	372	\$154,660,064	366	\$176,567,385
2. Present Value of Future Normal Costs	\$25,005,131		\$34,154,266	
3. Present Value of Benefits (1(f) + 2)	\$179,665,195		\$210,721,651	
4. Market Value of Assets	\$12,976,853		\$13,888,494	
5. Unfunded Actuarial Accrued Liability (1(f) - 4)	\$141,683,211		\$162,678,891	
6. Funded Ratio (4 / 1(f))	8.39%		7.87%	
7. Net Employer Normal Cost				
(a) Gross Normal Cost ^a	\$2,996,816		\$3,870,604	
(b) Employee Contribution Rate	8.00%		8.00%	
(c) Expected Employee Contributions	\$589,193		\$581,854	
(d) Net Employer Normal Cost (a - c)	\$2,407,623		\$3,288,750	
(% of Compensation)	32.69%		45.22%	
	FY 2016		FY 2017	
8. Minimum Employer Contribution ^b	\$5,300,144		\$6,013,941	
(% of Projected Compensation)	72%		83%	
9. State Insurance Premium Tax Allocation	\$1,577,553		\$1,710,329	
(% of Projected Compensation)	21%		24%	

^a Gross normal cost for plan year end June 30, 2016, includes administrative expenses of \$8,470.

^b Estimated Employer contribution for fiscal year end June 30, 2017.

**City of Charleston Firemen's Pension and Relief Fund
Actuarial Study as of July 1, 2015**

(Gain)/Loss Analysis

Schedule B

Experience (Gain)/Loss for Plan Year Ended June 30, 2015		
1.	(a) Liability as of 7/1/2014	\$154,660,064
	(b) Normal Cost due 7/1/2014	2,979,475
	(c) Interest on (a) and (b) to 6/30/2015	7,807,490
	(d) Benefit Payments with interest to 6/30/2015	7,031,279
	(e) Effect of Assumption Changes	19,243,959
	(f) Expected Liability at 7/1/2015 [(a) + (b) + (c) - (d) + (e)]	177,659,709
	(g) Actual Liability at 7/1/2015	\$176,567,385
	(h) Liability (Gain)/Loss [(g) - (f)]	(\$1,092,324)
2.	(a) Market Value of Assets as of 7/1/2014	\$12,976,853
	(b) Interest on (a) to 6/30/2015	648,843
	(c) Contributions with interest to 6/30/2015	7,331,138
	(d) Benefit Payments with interest to 6/30/2015	7,031,279
	(e) Expected Assets at 6/30/2015 [(a) + (b) + (c) - (d)]	\$13,925,555
	(f) Actual Assets at 7/1/2015	\$13,888,494
	(g) Asset (Gain)/Loss [(e) - (f)]	\$37,061
3.	Total (Gain)/Loss [1(h) + 2(g)]	(\$1,055,263)

SECTION II

ACTUARIAL PROJECTIONS

City of Charleston Firemen's Pension and Relief Fund

Actuarial Projections

Table 1

Valuation			Total Assets								Actuarial		
Plan	Number		Assets (boy)	Benefit Payments	Expenses	Employer Contributions	Employee Contributions	Premium Tax		Assets (eoy)	Accrued Liability	Unfunded Liability	Funded Ratio
Year End	Pay	Status						Allocation Contributions	Investment Income				
30-Jun	Active	Status											
2015	134	232	\$12,976,853	\$6,859,784	\$5,864	\$5,004,065	\$592,996	\$1,557,784	\$622,444	13,888,494	\$176,567,385	\$162,678,891	8%
2016	125	236	13,888,494	7,069,237	8,470	5,300,144	580,188	1,577,553	633,442	14,902,114	181,234,448	166,332,335	8%
2017	118	239	14,902,114	7,278,081	8,583	6,013,941	573,087	1,710,329	693,085	16,605,893	185,840,300	169,234,407	9%
2018	109	242	16,605,893	7,526,145	8,701	6,231,350	567,435	1,785,274	770,613	18,425,719	190,320,022	171,894,304	10%
2019	101	246	18,425,719	7,806,748	8,822	6,499,258	552,017	1,838,980	853,072	20,353,475	194,605,137	174,251,661	10%
2020	91	251	20,353,475	8,193,751	8,948	6,870,418	537,047	1,898,596	940,459	22,397,296	198,538,252	176,140,956	11%
2021	82	256	22,397,296	8,614,835	9,075	7,285,707	508,465	1,960,358	1,033,037	24,560,953	202,006,300	177,445,347	12%
2022	73	261	24,560,953	9,008,850	9,203	7,676,443	475,890	2,023,666	1,131,010	26,849,909	205,004,082	178,154,173	13%
2023	64	265	26,849,909	9,421,496	9,336	8,082,921	445,941	2,088,582	1,234,651	29,271,172	207,480,309	178,209,137	14%
2024	56	269	29,271,172	9,824,317	9,467	8,484,855	409,769	2,153,021	1,344,214	31,829,248	209,415,219	177,585,972	15%
2025	50	270	31,829,248	10,150,703	9,600	8,808,177	377,938	2,214,603	1,459,918	34,529,581	210,912,237	176,382,655	16%
2026	43	273	34,529,581	10,519,995	9,732	9,162,306	356,419	2,284,067	1,582,160	37,384,807	211,886,774	174,501,968	18%
2027	37	275	37,384,807	10,929,814	9,865	9,571,675	316,326	2,354,335	1,711,303	40,398,767	212,228,957	171,830,190	19%
2028	32	276	40,398,767	11,238,884	9,999	9,877,057	281,024	2,423,216	1,847,594	43,578,775	212,056,091	168,477,316	21%
2029	27	276	43,578,775	11,493,451	10,133	10,119,988	254,829	2,493,259	1,991,408	46,934,676	211,428,028	164,493,352	22%
2030	22	277	46,934,676	11,775,473	10,266	10,389,984	227,957	2,565,297	2,143,158	50,475,333	210,269,230	159,793,897	24%
2031	17	277	50,475,333	12,070,115	10,397	10,677,429	193,104	2,640,835	2,303,230	54,209,418	208,528,107	154,318,689	26%
2032	14	276	54,209,418	12,319,821	10,525	10,918,616	161,353	2,713,826	2,471,989	58,144,856	206,250,771	148,105,915	28%
2033	10	275	58,144,856	12,560,151	10,647	11,145,006	133,463	2,791,648	2,649,882	62,294,057	203,429,931	141,135,875	31%
2034	7	273	62,294,057	12,762,580	10,764	11,336,222	102,270	2,869,365	2,837,379	66,665,948	200,098,996	133,433,047	33%
2035	6	270	66,665,948	12,877,520	10,875	11,434,251	79,493	2,944,653	3,034,904	71,270,855	196,374,511	125,103,656	36%
2036	4	267	71,270,855	12,947,197	10,978	11,479,784	63,405	3,023,738	3,242,987	76,122,594	192,311,803	116,189,209	40%
2037	3	263	76,122,594	12,982,594	11,075	11,490,483	48,102	3,102,629	3,462,178	81,232,318	187,947,030	106,714,712	43%
2038	2	258	81,232,318	12,979,770	11,163	11,457,845	36,647	3,185,720	3,693,045	86,614,642	183,322,016	96,707,374	47%
2039	1	254	86,614,642	12,939,059	11,243	11,385,129	26,324	3,271,485	3,936,214	92,283,492	178,478,773	86,195,281	52%
2040	1	249	92,283,492	12,869,204	11,313	11,278,629	19,635	3,360,806	4,192,334	98,254,379	173,448,151	75,193,772	57%
2041	1	243	98,254,379	12,774,562	11,373	11,145,587	12,620	3,454,389	4,462,095	104,543,135	168,255,199	63,712,064	62%
2042	0	238	104,543,135	12,645,005	11,423	10,973,934	8,437	3,550,902	4,746,205	111,166,185	162,940,411	51,774,226	68%
2043	0	232	111,166,185	12,494,393	11,461	10,778,269	5,597	3,651,347	5,045,411	118,140,956	157,525,417	39,384,461	75%
2044	0	226	118,140,956	12,324,186	11,488	10,561,086	3,298	3,754,910	5,360,483	125,485,059	152,030,531	26,545,472	83%
2045	0	220	125,485,059	12,134,995	11,502	10,322,745	2,089	3,861,176	5,692,212	133,216,785	146,476,279	13,259,495	91%
2046	0	214	133,216,785	11,931,222	11,503	9,599,275	1,340	3,971,008	6,031,002	140,876,684	140,876,684	0	100%
2047	0	208	140,876,684	11,713,921	11,491	13,835	750	0	6,078,856	135,244,714	135,244,714	0	100%
2048	0	202	135,244,714	11,483,549	11,463	12,570	421	0	5,830,509	129,593,201	129,593,201	0	100%
2049	0	195	129,593,201	11,240,486	11,421	11,958	166	0	5,581,582	123,935,000	123,935,000	0	100%
2050	0	189	123,935,000	10,985,461	11,362	11,535	111	0	5,332,628	118,282,453	118,282,453	0	100%
2051	0	182	118,282,453	10,719,080	11,286	11,286	0	0	5,084,185	112,647,558	112,647,558	0	100%

City of Charleston Firemen's Pension and Relief Fund

Actuarial Projections

Table 2

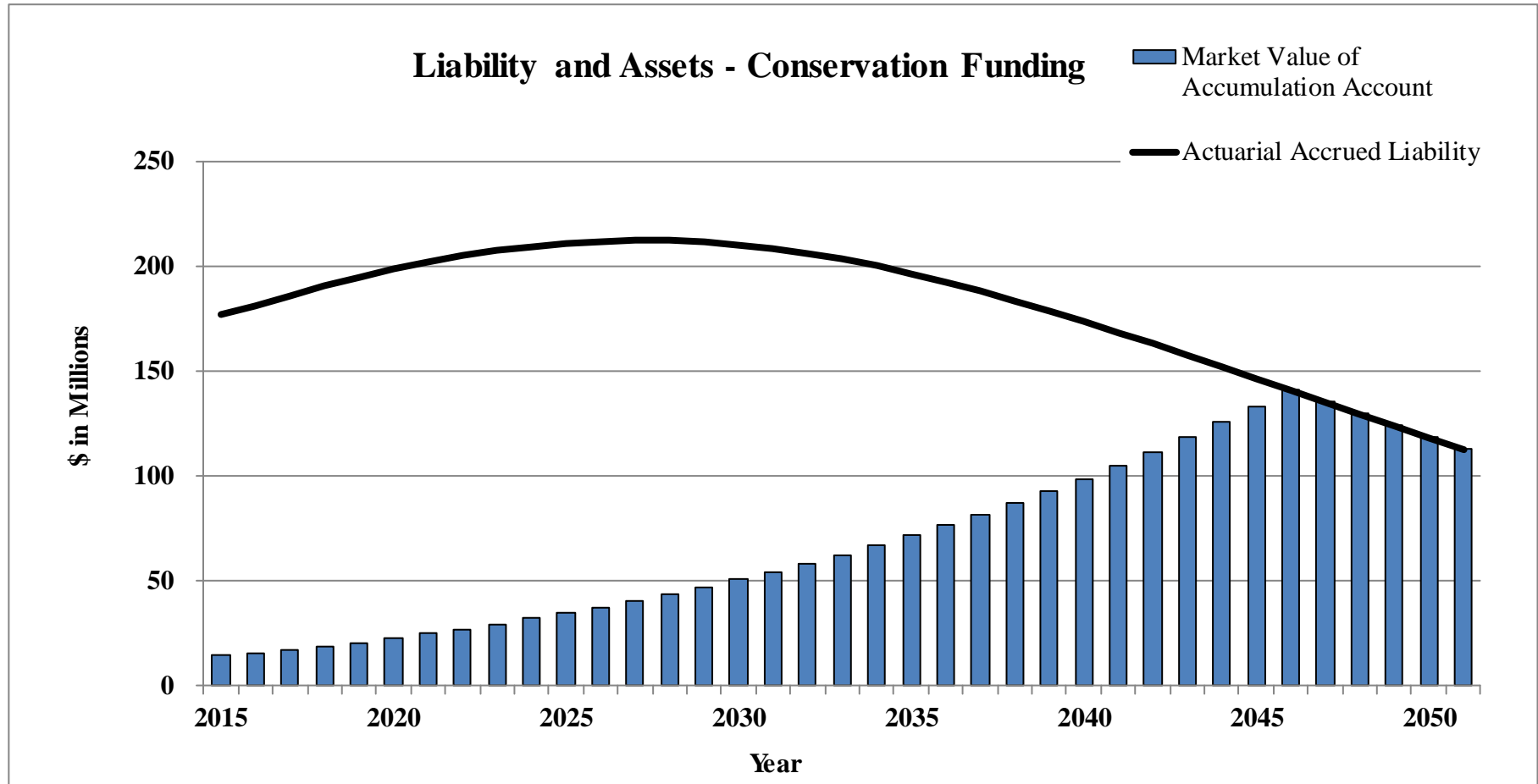
Plan Year End 30-Jun	Benefit Payment Account ^a							Accumulation Account ^b						
	Assets (boy)	Net Benefit Pmts and Expenses	Employer Contributions	6.50% of Pay Employee Contributions	47.19% of Premium Tax Allocation	Investment Income	Transfer (To)/From Accumulation Account	Assets (boy)	Net Benefit Pmts and Expenses	Employer Contributions	1.50% of Pay Employee Contributions	52.81% of Premium Tax Allocation	Investment Income	
2017	\$0	\$7,286,663	\$6,013,941	\$465,633	\$807,089	\$0	\$0	\$14,902,114	\$0	\$0	\$107,454	\$903,240	\$693,085	
2018	0	7,534,846	6,231,350	461,041	842,455	0	0	16,605,893	0	0	106,394	942,819	770,613	
2019	0	7,815,570	6,499,258	448,514	867,798	0	0	18,425,719	0	0	103,503	971,182	853,072	
2020	0	8,202,699	6,870,418	436,350	895,930	0	0	20,353,475	0	0	100,696	1,002,665	940,459	
2021	0	8,623,910	7,285,707	413,128	925,075	0	0	22,397,296	0	0	95,337	1,035,283	1,033,037	
2022	0	9,018,054	7,676,443	386,661	954,950	0	0	24,560,953	0	0	89,229	1,068,716	1,131,010	
2023	0	9,430,832	8,082,921	362,327	985,583	0	0	26,849,908	0	0	83,614	1,102,999	1,234,651	
2024	0	9,833,784	8,484,855	332,938	1,015,991	0	0	29,271,172	0	0	76,832	1,137,030	1,344,214	
2025	0	10,160,302	8,808,177	307,075	1,045,051	0	0	31,829,247	0	0	70,863	1,169,552	1,459,918	
2026	0	10,529,727	9,162,306	289,590	1,077,831	0	0	34,529,581	0	0	66,829	1,206,236	1,582,160	
2027	0	10,939,679	9,571,675	257,015	1,110,990	0	0	37,384,805	0	0	59,311	1,243,346	1,711,303	
2028	0	11,248,883	9,877,057	228,332	1,143,494	0	0	40,398,765	0	0	52,692	1,279,722	1,847,594	
2029	0	11,503,584	10,119,988	207,049	1,176,547	0	0	43,578,773	0	0	47,781	1,316,713	1,991,408	
2030	0	11,785,739	10,389,984	185,215	1,210,541	0	0	46,934,674	0	0	42,742	1,354,756	2,143,158	
2031	0	12,080,512	10,677,429	156,897	1,246,186	0	0	50,475,331	0	0	36,207	1,394,649	2,303,230	
2032	0	12,330,345	10,918,616	131,099	1,280,630	0	0	54,209,416	0	0	30,254	1,433,196	2,471,989	
2033	0	12,570,798	11,145,006	108,438	1,317,353	0	0	58,144,854	0	0	25,024	1,474,294	2,649,882	
2034	0	12,773,344	11,336,222	83,094	1,354,027	0	0	62,294,055	0	0	19,176	1,515,337	2,837,379	
2035	0	12,888,394	11,434,251	64,588	1,389,555	0	0	66,665,946	0	0	14,905	1,555,098	3,034,904	
2036	0	12,958,175	11,479,784	51,517	1,426,875	0	0	71,270,853	0	0	11,888	1,596,863	3,242,987	
2037	0	12,993,668	11,490,483	39,083	1,464,103	0	0	76,122,592	0	0	9,019	1,638,527	3,462,178	
2038	0	12,990,933	11,457,845	29,776	1,503,312	0	0	81,232,316	0	0	6,871	1,682,407	3,693,045	
2039	0	12,950,302	11,385,129	21,388	1,543,784	0	0	86,614,639	0	0	4,936	1,727,701	3,936,214	
2040	0	12,880,517	11,278,629	15,954	1,585,934	0	0	92,283,489	0	0	3,682	1,774,872	4,192,334	
2041	0	12,785,935	11,145,587	10,253	1,630,095	0	0	98,254,377	0	0	2,366	1,824,294	4,462,095	
2042	0	12,656,428	10,973,934	6,855	1,675,639	0	0	104,543,132	0	0	1,582	1,875,263	4,746,205	
2043	0	12,505,854	10,778,269	4,548	1,723,038	0	0	111,166,182	0	0	1,049	1,928,309	5,045,411	
2044	0	12,335,673	10,561,086	2,679	1,771,908	0	0	118,140,952	0	0	618	1,983,002	5,360,483	
2045	0	12,146,497	10,322,745	1,697	1,822,054	0	0	125,485,055	0	0	392	2,039,122	5,692,212	
2046	0	11,942,725	9,599,275	1,089	1,873,883	(10,425)	478,904	133,216,781	0	0	251	2,097,125	6,041,427	
2047	0	0	0	0	0	0	0	140,876,680	11,725,411	13,835	750	0	6,078,856	
2048	0	0	0	0	0	0	0	135,244,710	11,495,013	12,570	421	0	5,830,509	
2049	0	0	0	0	0	0	0	129,593,197	11,251,907	11,958	166	0	5,581,582	
2050	0	0	0	0	0	0	0	123,934,997	10,996,822	11,535	111	0	5,332,628	
2051	0	0	0	0	0	0	0	118,282,449	10,730,366	11,286	0	0	5,084,185	

^a Employer contributions paid from the City's General Fund are used to finance benefits not covered by the applicable employee contributions or premium tax allocation.

^b Assets accumulate in the Pension and Relief Fund.

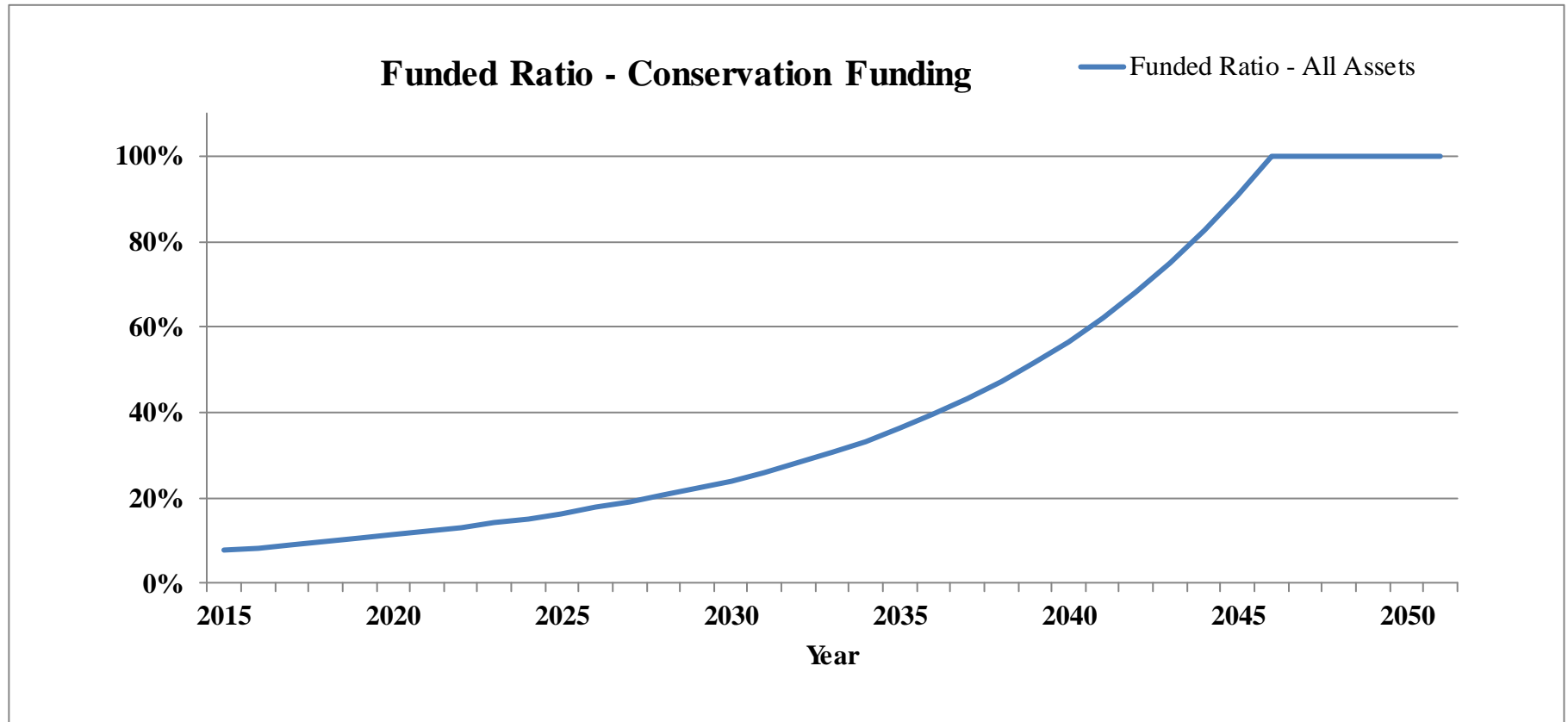
City of Charleston Firemen's Pension and Relief Fund Actuarial Projections

Graph 1



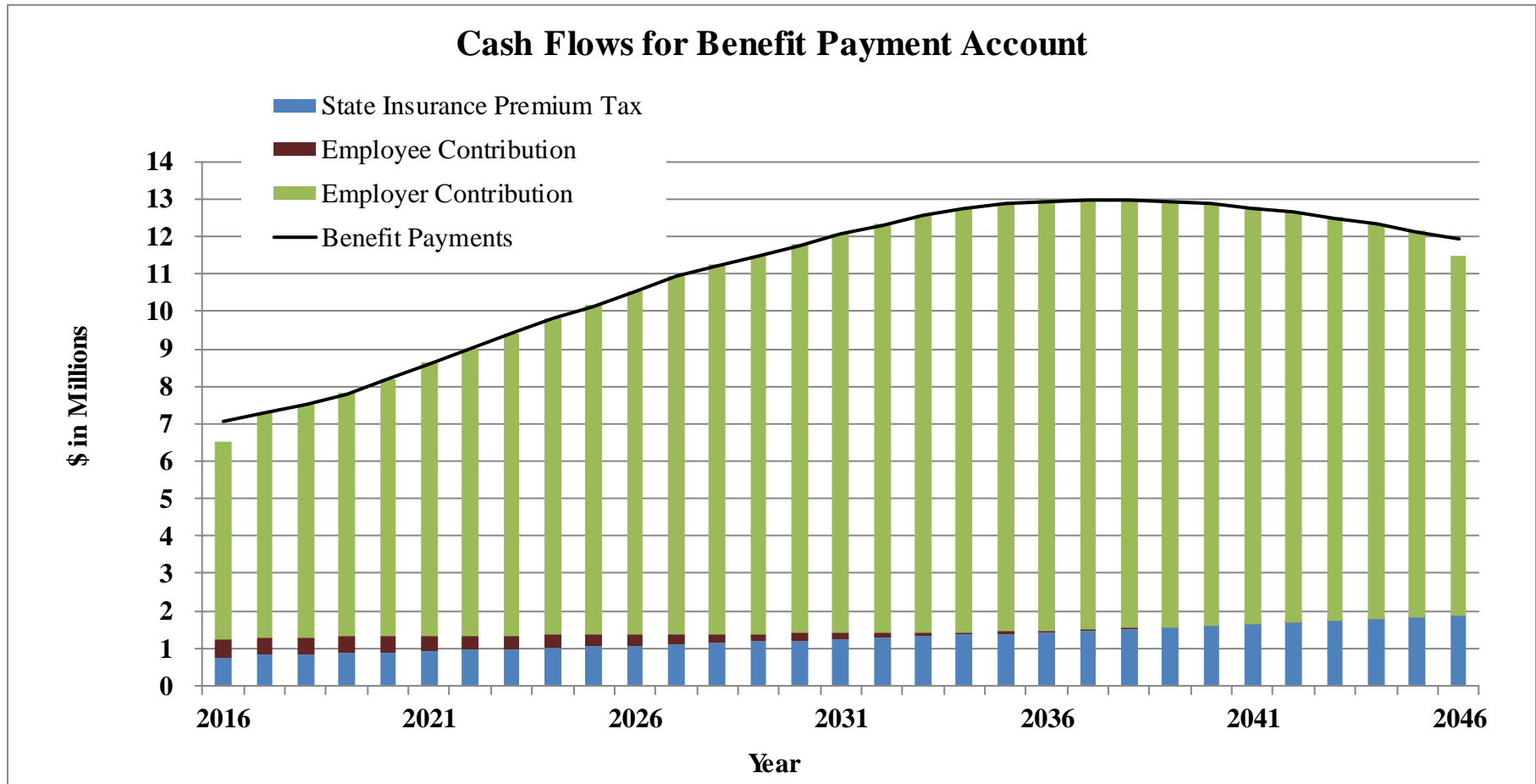
City of Charleston Firemen's Pension and Relief Fund Actuarial Projections

Graph 2



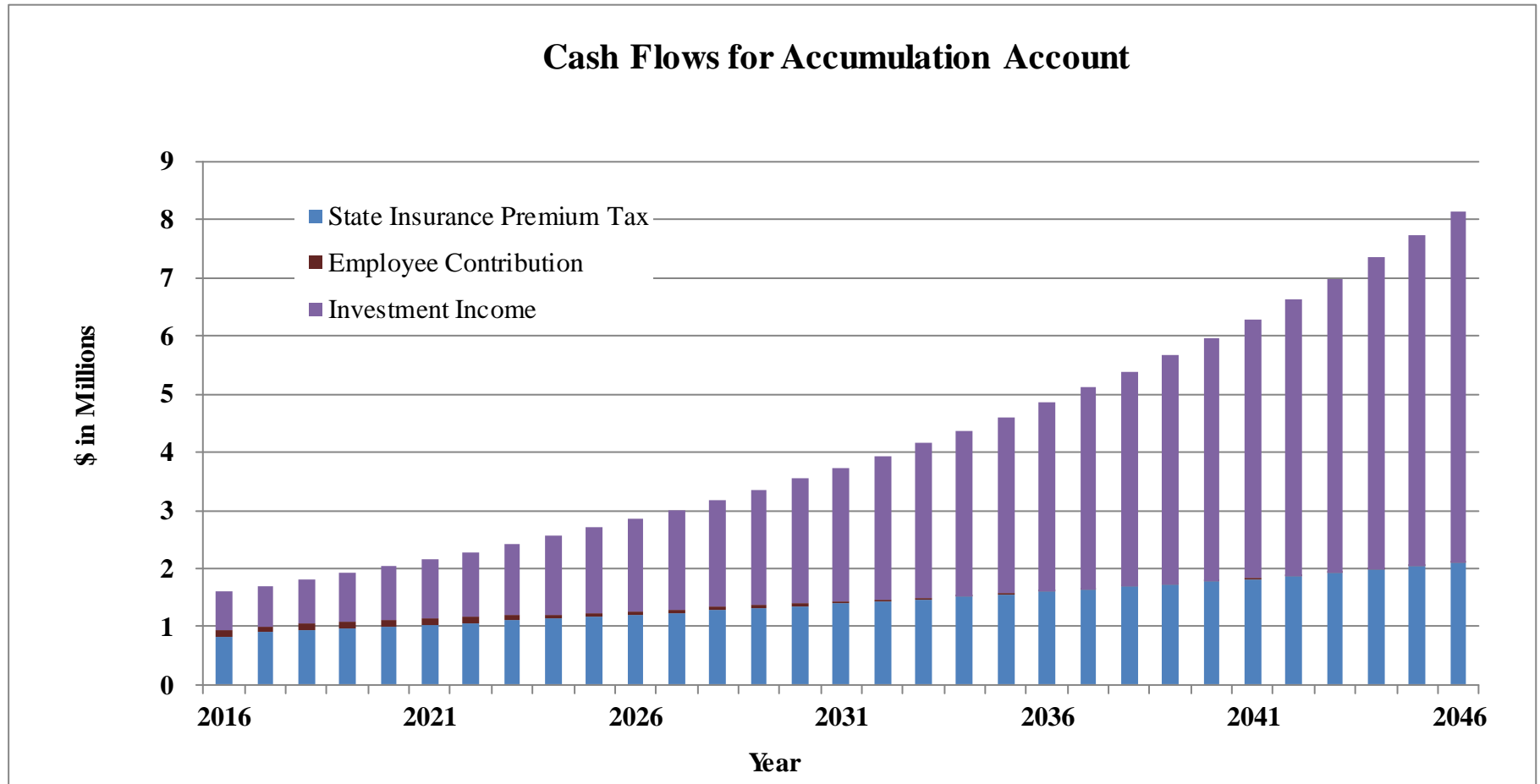
City of Charleston Firemen's Pension and Relief Fund Actuarial Projections

Graph 3



City of Charleston Firemen's Pension and Relief Fund Actuarial Projections

Graph 4



SECTION III

ACTUARIALLY DETERMINED CONTRIBUTION FOR GASB NOS. 67 AND 68 REPORTING

City of Charleston Firemen's Pension and Relief Fund
Actuarially Determined Contribution For GASB Nos. 67 and 68
Reporting

Funding Progress and Employer Contributions

Schedule C

	July 1, 2014	July 1, 2015
Valuation Date	July 1, 2014	July 1, 2015
Valuation Interest Rate	5.00%	4.50%
Cost-of-Living Adjustment	3.00%	2.75%
Wage Inflation	4.00%	3.75%
Actuarial Value of Assets	Market	Market
Actuarial Cost Method	Entry Age Normal	Entry Age Normal
Remaining Amortization Period ^a	26 Years, Level % of Pay	25 Years, Level % of Pay
Schedule of Funding Progress		
Actuarial Valuation Date	July 1, 2014	July 1, 2015
1. Market Value of Assets	\$12,976,853	\$13,888,494
2. Actuarial Accrued Liability	\$154,660,064	\$176,567,385
3. Unfunded Actuarial Accrued Liability (2 - 1)	\$141,683,211	\$162,678,891
4. Funded Ratio (1/2)	8%	8%
5. Covered Payroll	\$7,364,910	\$7,273,171
6. UAAL as Percentage of Covered Payroll (3/5)	1924%	2237%
Schedule of Employer Contributions ^c		
	FY 2015	FY 2016
1. Actuarially Determined Contribution		
(a) Employer Normal Cost	\$2,407,623	\$3,288,750
(b) Amortization of Unfunded Actuarial Accrued Liability	\$6,125,994	\$7,085,063
(c) Actuarially Determined Contribution (ADC) (a + b)	\$8,533,617	\$10,373,813
2. Employer Contribution	\$5,004,065	\$5,300,144 ^b
3. Premium Tax Allocation	\$1,586,890	\$1,577,553
4. Percentage of ADC Contributed [(2 + 3)/1(c)]	77%	66%

^a Suggested amortization policy to comply with GASB Nos. 67 and 68 Standards.

^b Actual employer contribution for fiscal year end June 30, 2016.

^c The Conservation contribution plus premium tax allocation does not satisfy the Actuarially Determined Contribution as defined by GASB Nos. 67 and 68.

SECTION IV

VALUATION DATA AS OF JULY 1, 2015

City of Charleston Firemen's Pension and Relief Fund
Valuation Data as of July 1, 2015

Reconciliation of Assets for Plan Year Ending June 30, 2014

Schedule D(1)

Plan Year Ending	Benefit Account	Accumulation Account	Total June 30, 2014
A. Market Value of Assets End of Prior Year	(\$185,638)	\$11,457,207	\$11,271,569
1. Revenue During Fiscal Year			
(a) Employee Contribution	\$490,207	\$113,126	\$603,333
(b) Governmental Contribution			
(i) From Local Government	5,191,340	0	5,191,340
(ii) From State Government	1,127,798	416,708	1,544,506
(iii) Reallocation from State Government	0	0	0
(iv) Total	\$6,319,138	\$416,708	\$6,735,846
(c) Earnings on Investments			
(i) Net Appreciation (Depreciation)	0	1,167,115	1,167,115
(ii) Bond Interest	88	55,623	55,711
(iii) Dividends	0	152,607	152,607
(iv) Net Realized Gain (Loss) on Sale/Exchange	0	0	0
(v) Other	0	0	0
(vi) Less Investment Expense	0	(57,438)	(57,438)
(vii) Total	\$88	\$1,317,907	\$1,317,995
(d) Other Revenue	0	\$0	\$0
(e) Receivable Contribution	\$0	\$0	\$0
(f) Total Revenue (sum of (a) through (e))	\$6,809,433	\$1,847,741	\$8,657,174
2. Expenditures During Fiscal Year			
(a) Benefits Paid	6,822,654	0	6,822,654
(b) Withdrawals	6,518	114,586	121,104
(c) Administrative Expenses	8,132	0	8,132
(d) Total Expenditures (sum of (a) through (c))	\$6,837,304	\$114,586	\$6,951,890
3. Accruals			
(a) Receivable (other than State and Local Contributions)	0	0	0
(b) Less Payable	0	0	0
(c) Total	\$0	\$0	\$0
B. Market Value of Assets End of Year [A + 1(f) - 2(d) + 3(c)]	(\$213,509)	\$13,190,362	\$12,976,853
C. Approximate Return on Assets			11.4%

City of Charleston Firemen's Pension and Relief Fund
Valuation Data as of July 1, 2015

Reconciliation of Assets for Plan Year Ending June 30, 2015

Schedule D(2)

Plan Year Ending	Benefit Account	Accumulation Account	Total June 30, 2015
A. Market Value of Assets End of Prior Year	(\$213,509)	\$13,190,362	\$12,976,853
1. Revenue During Fiscal Year			
(a) Employee Contribution	\$481,808	\$111,188	\$592,996
(b) Governmental Contribution			
(i) From Local Government	5,004,065	0	5,004,065
(ii) From State Government	1,237,616	320,168	1,557,784
(iii) Reallocation from State Government	0	0	0
(iv) Total	\$6,241,681	\$320,168	\$6,561,849
(c) Earnings on Investments			
(i) Net Appreciation (Depreciation)	0	461,352	461,352
(ii) Bond Interest	77	81,380	81,457
(iii) Dividends	0	143,326	143,326
(iv) Net Realized Gain (Loss) on Sale/Exchange	0	0	0
(v) Other	0	0	0
(vi) Less Investment Expense	0	(63,691)	(63,691)
(vii) Total	\$77	\$622,367	\$622,444
(d) Other Revenue	0	\$0	\$0
(e) Receivable Contribution	\$0	\$0	\$0
(f) Total Revenue (sum of (a) through (e))	\$6,723,566	\$1,053,723	\$7,777,289
2. Expenditures During Fiscal Year			
(a) Benefits Paid	6,842,553	0	6,842,553
(b) Withdrawals	17,231	0	17,231
(c) Administrative Expenses	5,864	0	5,864
(d) Total Expenditures (sum of (a) through (c))	\$6,865,648	\$0	\$6,865,648
3. Accruals			
(a) Receivable (other than State and Local Contributions)	0	0	0
(b) Less Payable	0	0	0
(c) Total	\$0	\$0	\$0
B. Market Value of Assets End of Year [A + 1(f) - 2(d) + 3(c)]	(\$355,591)	\$14,244,085	\$13,888,494
C. Approximate Return on Assets			4.7%

City of Charleston Firemen's Pension and Relief Fund
Valuation Data as of July 1, 2015

Assets Held by Category as of June 30, 2014

Schedule E(1)

Plan Year Ending	June 30, 2014	
1. Cash and Short-term Investments	\$3,248,230	25%
2. Government Securities		
(a) Treasury Notes and Bonds	\$3,455,556	
(b) State and Municipal Bonds	\$0	
(c) Total Government Securities (sum of (a) and (b))	\$3,455,556	27%
3. Corporate Bonds		
(a) Bonds	\$0	
(b) Mortgage Backed Securities	\$0	
(c) Debentures	\$0	
(d) Mutual Fund Shares (Bonds)	\$0	
(e) Total Corporate Bonds (sum of (a) through (d))	\$0	0%
4. Corporate Stocks		
(a) Stocks	\$6,269,693	
(b) Mutual Fund Shares (Stocks)	\$0	
(c) Total Corporate Stocks (sum of (a) and (b))	\$6,269,693	48%
5. Other	\$3,374	0%
6. Receivable Contributions		
(a) From Local Government	\$0	0%
(b) From State Government	\$0	0%
7. Accruals		
(a) Receivable (other than State and Local Contributions)	\$0	
(b) Less Payable	\$0	
(c) Total	\$0	0%
Market Value of Assets as of June 30, 2014	\$12,976,853	
[sum of (1) through (7)]		

City of Charleston Firemen's Pension and Relief Fund
Valuation Data as of July 1, 2015

Assets Held by Category as of June 30, 2015

Schedule E(2)

Plan Year Ending	June 30, 2015	
1. Cash and Short-term Investments	\$2,578,392	18%
2. Government Securities		
(a) US Treasury Bills, Notes and Bonds	2,314,699	
(b) US State and Local Governmental Debt Securities	0	
(c) Foreign Governmental Debt Securities	0	
(d) Other	0	
(e) Total Government Securities (sum of (a) through (d))	\$2,314,699	17%
3. Corporate Fixed Income		
(a) US Bonds	1,483,138	
(b) US Mortgage or other Asset Backed Securities	0	
(c) US Mutual Fund Shares (Bonds)	0	
(d) US Exchange Traded Funds (Bonds)	0	
(e) International Bonds	0	
(f) International Mutual Fund Shares (Bonds)	0	
(g) International Exchange Traded Funds (Bonds)	0	
(h) Total Corporate Fixed Income (sum of (a) through (g))	\$1,483,138	11%
4. Corporate Equity		
(a) US Equity	2,908,417	
(b) US Mutual Fund Shares (Equity)	0	
(c) US Exchange Traded Funds (Equity)	4,595,606	
(d) International Equity	0	
(e) International Mutual Fund Shares (Equity)	0	
(f) International Exchange Traded Funds (Equity)	0	
(g) Total Corporate Equity (sum of (a) through (f))	\$7,504,023	54%
5. Alternative Investments		
(a) Real Estate Investment Trust	0	
(b) Private Equity Fund	0	
(c) Hedge Funds	0	
(d) Other Alternative Investments	0	
(e) Total Alternative Investments (sum of (a) through (d))	\$0	0%
6. Other	\$0	0%
7. Receivable Contributions		
(a) From Local Government	\$0	0%
(b) From State Government	\$103,135	1%
8. Accruals		
(a) Receivable (other than State and Local Contributions)	8,242	
(b) Less Payable	(103,135)	
(c) Total	(\$94,893)	-1%
Market Value of Assets as of June 30, 2015	\$13,888,494	
[sum of (1) through (8)]		

City of Charleston Firemen's Pension and Relief Fund
Valuation Data as of July 1, 2015

Summary of Participant Activity

Schedule F

	Actives	Retirees	Disabled	Deferred Vested	Spouses and Beneficiaries	Totals
Total Participants July 1, 2014:	144	147	36	0	45	372
New Actives:						0
Returned to Actives Status:						0
Data Corrections/Other Changes:						0
Vested Terminations:	(2)			2		0
Non-Vested Terminations:	(1)					(1)
Disabled:	(5)		5			0
Retirements:	(2)	2				0
Deaths with Beneficiary:		(5)			5	0
Deaths w/o Beneficiary:		(4)				(4)
Expired Annuity or Stop Payment:					(1)	(1)
Net Changes:	(10)	(7)	5	2	4	(6)
Total Participants June 30, 2015:	134	140	41	2	49	366

**City of Charleston Firemen's Pension and Relief Fund
Valuation Data as of July 1, 2015**

Distribution of Active Employees by Age and Length of Service

Schedule G

Attained Age	<u>Years of Service to Valuation Date</u>									Totals	Valuation Payroll
	Less than 1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	Over 35		
Under 20											\$ 0
20-24											0
25-29			5							5	220,896
30-34			15	3						18	833,474
35-39			12	6	5					23	1,204,871
40-44			10	10	14	2				36	1,926,520
45-49				10	6	21	4			41	2,412,884
50-54					1	3	6			10	615,706
55-59								1		1	58,820
60-64											0
65-69											0
Over 70											0
Totals	0	0	42	30	28	29	5	0	0	134	\$ 7,273,171
Averages _____											
Age: 42.1 years											
Service: 14.4 years											
Annual Pay: \$54,277											

City of Charleston Firemen's Pension and Relief Fund
Valuation Data as of July 1, 2015

Participants Summary

Schedule H

Active Participants	July 1, 2014	July 1, 2015
Number of Actives	144	134
Total Annual Pay	\$7,364,910	\$7,273,171
Average Age	41.3	42.1
Average Service	13.6	14.4

Inactive Participants	July 1, 2014		July 1, 2015	
Type	No.	Annual Benefit	No.	Annual Benefit
Retirees	147	\$5,279,832	140	\$5,111,973
Surviving Spouses	45	\$673,150	49	\$767,346
Disabled Members	36	\$880,665	41	\$1,031,296
Deferred Vested Members	0	\$0	2	\$56,385

SECTION V

ACTUARIAL ASSUMPTIONS AND METHODS

**City of Charleston Firemen’s Pension and Relief Fund
Actuarial Assumptions and Methods
Used in the Valuation as of July 1, 2015**

Discount Rate

The following table outlines the factors used to determine the discount rate:

Funded Ratio as of Valuation Date ¹	Liquidity Ratio ²	Equity Exposure ³	Projected Funded Ratio after 15 Years ¹	Discount Rate
60% or more	10	50% or more	70% or more	6.5%
40% or more	8	40% or more	60% or more	6.0%
30% or more	6	30% or more	50% or more	5.5%
15% or more	4	n/a	40% or more	5.0%
Less than 15%	n/a	n/a	15% or more	4.5%
Less than 15%	n/a	n/a	Less than 15%	4.0%

¹ Funded ratios based on a 6.0% investment return assumption for plans using an actuarially sound policy (standard or optional) and a 5.5% investment return assumption for other plans (alternative or conservation).

² Liquidity ratio equals assets as of the valuation date divided by expected benefit payments for the year.

³ Based on investment policy.

As of June 30, 2015	
Assets	\$13,888,494
Liabilities using a 5.50% Discount Rate	\$153,522,121
Funded Ratio	9%
Expected Benefit Payments	\$7,069,237
Liquidity Ratio	1.96
Equity Exposure	54%
Projected Funded Ratio after 15 years	24%

Discount Rate	4.50%
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City of Charleston Firemen’s Pension and Relief Fund
Actuarial Assumptions and Methods
Used in the Valuation as of July 1, 2015

The premium tax allocation is projected using the following methodology:

- (1) The Base Allocation for all Pension and Relief Funds is a fixed amount equal to \$8,709,689 in all future years. This amount is allocated to each individual Pension and Relief Fund in proportion to the number of eligible members, which includes active members covered in either the Pension and Relief Fund or the statewide plan, Municipal Police Officers and Firefighters Retirement System (“MPFRS”).
- (2) The Excess Allocation is equal to the excess of the current year premium tax assigned to all Pension and Relief Funds over the total Base Allocation. This amount is allocated to each individual Pension and Relief Fund in proportion to the number of eligible active and retired members covered in either the Pension and Relief Fund or the MPFRS.
- (3) We have assumed all Pension and Relief Funds will make the minimum statutory contribution requirement and will receive 100% of both the Base Allocation and the Excess Allocation assigned to the individual plan. Consequently, the projections do not include any reallocation of Expired Premium Tax Allocation for plan years beginning on and after July 1, 2017.
- (4) The total available premium tax allocation, net of expenses, as of September 1, 2016, includes a Base Allocation of \$8,709,689, an Excess Allocation of \$8,696,736, and an Expired Premium Tax Allocation of \$336,643.
- (5) For the plan year ended June 30, 2016, all Pension and Relief Funds reported a total of 1,689 eligible active members, and 2,162 eligible retired members. The City of Charleston Firemen’s Pension and Relief Fund reported 155 eligible active members, and 234 eligible retired members, based on the average number of plan participants for the 12-month period ended June 30, 2016. The Fund is eligible to receive a premium tax allocation of \$1,710,329 for the fiscal year ending June 30, 2017.
- (6) The total premium tax allocation was assumed to increase by 2.75% in calendar years ending on and after 2017.

City of Charleston Firemen’s Pension and Relief Fund
Actuarial Assumptions and Methods
Used in the Valuation as of July 1, 2015

General Inflation	2.75%																		
Expected Salary Increase	General Inflation: 2.75% <i>plus</i>																		
Service-based Increase:	Wage Inflation Increment: 1.00% <i>plus</i>																		
	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: left;"><u>Years of Service</u></th> <th style="text-align: right;"><u>Increase</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">1</td> <td style="text-align: right;">20.00%</td> </tr> <tr> <td style="text-align: center;">2</td> <td style="text-align: right;">6.50%</td> </tr> <tr> <td style="text-align: center;">3</td> <td style="text-align: right;">3.50%</td> </tr> <tr> <td style="text-align: center;">4</td> <td style="text-align: right;">2.75%</td> </tr> <tr> <td style="text-align: center;">5-9</td> <td style="text-align: right;">2.50%</td> </tr> <tr> <td style="text-align: center;">10-29</td> <td style="text-align: right;">2.00%</td> </tr> <tr> <td style="text-align: center;">30-34</td> <td style="text-align: right;">1.25%</td> </tr> <tr> <td style="text-align: center;">after 34 years of service</td> <td style="text-align: right;">0.00%</td> </tr> </tbody> </table>	<u>Years of Service</u>	<u>Increase</u>	1	20.00%	2	6.50%	3	3.50%	4	2.75%	5-9	2.50%	10-29	2.00%	30-34	1.25%	after 34 years of service	0.00%
<u>Years of Service</u>	<u>Increase</u>																		
1	20.00%																		
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30-34	1.25%																		
after 34 years of service	0.00%																		
Post-retirement COLA	2.75% on first \$15,000 of Annual Benefit and on the accumulated supplemental pension amounts for prior years.																		
Increase in State Insurance Premium Tax Allocation	2.75% on and after year 1																		
Cost Method	Entry-Age-Normal, Level-Percentage-of-Pay																		
<i>Amortization Policies:</i>																			
Alternative Plans and former Alternative Plans that selected the Conservation Policy	For GASB 67/68 Accounting: 30 – Year Closed Level-Percentage-of-Pay Amortization (from July 1, 2010 – 25 years remaining as of July 1, 2015).																		
Standard Plans and former Standard Plans that selected the Optional Policy	For funding and GASB 67/68 Accounting: 40-Year Closed Level-Dollar Amortization (from July 1, 1991 – 16 years remaining as of July 1, 2015)																		
Former Alternative Plans that selected the Optional Policy	For funding: 40-Year Closed Level-Dollar Amortization (from January 1, 2010 – 34.5 years remaining as of July 1, 2015). For GASB 67/68 Accounting: 30-Year Closed Level-Percentage-of-Pay Amortization (from July 1, 2010 – 25 years remaining as of July 1, 2015)																		

**City of Charleston Firemen’s Pension and Relief Fund
Actuarial Assumptions and Methods
Used in the Valuation as of July 1, 2015**

Asset Method	Market Value										
Turnover	<p style="text-align: center;">Sample Rates –</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>Age</u></th> <th style="text-align: center;"><u>Rates</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">25</td> <td style="text-align: center;">9%</td> </tr> <tr> <td style="text-align: center;">35</td> <td style="text-align: center;">4%</td> </tr> <tr> <td style="text-align: center;">45</td> <td style="text-align: center;">2%</td> </tr> <tr> <td style="text-align: center;">50</td> <td style="text-align: center;">0%</td> </tr> </tbody> </table>	<u>Age</u>	<u>Rates</u>	25	9%	35	4%	45	2%	50	0%
<u>Age</u>	<u>Rates</u>										
25	9%										
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Retirement	<table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>Age</u></th> <th style="text-align: center;"><u>Rates</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">50</td> <td style="text-align: center;">45%</td> </tr> <tr> <td style="text-align: center;">51-55</td> <td style="text-align: center;">30%</td> </tr> <tr> <td style="text-align: center;">56-59</td> <td style="text-align: center;">35%</td> </tr> <tr> <td style="text-align: center;">60</td> <td style="text-align: center;">100%</td> </tr> </tbody> </table>	<u>Age</u>	<u>Rates</u>	50	45%	51-55	30%	56-59	35%	60	100%
<u>Age</u>	<u>Rates</u>										
50	45%										
51-55	30%										
56-59	35%										
60	100%										
Mortality	<p>Active: RP-2014 Blue Collar Healthy Employee</p> <p>Post-Retirement: RP-2014 Blue Collar Healthy Annuitant</p> <p>Disabled: RP-2014 Blue Collar Healthy Annuitant set forward four years</p> <p>Tables above incorporate generational mortality improvement using MP-2014 2-dimensional mortality improvement scales</p>										
Disability	<p style="text-align: center;">Sample Rates –</p> <table style="width: 100%; border-collapse: collapse;"> <thead> <tr> <th style="text-align: center;"><u>Age</u></th> <th style="text-align: center;"><u>Rates^a</u></th> </tr> </thead> <tbody> <tr> <td style="text-align: center;">30</td> <td style="text-align: center;">0.22%</td> </tr> <tr> <td style="text-align: center;">40</td> <td style="text-align: center;">0.50%</td> </tr> <tr> <td style="text-align: center;">50</td> <td style="text-align: center;">0.79%</td> </tr> </tbody> </table> <p>^a Assumes 60% duty related and 40% non-duty related.</p>	<u>Age</u>	<u>Rates^a</u>	30	0.22%	40	0.50%	50	0.79%		
<u>Age</u>	<u>Rates^a</u>										
30	0.22%										
40	0.50%										
50	0.79%										
Percent Married	90%										
Spouse Age	Females 3 years younger than males										

SECTION VI

SUMMARY OF PRINCIPAL PLAN PROVISIONS

City of Charleston Firemen's Pension and Relief Fund

Summary of Principal Plan Provisions

Actuarial Valuation as of July 1, 2015

Employee Eligibility — All compensated employees of the Fire Department hired before June 1, 2011 are eligible to participate in the Firemen's Pension and Relief Fund.

Average Annual Compensation — The average of any three twelve-consecutive-month periods of employment which produces the highest average annual compensation.

Each twelve-consecutive-month annual compensation is limited to 120% of the *Average Adjusted Salary* received by the member in the two consecutive twelve-consecutive-month periods immediately preceding the twelve-consecutive-month period used in determining benefits.

The *Average Adjusted Salary* is base salary (exclusive of all overtime and other pay) of the year used in determining benefits multiplied by the ratio of total salary (includes all overtime and other pay) to base salary from the respective preceding twelve-consecutive-month period.

Determining Years of Service Credit (Credited Service) — The number of years that the member has contributed to the employees retirement and benefit fund.

Prior Military Service — A city may provide that members who have been honorably discharged from the military shall receive up to two years prior service credit for military service prior to their employment with the city.

Current Military Service — Any current member who has been on qualified military service in the armed forces of the United States with an honorable discharge may, within six months from his or her date of discharge, be given credit for continuous service in the paid police or fire department.

Any member who has served in active duty with the armed forces of the United States, whether prior to or subsequent to becoming a member of a paid police or fire department, shall receive one additional percent for each year so served in active military duty, up to a maximum of four additional percent.

Absence from the service because of sickness or injury for a period of two years or less shall not be construed as time out of service.

Contributions — Participating employees contribute 8.0% of compensation. Participating employees hired on or after January 1, 2010 contribute 9.5% of pay. The municipality has elected to contribute the minimum employer contribution under the Conservation funding policy.

Normal Retirement — Members are eligible at the earlier of age 50 with 20 years of credited service or age 65.

Benefit Commencement — Annual retirement pension benefits commence upon retirement or upon the member attaining age fifty, whichever is later, payable in twelve monthly installments.

City of Charleston Firemen's Pension and Relief Fund

Summary of Principal Plan Provisions

Actuarial Valuation as of July 1, 2015

Accrued Benefit — The annual retirement benefit equals 60% of average annual compensation, not less than \$6,000, plus an additional percentage of average annual compensation for service over 20 years equal to 2% for each year of service between 20 and 25 and 1% for each year of service between 25 and 30 years. Employees serving in the military are eligible for an additional 1% of average annual compensation for each year of military service up to four years. The maximum benefit is limited to 75% of average annual compensation. Benefits continue for life.

Disability Retirement — Members are eligible after earning five years of service. No service requirement if disability is service related.

The monthly disability benefit equals the greater of 60% of monthly salary at disability or \$500. Employees serving in the military are eligible for an additional benefit of 1% of monthly salary at disability for each year of military service up to four years. Disability benefits, when aggregated with monthly state workers compensation benefits, shall not exceed 100% of the member's monthly compensation at the time of disability. Benefits continue for life or until recovery.

Death Benefits — Members are eligible after earning five years of service. No service requirement if death is service related. Retirees and terminated vested participants are also eligible.

The benefit is equal to 60% of the participant's benefit, but not less than \$300 per month, payable to the spouse until death or remarriage. Other dependents (children, parents, brothers, and sisters) are also eligible for death benefits. To each dependent child, twenty percent of the participant's benefit until the child attains eighteen or marries; to each dependent orphaned child, twenty-five percent of the participant's benefit until the child attains eighteen or marries; to each dependent parent, ten percent of the participant's benefit for life, and to each dependent brother or sister, the sum of fifty dollars per month (but a total not to exceed \$100 per month) until such individual attains the age of eighteen years or marries.

In no case shall the payments to the surviving spouse and children be reduced below sixty-five percent of the total amount paid to all dependents.

Supplemental Pension Benefits — All retirees, surviving beneficiaries and disability pensioners are eligible for automatic cost-of-living benefits commencing on the first day of July following two years of retirement. The benefits equal the percentage increase in the Consumer Price Index, limited to 4% (2% for some disability retirees), multiplied by the sum of the allowable amount which is the first \$15,000 of the total annual benefits paid and the accumulated supplemental pension amounts for prior years.

Termination Benefits — Any member who terminates employment prior to retirement will be entitled to a refund of contributions without interest.

Refunds — Any member who terminates from their department without receiving a retirement pension shall be refunded all deductions made from his salary, without interest. Any member who receives such a refund and subsequently wishes to reenter the department must repay to the pension fund all sums refunded with interest at the rate of eight percent annual.