



**Municipal Pensions
Oversight Board**

**City of Clarksburg
West Virginia
Firemen's Pension and Relief Fund**

GASB 68 Actuarial Information for the
Measurement Period Ending
June 30, 2020

Bolton

Submitted by:

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Employee Benefits, Actuarial & Investment Consulting

October 27, 2020

Mrs. Kimberly Karakiozis
Finance Director
City of Clarksburg
222 W. Main Street
Clarksburg, WV 26301

Lieutenant Gino Gallo
Pension Board Secretary
City of Clarksburg
Firemen's Pension and Relief Fund

Re: City of Clarksburg Firemen's Pension and Relief Fund
GASB 68 Actuarial Information for the Measurement Period Ending June 30, 2020

Dear Kimberly,

The following report contains the GASB 67 and GASB 68 actuarial information for the City of Clarksburg Firemen's Pension and Relief Fund to be included in the City's financial statements for FY 2020. The GASB 67 information has been provided as of June 30, 2020 (the GASB 68 measurement date for FY 2020).

Methodology, Reliance and Certification

This report is prepared for the City. The report contains the actuarial information to be included with the City's financial statements for the year ending June 30, 2020 (the City's fiscal year end date) as required by GASB 68. This information has been prepared for use in the financial statements of the City. This information is not intended for, nor should it be used for, any additional purposes.

The total pension liability is based on the July 1, 2019 actuarial valuation rolled forward to June 30, 2020. The methods, assumptions, and participant data used are detailed in the July 1, 2019 actuarial valuation report with the exception of the actuarial cost method. These calculations are based on the Entry Age Normal cost method as required by GASB 67. The calculation of the Actuarially Determined Contribution (ADC) for the fiscal year ending June 30, 2020 is contained in the July 1, 2018 actuarial valuation report. The discount rate assumption may have changed if a blended rate was used for GASB purposes.

The included calculations are based on the valuation discount rate of 5.00%. The plan's expected gross rate of investment return of 5.00% has been blended with the 2.45% yield corresponding to the 20-year maturity on a municipal general obligation AA bond yield curve published on Fidelity's Fixed Income Market Data webpage as of June 30, 2020. The development of the blended discount rate is included within this report. Since the plan assets are estimated to be sufficient to cover benefit payments throughout the projection period, the liability discount rate used for this June 30, 2020 measurement date is equal to the plan's expected rate of investment return.

The long-term nominal expected rate of return on pension plan investments was determined using a methodology approved by the Municipal Pensions Oversight Board (MPOB) and is based on the fund's current funding ratio, liquidity ratio, equity exposure and expected funded status in 15 years.

The included calculations assume that the members and the City will continue to make all required contributions in accordance with the City's funding policy.

Methodology, Reliance and Certification (cont.)

These calculations and comparisons with assets are applicable for the valuation date only. The future is uncertain, and the plan may become better funded or more poorly funded in the future. This valuation does not provide any guarantee that the plan will be able to provide the promised benefits in the future.

This is a deterministic valuation in that it is based on a single set of assumptions. This set of assumptions is one possible basis for our calculations. Other assumptions may be equally valid. The future is uncertain and the plan's actual experience will differ from the assumptions; the differences may be significant or material because the results are very sensitive to the assumptions made and, in some cases, to the interaction between the assumptions. We may consider that some factors are not material to the valuation of the plan and may not provide a specific assumption for those factors. We may have used other assumptions in the past. We will likely consider changes in assumptions at a future date.

The City is responsible for selecting the plan's funding policy based on four methods allowed for under state law. The actuarial valuation methods are chosen by the actuary in accordance with actuarial standards of practice promulgated by the Actuarial Standards Board of the American Academy of Actuaries and as required by GASB 67 & 68. The MPOB selects the asset valuation methods and assumptions; these selections are reviewed by a qualified actuary no less than every five years. The actuary shall provide a report to the Board with recommendations on any changes to the actuarial process. The policies, methods and assumptions used in this valuation are those that have been so prescribed and are described in this report. The City and MPOB are solely responsible for communicating to Bolton Partners, Inc. any changes required thereto.

The City could reasonably ask how the valuation would change if we used a different assumption set or if plan experience exhibited variations from our assumptions. This report does not contain such an analysis. That type of analysis would be a separate assignment.

The cost of this plan is determined by the benefits promised by the plan, the plan's participant population, the investment experience of the plan and many other factors. An actuarial valuation is a budgeting tool for the City or, in this case, a measure of accounting expense. It does not affect the cost of the plan. As the experience of the plan evolves, it is normal for the level of contributions and expense of the plan to change.

We make every effort to ensure that our calculations are accurately performed. These calculations are complex. Despite our best efforts, we may make a mistake. We reserve the right to correct any potential errors by amending the results of this report or by including the corrections in a future valuation report.

Because modeling all aspects of a situation is not possible or practical, we may use summary information, estimates, or simplifications of calculations to facilitate the modeling of future events in an efficient and cost-effective manner. We may also exclude factors or data that are immaterial in our judgment. Use of such simplifying techniques does not, in our judgment, affect the reasonableness of valuation results for the plan.

The valuation was completed using both proprietary and third-party models (including software and tools). We have tested these models to ensure they are used for their intended purposes, within their known limitations, and without any known material inconsistencies unless otherwise stated.



Methodology, Reliance and Certification (cont.)

This report is based on plan provisions, census data, and asset data submitted by the City. We have relied on this information for purposes of preparing this report, but have not performed an audit. The accuracy of the results presented in this report is dependent upon the accuracy and completeness of the underlying information. The plan sponsor is solely responsible for the validity and completeness of this information.

The City is solely responsible for selecting the plan's investment policies, asset allocations and individual investments. Bolton Partners, Inc.'s actuaries have not provided any investment advice to the City.

The information in this report was prepared for the internal use of the City, the plan and their auditors in connection with our actuarial valuations of the pension plan as required by GASB 68. This report may not be used for any other purpose; Bolton Partners, Inc. is not responsible for the consequences of any unauthorized use or the reliance on this information by any other party.

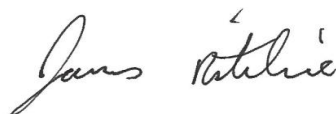
The calculation of actuarial liabilities for valuation purposes is based on a current estimate of future benefit payments. The calculation includes a computation of the "present value" of those estimated future benefit payments using an assumed discount rate; the higher the discount rate assumption, the lower the estimated liability will be. For purposes of estimating the liabilities (future and accrued) in this report, an assumption based on the expected long-term rate of return on plan investments is used. If the plan is expected to become insolvent, the return assumption is blended with a long-term municipal bond rate. Using a lower discount rate assumption, such as a rate solely based on long-term bond yields, could substantially increase the estimated present value of future and accrued liabilities.

This report provides certain financial calculations for use by the auditor. These values have been computed in accordance with our understanding of generally accepted actuarial principles and practices and fairly reflect the actuarial position of the plan. The various actuarial assumptions and methods which have been used are, in our opinion, appropriate for the purposes of this report.

The report is conditioned on the assumption of an ongoing plan and is not meant to present the actuarial position of the plan in the case of plan termination. 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 undersigned enrolled actuaries meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion contained herein. The July 1, 2019 actuarial valuation report contains information that is integral to the results contained herein and a copy may be provided upon request.

Sincerely,



James Ritchie, ASA, EA, FCA, MAAA



Jordan McClane, FSA, EA, FCA, MAAA



City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Net Pension Liability of the Employer

The components of the net pension liability of the Employer at June 30, 2020, were as follows:

Total pension liability	\$ 38,062,631
Plan fiduciary net position	(11,294,578)
Employer's net pension liability	<u>\$ 26,768,053</u>
Plan fiduciary net position as a percentage of the total pension liability	29.67%

Actuarial assumptions. The total pension liability was determined by an actuarial valuation as of July 1, 2019 rolled forward to June 30, 2020 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	2.75 percent
Salary increases	Rates vary by years of service
Single discount rate (BOY)	5.00%
Single discount rate (EOY)	5.00%
Investment rate of return (BOY)	5.00%, net of pension plan investment expense, including inflation
Investment rate of return (EOY)	5.00%, net of pension plan investment expense, including inflation
Long-term municipal bond rate (BOY)	3.13%
Long-term municipal bond rate (EOY)	2.45%
Mortality	RP-2014 Blue Collar Mortality Table with generational projection using Scale MP-2014
Year Fund is projected to be fully funded	2044
Year assets are expected to be depleted for a closed plan	N/A

The above is a summary of key actuarial assumptions. Full descriptions of the actuarial assumptions are available in the July 1, 2019 actuarial valuation report.

Sensitivity of the net pension liability to changes in the discount rate

	1% Decrease 4.00%	Current Discount Rate 5.00%	1% Increase 6.00%
Employer's net pension liability	\$ 32,686,961	\$ 26,768,053	\$ 22,033,080

City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Changes in the Net Pension Liability

	Total Pension Liability (a)	Increase (Decrease) Plan Fiduciary Net Position (b)	Net Pension Liability (a) - (b)
Balances at 6/30/19	\$ 35,522,255	\$ 9,953,711	\$ 25,568,544
Changes for the year:			
Service cost	948,245		948,245
Interest	1,744,625		1,744,625
Changes of benefit terms	-		-
Differences between expected and actual experience	1,107,034		1,107,034
Changes of assumptions	-		-
Contributions - employer (including Premium Tax Allocation)		2,298,344	(2,298,344)
Contributions - member		176,172	(176,172)
Net investment income		133,379	(133,379)
Benefit payments, including refunds of member contributions	(1,259,528)	(1,259,528)	-
Administrative expense		(7,500)	7,500
Other		-	-
Net Changes	<u>2,540,376</u>	<u>1,340,867</u>	<u>1,199,509</u>
Balances at 6/30/20	<u>\$ 38,062,631</u>	<u>\$ 11,294,578</u>	<u>\$ 26,768,053</u>
Return on Investments		1.3%	

City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Components of Employer's Pension Expense for the Fiscal Year Ended June 30, 2020

Note	Description	Amount
A	Service cost	\$ 948,245
B	Interest on the total pension liability	1,744,625
A	Changes of benefit terms	-
C	Differences between expected and actual experience	(73,089)
C	Changes of assumptions	(580,525)
A	Employee contributions	(176,172)
D	Projected earnings on pension plan investments	(527,873)
C	Differences between expected and actual earnings on plan investments	(47,189)
A	Pension plan administrative expense	7,500
A	Other changes in fiduciary net position	-
Total Pension Expense		\$ 1,295,522

Notes:

A Provided in the Changes in Net Pension Liability exhibit.

B Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Interest Rate (c)	Projected Earnings (a) x (b) x (c)
Beginning total pension liability	\$ 35,522,255	100%	5.00%	\$ 1,776,113
Service cost (End of Year)	948,245	0%	5.00%	-
Benefit payments, including refunds of employee contributions	(1,259,528)	50%	5.00%	(31,488)
Total interest on the total pension liability				\$ 1,744,625

C Provided in the Schedules of Deferrals.

D Based on the following calculation:

	Amount for Period (a)	Portion of Period (b)	Projected Rate of Return (c)	Projected Earnings (a) x (b) x (c)
Beginning plan fiduciary net position	\$ 9,953,711	100%	5.00%	\$ 497,686
Employer contributions	2,298,344	50%	5.00%	57,459
Employee contributions	176,172	50%	5.00%	4,404
Benefit payments, including refunds of employee contributions	(1,259,528)	50%	5.00%	(31,488)
Administrative expense and other	(7,500)	50%	5.00%	(188)
Total Projected Earnings				\$ 527,873

City of Clarksburg, West Virginia Firemen’s Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Deferred Outflows of Resources and Deferred Inflows of Resources Related to Pensions

At June 30, 2020, the Employer reported deferred outflows of resources and deferred inflows of resources related to pensions from the following sources:

	Deferred Outflows of Resources	Deferred Inflows of Resources
Differences between expected and actual experience	\$ 1,160,354	\$ 211,171
Changes of assumptions	-	-
Net difference between projected and actual earnings on pension plan investments	134,827	-
Total	\$ 1,295,181	\$ 211,171

Amounts reported as deferred outflows of resources and deferred inflows of resources related to pensions will be recognized in pension expense as follows:

Year ended June 30:	
2021	\$ 194,510
2022	468,878
2023	341,724
2024	78,898
2025	-
Thereafter	-

City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Changes in the Employer's Net Pension Liability and Related Ratios
 Last 10 Fiscal Years

Total pension liability	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Service cost	\$ 948,245	\$ 906,710	\$ 911,837	\$ 1,041,846	\$ 739,794	\$ 735,159	\$ 729,815	\$ -	\$ -	\$ -
Interest	1,744,625	1,646,488	1,604,493	1,540,729	1,503,073	1,480,035	1,492,730	-	-	-
Changes of benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	1,107,034	660,159	(1,021,000)	(1,006,489)	(511,633)	(837,150)	-	-	-	-
Changes of assumptions	-	-	-	(2,433,972)	4,020,701	-	-	-	-	-
Benefit payments, including refunds of member contributions	(1,259,528)	(1,241,719)	(1,199,305)	(1,223,009)	(1,239,292)	(1,250,939)	(1,303,181)	-	-	-
Net change in total pension liability	2,540,376	1,971,638	296,025	(2,080,895)	4,512,643	127,105	919,364	-	-	-
Total pension liability - beginning	35,522,255	33,550,617	33,254,592	35,335,487	30,822,844	30,695,739	29,776,375	-	-	-
Total pension liability - ending (a)	\$ 38,062,631	\$ 35,522,255	\$ 33,550,617	\$ 33,254,592	\$ 35,335,487	\$ 30,822,844	\$ 30,695,739	\$ -	\$ -	\$ -
Plan fiduciary net position	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Contributions - employer (including Premium Tax Allocation)	\$ 2,298,344	\$ 2,034,183	\$ 2,029,582	\$ 1,790,929	\$ 1,361,271	\$ 1,288,742	\$ 1,210,474	\$ -	\$ -	\$ -
Contributions - member	176,172	167,038	155,596	148,321	145,720	140,550	135,019	-	-	-
Net investment income	133,379	517,666	561,109	586,180	315,511	185,060	465,521	-	-	-
Benefit payments, including refunds of member contributions	(1,259,528)	(1,241,719)	(1,199,305)	(1,223,009)	(1,239,292)	(1,250,939)	(1,303,181)	-	-	-
Administrative expense	(7,500)	-	(7,500)	(7,500)	(6,000)	(6,000)	(6,000)	-	-	-
Other	-	(7,500)	-	-	-	-	-	-	-	-
Net change in plan fiduciary net position	\$ 1,340,867	\$ 1,469,668	\$ 1,539,482	\$ 1,294,921	\$ 577,210	\$ 357,413	\$ 501,833	\$ -	\$ -	\$ -
Plan fiduciary net position - beginning	9,953,711	8,484,043	6,944,559	5,649,638	5,072,427	4,715,014	4,213,181	-	-	-
Plan fiduciary net position - ending (b)	\$ 11,294,578	\$ 9,953,711	\$ 8,484,043	\$ 6,944,559	\$ 5,649,637	\$ 5,072,427	\$ 4,715,014	\$ -	\$ -	\$ -
Employer's net pension liability - ending (a)-(b)	<u>\$ 26,768,053</u>	<u>\$ 25,568,544</u>	<u>\$ 25,066,574</u>	<u>\$ 26,310,033</u>	<u>\$ 29,685,850</u>	<u>\$ 25,750,417</u>	<u>\$ 25,980,725</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Plan fiduciary net position as a percentage of the total pension liability	29.67%	28.02%	25.29%	20.88%	15.99%	16.46%	15.36%	0.00%	0.00%	0.00%
Covered payroll	\$ 2,064,594	\$ 1,963,141	\$ 1,912,017	\$ 1,919,071	\$ 1,868,455	\$ 1,826,835	\$ 1,812,838	\$ -	\$ -	\$ -
Employer's net pension liability as a percentage of covered payroll	1296.53%	1302.43%	1311.00%	1370.98%	1588.79%	1409.56%	1433.15%	0.00%	0.00%	0.00%
Expected average remaining service years of all participants	4.00	4.00	3.78	3.96	4.01	3.85	-	-	-	-

Notes to Schedule:

Benefit changes: There were no changes for FY2020.

Changes of assumptions: There were no changes for FY2020.

City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Schedule of Employer Contributions
 Last 10 Fiscal Years

	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Actuarially determined contribution	\$ 2,340,972	\$ 2,327,809	\$ 2,026,406	\$ 2,031,009	\$ 2,124,224	\$ 1,697,409	\$ 1,676,866	\$ 1,603,979	\$ -	\$ -
Contributions in relation to the actuarially determined contribution										
Employer provided	1,861,120	1,581,814	1,592,742	1,345,298	936,850	867,454	803,198	743,702	-	-
State provided	437,224	452,369	436,840	445,631	424,421	421,288	407,276	473,392	-	-
Contribution deficiency (excess)	<u>\$ 42,628</u>	<u>\$ 293,626</u>	<u>\$ (3,176)</u>	<u>\$ 240,080</u>	<u>\$ 762,953</u>	<u>\$ 408,667</u>	<u>\$ 466,392</u>	<u>\$ 386,885</u>	<u>\$ -</u>	<u>\$ -</u>
Covered payroll	\$ 2,064,594	\$ 1,963,141	\$ 1,912,017	\$ 1,919,071	\$ 1,868,455	\$ 1,826,835	\$ 1,812,838	\$ 1,712,139	\$ -	\$ -
Contributions as a percentage of covered employee payroll	111.32%	103.62%	106.15%	93.32%	72.86%	70.55%	66.77%	71.09%	N/A	N/A

Notes to Schedule

Valuation date:

Actuarially determined contribution amounts are calculated as of the beginning of the fiscal year (July 1) for the year immediately following the fiscal year. Actuarial valuations are performed every year.

Methods and assumptions used to determine contribution rates:

Actuarial cost method	Entry Age Normal
Amortization method	Level Dollar
Remaining amortization period	31.5 years
Asset valuation method	Market Value
Inflation	2.75 percent
Salary increases	Rates vary by years of service
Investment rate of return	5.00%, net of pension plan investment expense, including inflation
Retirement age	Rates vary by age
Mortality	RP-2014 Blue Collar Mortality Table with generational projection using Scale MP-2014

City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Schedule of Differences between Projected and Actual Earnings on Pension Plan Investments

In conformity with paragraph 33b of Statement 68, the effects of differences between projected and actual earnings on pension plan investments are recognized in pension expense using a systematic and rational method over a closed five-year period, beginning in the current reporting period. The following table illustrates the application of this requirement.

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Projected and Actual Earnings on Plan Investments											
Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2016	2017	2018	2019	2020	2021	2022	2023	2024
2016	\$ (55,347)	5	\$ (11,069)	(11,069)	(11,069)	(11,069)	(11,071)				
2017	(316,000)	5		\$ (63,200)	(63,200)	(63,200)	(63,200)	(63,200)			
2018	(189,422)	5			\$ (37,884)	(37,884)	(37,884)	(37,884)	(37,886)		
2019	(69,664)	5				\$ (13,933)	(13,933)	(13,933)	(13,933)	(13,932)	
2020	394,494	5					\$ 78,899	78,899	78,899	78,899	78,898
Net increase (decrease) in pension expense							\$ (47,189)	\$ (36,118)	\$ 27,080	\$ 64,967	\$ 78,898

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Differences between Projected and Actual Earnings on Pension Plan Investments

Year	Investment Earnings Less than Projected (a)	Investment Earnings Greater Than Projected (b)	Amounts Recognized in Pension Expense Through June 30, 2020 (c)	Balances at June 30, 2020	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	\$ -	\$ 55,347	\$ 55,347	\$ -	\$ -
2017	-	316,000	252,800	-	63,200
2018	-	189,422	113,652	-	75,770
2019	-	69,664	27,866	-	41,798
2020	394,494	-	78,899	315,595	-
				\$ 315,595	\$ 180,768

City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Schedule of Differences between Expected and Actual Experience

In conformity with paragraph 33a of Statement 68, the effects of differences between expected and actual experience are recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

Increase (Decrease) in Pension Expense Arising from the Recognition of Differences between Expected and Actual Experience																			
Year	Differences between Expected and Actual Experience	Recognition Period (Years)	Prior	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Thereafter
Prior	-	-																	
2011	-	-																	
2012	-	-																	
2013	-	-																	
2014	-	-																	
2015	(837,150)	3.852277						\$ (217,313)	(217,313)	(217,313)	(185,211)								
2016	(511,633)	4.009013						\$ (127,621)	(127,621)	(127,621)	(127,621)	(127,621)	(1,149)						
2017	(1,006,489)	3.958952							\$ (254,231)	(254,231)	(254,231)	(254,231)	(243,796)						
2018	(1,021,000)	3.782276								\$ (269,943)	(269,943)	(269,943)	(269,943)	(211,171)					
2019	660,159	4.000000								\$ 165,040		165,040	165,040	165,039					
2020	1,107,034	4.000000										\$ 276,759	276,759	276,759	276,759	276,757			
Net increase (decrease) in pension expense													\$ (73,089)	\$ 230,628	\$ 441,798	\$ 276,757	\$ -	\$ -	\$ -

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Differences between Expected and Actual Experience

Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense Through June 30, 2020 (c)	Balances at June 30, 2020	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	\$ -	\$ -	\$ -	\$ -	\$ -
2011	-	-	-	-	-
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	-	837,150	837,150	-	-
2016	-	511,633	511,633	-	-
2017	-	1,006,489	1,006,489	-	-
2018	-	1,021,000	809,829	-	211,171
2019	660,159	-	330,080	330,079	-
2020	1,107,034	-	276,759	830,275	-
				\$ 1,160,354	\$ 211,171



Schedule of Changes of Assumptions

In conformity with paragraph 33a of Statement 68, the effects of changes of assumptions should be recognized in pension expense, beginning in the current reporting period, using a systematic and rational method over a closed period equal to the average of the remaining service lives of all employees that are provided with pensions through the pension plan (active and inactive employees), determined as of the beginning of the measurement period. The following table illustrates the application of this requirement.

Increase (Decrease) in Pension Expense Arising from the Effects of Changes of Assumptions																			
Year	Changes of Assumptions	Recognition Period (Years)	Prior	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023	2024	2025	Thereafter
Prior	\$ -	-																	-
2011	-	-																	-
2012	-	-																	-
2013	-	-																	-
2014	-	-																	-
2015	-	3,852,277																	-
2016	4,020,701	4,009,013							\$ 1,002,915	1,002,915	1,002,915	1,002,915	9,041						-
2017	(2,433,972)	3,958,952								\$ (614,802)	(614,802)	(614,802)	(589,566)						-
2018	-	3,782,276																	-
2019	-	4,000,000																	-
2020	-	4,000,000																	-
Net increase (decrease) in pension expense													\$ (580,525)	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -

Deferred Outflows of Resources and Deferred Inflows of Resources Arising from Changes of Assumptions

Year	Increases in the Total Pension Liability (a)	Decreases in the Total Pension Liability (b)	Amounts Recognized in Pension Expense Through June 30, 2020 (c)	Balances at June 30, 2020	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
Prior	\$ -	\$ -	\$ -	\$ -	\$ -
2011	-	-	-	-	-
2012	-	-	-	-	-
2013	-	-	-	-	-
2014	-	-	-	-	-
2015	-	-	-	-	-
2016	4,020,701	-	4,020,701	-	-
2017	-	2,433,972	2,433,972	-	-
2018	-	-	-	-	-
2019	-	-	-	-	-
2020	-	-	-	-	-
				\$ -	\$ -

City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Projection of Pension Plan's Fiduciary Net Position

Fiscal Year	Gross Normal Cost (BOY)			Employee Contributions (BOY)			Employer Normal Cost (BOY)			Expenses (BOY)			Employer Contributions (MOY)			Premium Tax Allocation (MOY)		
	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total	Current Members	Future Members	Total
2020	\$ 903,090	\$ -	\$ 903,090	\$ 154,545	\$ -	\$ 154,545	\$ 748,545	\$ -	\$ 748,545	\$ 8,136	\$ -	\$ 8,136	\$ 1,162,875	\$ -	\$ 1,162,875	\$ 478,835	\$ -	\$ 478,835
2021	\$ 822,368	\$ 103,367	\$ 925,735	\$ 143,700	\$ 21,666	\$ 165,366	\$ 678,668	\$ 81,701	\$ 760,369	\$ 8,359	\$ -	\$ 8,359	\$ 1,160,557	\$ 83,719	\$ 1,244,276	\$ 494,586	\$ -	\$ 494,586
2022	\$ 758,535	\$ 219,657	\$ 978,192	\$ 135,022	\$ 46,069	\$ 181,091	\$ 623,513	\$ 173,588	\$ 797,101	\$ 8,402	\$ 450	\$ 8,852	\$ 1,153,050	\$ 178,325	\$ 1,331,375	\$ 498,835	\$ -	\$ 498,835
2023	\$ 726,259	\$ 130,935	\$ 857,194	\$ 130,604	\$ 65,243	\$ 195,847	\$ 595,655	\$ 245,692	\$ 841,347	\$ 8,537	\$ 739	\$ 9,276	\$ 1,172,073	\$ 252,498	\$ 1,424,571	\$ 520,533	\$ -	\$ 520,533
2024	\$ 689,052	\$ 397,670	\$ 1,086,722	\$ 125,547	\$ 83,487	\$ 209,034	\$ 563,505	\$ 314,183	\$ 877,688	\$ 8,673	\$ 951	\$ 9,624	\$ 1,201,398	\$ 322,893	\$ 1,524,291	\$ 534,733	\$ -	\$ 534,733
2025	\$ 660,542	\$ 482,318	\$ 1,142,860	\$ 121,574	\$ 101,314	\$ 222,888	\$ 538,968	\$ 381,004	\$ 919,972	\$ 8,709	\$ 1,275	\$ 9,984	\$ 1,239,303	\$ 391,688	\$ 1,630,991	\$ 549,323	\$ -	\$ 549,323
2026	\$ 640,887	\$ 564,874	\$ 1,205,761	\$ 118,805	\$ 118,720	\$ 237,525	\$ 522,082	\$ 446,154	\$ 968,236	\$ 8,844	\$ 1,512	\$ 10,356	\$ 1,286,476	\$ 458,684	\$ 1,745,160	\$ 566,034	\$ -	\$ 566,034
2027	\$ 629,503	\$ 643,726	\$ 1,273,229	\$ 117,441	\$ 135,362	\$ 252,803	\$ 512,062	\$ 508,364	\$ 1,020,426	\$ 8,980	\$ 1,661	\$ 10,641	\$ 1,344,742	\$ 522,579	\$ 1,867,321	\$ 581,474	\$ -	\$ 581,474
2028	\$ 621,767	\$ 718,322	\$ 1,340,089	\$ 116,847	\$ 151,117	\$ 267,964	\$ 504,920	\$ 567,205	\$ 1,072,125	\$ 9,117	\$ 1,817	\$ 10,934	\$ 1,415,004	\$ 583,029	\$ 1,998,033	\$ 601,344	\$ -	\$ 601,344
2029	\$ 600,948	\$ 796,978	\$ 1,397,926	\$ 114,116	\$ 167,739	\$ 281,855	\$ 486,832	\$ 629,239	\$ 1,116,071	\$ 9,142	\$ 2,093	\$ 11,235	\$ 1,491,024	\$ 646,871	\$ 2,137,895	\$ 620,162	\$ -	\$ 620,162
2030	\$ 571,863	\$ 891,668	\$ 1,463,531	\$ 110,070	\$ 187,765	\$ 297,835	\$ 461,793	\$ 703,903	\$ 1,165,696	\$ 9,277	\$ 2,376	\$ 11,653	\$ 1,563,886	\$ 723,662	\$ 2,287,548	\$ 637,075	\$ -	\$ 637,075
2031	\$ 540,079	\$ 987,974	\$ 1,528,053	\$ 105,267	\$ 208,143	\$ 313,410	\$ 434,812	\$ 779,831	\$ 1,214,643	\$ 9,294	\$ 2,679	\$ 11,973	\$ 1,645,908	\$ 801,768	\$ 2,447,676	\$ 654,453	\$ -	\$ 654,453
2032	\$ 489,303	\$ 1,097,579	\$ 1,586,882	\$ 97,083	\$ 231,353	\$ 328,436	\$ 392,220	\$ 866,226	\$ 1,258,446	\$ 9,550	\$ 2,867	\$ 12,417	\$ 1,728,528	\$ 890,485	\$ 2,619,013	\$ 672,309	\$ -	\$ 672,309
2033	\$ 439,566	\$ 1,220,367	\$ 1,659,933	\$ 88,661	\$ 257,376	\$ 346,037	\$ 350,905	\$ 962,991	\$ 1,313,896	\$ 9,561	\$ 3,197	\$ 12,758	\$ 1,812,375	\$ 989,969	\$ 2,802,344	\$ 690,655	\$ -	\$ 690,655
2034	\$ 386,243	\$ 1,346,094	\$ 1,732,337	\$ 79,557	\$ 284,034	\$ 363,591	\$ 306,686	\$ 1,062,060	\$ 1,368,746	\$ 9,695	\$ 3,535	\$ 13,230	\$ 1,906,685	\$ 1,091,823	\$ 2,998,508	\$ 713,930	\$ -	\$ 713,930
2035	\$ 339,180	\$ 1,477,930	\$ 1,817,110	\$ 71,285	\$ 312,002	\$ 383,287	\$ 267,895	\$ 1,166,928	\$ 1,433,823	\$ 9,829	\$ 3,765	\$ 13,594	\$ 2,009,918	\$ 1,198,486	\$ 3,208,404	\$ 736,926	\$ -	\$ 736,926
2036	\$ 279,590	\$ 1,606,010	\$ 1,885,600	\$ 60,209	\$ 339,182	\$ 399,391	\$ 219,381	\$ 1,266,828	\$ 1,486,209	\$ 9,826	\$ 4,142	\$ 13,968	\$ 2,130,738	\$ 1,302,254	\$ 3,432,992	\$ 772,730	\$ -	\$ 772,730
2037	\$ 225,858	\$ 1,753,530	\$ 1,979,388	\$ 49,871	\$ 370,510	\$ 420,381	\$ 175,987	\$ 1,383,020	\$ 1,559,007	\$ 9,956	\$ 4,396	\$ 14,352	\$ 2,251,731	\$ 1,421,570	\$ 3,673,301	\$ 795,746	\$ -	\$ 795,746
2038	\$ 189,150	\$ 1,893,587	\$ 2,082,737	\$ 42,855	\$ 400,256	\$ 443,111	\$ 146,295	\$ 1,493,331	\$ 1,639,626	\$ 9,942	\$ 4,805	\$ 14,747	\$ 2,395,418	\$ 1,535,014	\$ 3,930,432	\$ 817,435	\$ -	\$ 817,435
2039	\$ 166,709	\$ 2,027,206	\$ 2,193,915	\$ 38,691	\$ 428,637	\$ 467,328	\$ 128,018	\$ 1,598,569	\$ 1,726,587	\$ 9,919	\$ 5,234	\$ 15,153	\$ 2,562,282	\$ 1,643,280	\$ 4,205,562	\$ 839,721	\$ -	\$ 839,721
2040	\$ 151,687	\$ 2,158,240	\$ 2,309,927	\$ 35,975	\$ 456,471	\$ 492,446	\$ 115,712	\$ 1,701,769	\$ 1,817,481	\$ 10,040	\$ 5,387	\$ 15,427	\$ 2,750,770	\$ 1,749,181	\$ 4,499,951	\$ 862,620	\$ -	\$ 862,620
2041	\$ 141,775	\$ 2,289,229	\$ 2,431,004	\$ 34,218	\$ 484,298	\$ 518,516	\$ 107,557	\$ 1,804,931	\$ 1,912,488	\$ 10,003	\$ 5,701	\$ 15,704	\$ 2,959,743	\$ 1,855,205	\$ 4,814,948	\$ 908,176	\$ -	\$ 908,176
2042	\$ 134,651	\$ 2,412,378	\$ 2,547,029	\$ 33,028	\$ 510,564	\$ 543,592	\$ 101,623	\$ 1,901,814	\$ 2,003,437	\$ 9,957	\$ 6,028	\$ 15,985	\$ 3,197,187	\$ 1,954,807	\$ 5,151,994	\$ 932,956	\$ -	\$ 932,956
2043	\$ 130,137	\$ 2,526,244	\$ 2,656,381	\$ 32,321	\$ 535,026	\$ 567,347	\$ 97,816	\$ 1,991,218	\$ 2,089,034	\$ 10,066	\$ 6,204	\$ 16,270	\$ 3,466,039	\$ 2,046,595	\$ 5,512,634	\$ 971,698	\$ -	\$ 971,698
2044	\$ 116,300	\$ 2,615,299	\$ 2,731,599	\$ 29,253	\$ 554,384	\$ 583,637	\$ 87,047	\$ 2,060,915	\$ 2,147,962	\$ 10,173	\$ 6,544	\$ 16,717	\$ 1,957,301	\$ 2,118,353	\$ 4,075,654	\$ -	\$ -	
2045	\$ 99,047	\$ 2,713,209	\$ 2,812,256	\$ 25,176	\$ 575,658	\$ 600,834	\$ 73,871	\$ 2,137,551	\$ 2,211,422	\$ 9,930	\$ 7,247	\$ 17,177	\$ 85,625	\$ 2,197,585	\$ 2,283,210	\$ -	\$ -	
2046	\$ 90,259	\$ 2,813,242	\$ 2,903,501	\$ 23,191	\$ 597,380	\$ 620,571	\$ 67,068	\$ 2,215,862	\$ 2,282,930	\$ 10,024	\$ 7,793	\$ 17,817	\$ 78,748	\$ 2,278,376	\$ 2,357,124	\$ -	\$ -	
2047	\$ 70,449	\$ 2,916,632	\$ 2,987,081	\$ 18,189	\$ 619,831	\$ 638,020	\$ 52,260	\$ 2,296,801	\$ 2,349,061	\$ 9,932	\$ 8,375	\$ 18,307	\$ 63,482	\$ 2,361,896	\$ 2,425,378	\$ -	\$ -	
2048	\$ 45,498	\$ 3,039,229	\$ 3,084,727	\$ 11,714	\$ 646,386	\$ 658,100	\$ 33,784	\$ 2,392,843	\$ 2,426,627	\$ 10,016	\$ 8,794	\$ 18,810	\$ 44,635	\$ 2,460,728	\$ 2,505,363	\$ -	\$ -	
2049	\$ 33,006	\$ 3,158,886	\$ 3,191,892	\$ 8,497	\$ 672,297	\$ 680,794	\$ 24,509	\$ 2,486,589	\$ 2,511,098	\$ 9,903	\$ 9,607	\$ 19,510	\$ 35,017	\$ 2,557,603	\$ 2,592,620	\$ -	\$ -	
2050	\$ 23,811	\$ 3,281,679	\$ 3,305,490	\$ 6,132	\$ 698,861	\$ 704,993	\$ 17,679	\$ 2,582,818	\$ 2,600,497	\$ 9,776	\$ 10,271	\$ 20,047	\$ 27,891	\$ 2,656,872	\$ 2,684,763	\$ -	\$ -	
2051	\$ 16,986	\$ 3,408,433	\$ 3,425,419	\$ 4,378	\$ 726,268	\$ 730,646	\$ 12,608	\$ 2,682,165	\$ 2,694,773	\$ 9,840	\$ 10,758	\$ 20,598	\$ 22,760	\$ 2,759,159	\$ 2,781,919	\$ -	\$ -	
2052	\$ 12,169	\$ 3,537,811	\$ 3,549,980	\$ 3,139	\$ 754,247	\$ 757,386	\$ 9,030	\$ 2,783,564	\$ 2,792,594	\$ 9,689	\$ 11,475	\$ 21,164	\$ 18,942	\$ 2,863,779	\$ 2,882,721	\$ -	\$ -	
2053	\$ 8,528	\$ 3,668,552	\$ 3,677,080	\$ 2,201	\$ 782,523	\$ 784,724	\$ 6,327	\$ 2,888,029	\$ 2,892,356	\$ 9,739	\$ 12,007	\$ 21,746	\$ 16,222	\$ 2,969,307	\$ 2,985,529	\$ -	\$ -	
2054	\$ 4,630	\$ 3,802,029	\$ 3,806,659	\$ 1,210	\$ 811,376	\$ 812,586	\$ 3,420	\$ 2,990,653	\$ 2,994,073	\$ 9,562	\$ 12,782	\$ 22,344	\$ 13,067	\$ 3,077,289	\$ 3,090,356	\$ -	\$ -	
2055	\$ 3,108	\$ 3,940,872	\$ 3,943,980	\$ 812	\$ 841,378	\$ 842,190	\$ 2,296	\$ 3,099,494	\$ 3,101,790	\$ 9,596	\$ 13,362	\$ 22,958	\$ 11,949	\$ 3,189,398	\$ 3,201,347	\$ -	\$ -	
2056	\$ 2,085	\$ 4,083,317	\$ 4,085,402	\$ 545	\$ 872,138	\$ 872,683	\$ 1,540	\$ 3,211,179	\$ 3,212,719	\$ 9,390	\$ 14,199	\$ 23,589	\$ 10,969	\$ 3,304,678	\$ 3,315,647	\$ -	\$ -	
2057	\$ -	\$ 4,232,164	\$ 4,232,164	\$ -	\$ 904,242	\$ 904,242	\$ -	\$ 3,327,922	\$ 3,327,922	\$ 9,407	\$ 15,057	\$ 24,464	\$ 9,407	\$ 3,425,162	\$ 3,434,569	\$ -	\$ -	
2058	\$ -	\$ 4,387,111	\$ 4,387,111	\$ -	\$ 937,643	\$ 937,643	\$ -	\$ 3,449,468	\$ 3,449,468	\$ 9,170	\$ 15,967	\$ 25,137	\$ 9,170	\$ 3,550,620	\$ 3,559,790	\$ -	\$ -	
2059	\$ -	\$ 4,549,910	\$ 4,549,910	\$ -	\$ 972,704	\$ 972,704	\$ -	\$ 3,577,206	\$ 3,577,206	\$ 9,168	\$ 16,660	\$ 25,828	\$ 9,169	\$ 3,682,205	\$ 3,691,374	\$ -	\$ -	
2060	\$ -	\$ 4,718,739	\$ 4,718,739	\$ -	\$ 1,009,034	\$ 1,009,034	\$ -	\$ 3,709,705	\$ 3,709,705	\$ 8,897	\$ 17,641	\$ 26,538	\$ 8,897	\$ 3,818,957	\$ 3,827,854	\$ -	\$ -	

City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Projection of Pension Plan's Fiduciary Net Position

Fiscal Year	Actuarial Accrued Liability (BOY)			Closed Group Asset Projection						
	Current Members	Future Members	Total	Fiduciary Net Position (BOY)	Funded Ratio (BOY)	Projected EEC Contributions (MOY)	Projected ER Contrib + Premium Tax (MOY)	Projected BP (MOY)	Projected Admin Expenses (MOY)	Projected Investment Earnings
2020	\$ 36,576,574	\$ -	\$ 36,576,574	\$ 9,953,711	27.21%	\$ 158,362	\$ 1,641,710	\$ 1,444,001	\$ 8,136	\$ 506,278
2021	\$ 37,883,860	\$ -	\$ 37,883,860	\$ 10,807,924	28.53%	\$ 147,249	\$ 1,655,143	\$ 1,588,751	\$ 8,359	\$ 545,466
2022	\$ 39,013,554	\$ 107,670	\$ 39,121,224	\$ 11,558,672	29.63%	\$ 138,356	\$ 1,651,885	\$ 1,705,267	\$ 8,402	\$ 579,825
2023	\$ 40,013,315	\$ 340,506	\$ 40,353,821	\$ 12,215,070	30.53%	\$ 133,829	\$ 1,692,606	\$ 1,786,072	\$ 8,537	\$ 611,539
2024	\$ 40,946,374	\$ 677,354	\$ 41,623,728	\$ 12,858,434	31.40%	\$ 128,647	\$ 1,736,131	\$ 1,876,486	\$ 8,673	\$ 642,418
2025	\$ 41,794,371	\$ 1,117,803	\$ 42,912,174	\$ 13,480,471	32.25%	\$ 124,576	\$ 1,788,626	\$ 1,960,261	\$ 8,709	\$ 672,646
2026	\$ 42,568,989	\$ 1,663,833	\$ 44,232,822	\$ 14,097,350	33.12%	\$ 121,739	\$ 1,852,510	\$ 2,023,808	\$ 8,844	\$ 703,425
2027	\$ 43,296,584	\$ 2,317,756	\$ 45,614,340	\$ 14,742,372	34.05%	\$ 120,341	\$ 1,926,216	\$ 2,072,651	\$ 8,980	\$ 736,252
2028	\$ 43,998,556	\$ 3,080,305	\$ 47,078,861	\$ 15,443,550	35.10%	\$ 119,733	\$ 2,016,348	\$ 2,111,328	\$ 9,117	\$ 772,564
2029	\$ 44,687,872	\$ 3,952,451	\$ 48,640,323	\$ 16,231,749	36.32%	\$ 116,934	\$ 2,111,186	\$ 2,182,221	\$ 9,142	\$ 812,495
2030	\$ 45,317,150	\$ 4,944,275	\$ 50,261,425	\$ 17,081,001	37.69%	\$ 112,788	\$ 2,200,961	\$ 2,251,086	\$ 9,277	\$ 855,368
2031	\$ 45,876,787	\$ 6,078,934	\$ 51,955,721	\$ 17,989,755	39.21%	\$ 107,867	\$ 2,300,361	\$ 2,322,446	\$ 9,294	\$ 901,377
2032	\$ 46,357,910	\$ 7,365,230	\$ 53,723,140	\$ 18,967,620	40.92%	\$ 99,480	\$ 2,400,837	\$ 2,420,279	\$ 9,550	\$ 950,122
2033	\$ 46,709,526	\$ 8,823,042	\$ 55,532,568	\$ 19,988,231	42.79%	\$ 90,850	\$ 2,503,030	\$ 2,513,579	\$ 9,561	\$ 1,001,158
2034	\$ 46,930,895	\$ 10,472,950	\$ 57,403,845	\$ 21,060,129	44.87%	\$ 81,522	\$ 2,620,615	\$ 2,617,257	\$ 9,695	\$ 1,054,863
2035	\$ 47,001,105	\$ 12,326,026	\$ 59,327,131	\$ 22,190,177	47.21%	\$ 73,045	\$ 2,746,844	\$ 2,699,852	\$ 9,829	\$ 1,112,230
2036	\$ 46,940,774	\$ 14,397,158	\$ 61,337,932	\$ 23,412,615	49.88%	\$ 61,696	\$ 2,903,468	\$ 2,799,922	\$ 9,826	\$ 1,174,469
2037	\$ 46,712,316	\$ 16,691,582	\$ 63,403,898	\$ 24,742,500	52.97%	\$ 51,103	\$ 3,047,477	\$ 2,892,482	\$ 9,956	\$ 1,241,969
2038	\$ 46,321,171	\$ 19,239,103	\$ 65,560,274	\$ 26,180,611	56.52%	\$ 43,913	\$ 3,212,853	\$ 2,944,047	\$ 9,942	\$ 1,316,508
2039	\$ 45,819,087	\$ 22,042,796	\$ 67,861,883	\$ 27,799,896	60.67%	\$ 39,646	\$ 3,402,003	\$ 2,967,438	\$ 9,919	\$ 1,401,461
2040	\$ 45,244,367	\$ 25,107,172	\$ 70,351,539	\$ 29,665,650	65.57%	\$ 36,863	\$ 3,613,390	\$ 2,976,577	\$ 10,040	\$ 1,499,671
2041	\$ 44,615,773	\$ 28,441,056	\$ 73,056,829	\$ 31,828,956	71.34%	\$ 35,063	\$ 3,867,919	\$ 2,973,717	\$ 10,003	\$ 1,614,149
2042	\$ 43,948,272	\$ 32,066,223	\$ 76,014,495	\$ 34,362,367	78.19%	\$ 33,844	\$ 4,130,143	\$ 2,962,644	\$ 9,957	\$ 1,747,540
2043	\$ 43,251,262	\$ 35,973,280	\$ 79,224,542	\$ 37,301,293	86.24%	\$ 33,119	\$ 4,437,737	\$ 2,944,074	\$ 10,066	\$ 1,902,520
2044	\$ 42,533,691	\$ 40,132,095	\$ 82,665,786	\$ 40,720,529	95.74%	\$ 29,975	\$ 1,957,301	\$ 2,951,783	\$ 10,173	\$ 2,011,957
2045	\$ 41,757,813	\$ 44,458,523	\$ 86,216,336	\$ 41,757,805	100.00%	\$ 25,798	\$ 85,625	\$ 2,950,153	\$ 9,930	\$ 2,017,542
2046	\$ 40,926,696	\$ 48,909,234	\$ 89,835,930	\$ 40,926,687	100.00%	\$ 23,764	\$ 78,748	\$ 2,930,915	\$ 10,024	\$ 1,976,239
2047	\$ 40,064,509	\$ 53,476,085	\$ 93,540,594	\$ 40,064,499	100.00%	\$ 18,638	\$ 63,482	\$ 2,951,072	\$ 9,932	\$ 1,932,131
2048	\$ 39,117,757	\$ 58,160,583	\$ 97,278,340	\$ 39,117,747	100.00%	\$ 12,003	\$ 44,635	\$ 2,957,914	\$ 10,016	\$ 1,883,993
2049	\$ 38,090,458	\$ 62,979,819	\$ 101,070,277	\$ 38,090,447	100.00%	\$ 8,707	\$ 35,017	\$ 2,937,974	\$ 9,903	\$ 1,832,804
2050	\$ 37,019,110	\$ 67,933,261	\$ 104,952,371	\$ 37,019,099	100.00%	\$ 6,283	\$ 27,891	\$ 2,908,928	\$ 9,776	\$ 1,779,721
2051	\$ 35,914,303	\$ 73,030,763	\$ 108,945,066	\$ 35,914,290	100.00%	\$ 4,486	\$ 22,760	\$ 2,872,698	\$ 9,840	\$ 1,725,203
2052	\$ 34,784,214	\$ 78,282,147	\$ 113,066,361	\$ 34,784,200	100.00%	\$ 3,217	\$ 18,942	\$ 2,830,137	\$ 9,689	\$ 1,669,628
2053	\$ 33,636,175	\$ 83,693,774	\$ 117,329,949	\$ 33,636,161	100.00%	\$ 2,255	\$ 16,222	\$ 2,782,996	\$ 9,739	\$ 1,613,298
2054	\$ 32,475,216	\$ 89,264,773	\$ 121,739,989	\$ 32,475,201	100.00%	\$ 1,240	\$ 13,067	\$ 2,734,077	\$ 9,562	\$ 1,556,359
2055	\$ 31,302,243	\$ 94,991,911	\$ 126,294,154	\$ 31,302,228	100.00%	\$ 832	\$ 11,949	\$ 2,678,747	\$ 9,596	\$ 1,499,038
2056	\$ 30,125,720	\$ 100,878,686	\$ 131,004,406	\$ 30,125,704	100.00%	\$ 558	\$ 10,969	\$ 2,620,648	\$ 9,390	\$ 1,441,621
2057	\$ 28,948,830	\$ 106,921,980	\$ 135,870,810	\$ 28,948,814	100.00%	\$ -	\$ 9,407	\$ 2,562,864	\$ 9,407	\$ 1,384,151
2058	\$ 27,770,117	\$ 113,127,267	\$ 140,897,384	\$ 27,770,100	100.00%	\$ -	\$ 9,170	\$ 2,499,196	\$ 9,170	\$ 1,326,787
2059	\$ 26,597,709	\$ 119,498,289	\$ 146,095,998	\$ 26,597,691	100.00%	\$ -	\$ 9,169	\$ 2,434,044	\$ 9,168	\$ 1,269,776
2060	\$ 25,433,442	\$ 126,044,254	\$ 151,477,696	\$ 25,433,424	100.00%	\$ -	\$ 8,897	\$ 2,367,317	\$ 8,897	\$ 1,213,210

City of Clarksburg, West Virginia Firemen's Pension and Relief Fund
 Actuarial Information to Include in the Financial Statements
 for the June 30, 2020 Measurement Date



Projection of Pension Plan's Fiduciary Net Position

Calculation of Single Equivalent Rate					
Fiscal Year	"Funded" Portion of BP	"Unfunded" Portion of BP	PV of "Funded" BP	PV of "Unfunded" BP	PV of BP Using a Single DR
2020	\$ 1,444,001	\$ -	\$ 1,409,201	\$ -	\$ 1,409,201
2021	\$ 1,588,751	\$ -	\$ 1,476,631	\$ -	\$ 1,476,631
2022	\$ 1,705,267	\$ -	\$ 1,509,451	\$ -	\$ 1,509,451
2023	\$ 1,786,072	\$ -	\$ 1,505,693	\$ -	\$ 1,505,693
2024	\$ 1,876,486	\$ -	\$ 1,506,584	\$ -	\$ 1,506,584
2025	\$ 1,960,261	\$ -	\$ 1,498,900	\$ -	\$ 1,498,900
2026	\$ 2,023,808	\$ -	\$ 1,473,801	\$ -	\$ 1,473,801
2027	\$ 2,072,651	\$ -	\$ 1,437,495	\$ -	\$ 1,437,495
2028	\$ 2,111,328	\$ -	\$ 1,394,590	\$ -	\$ 1,394,590
2029	\$ 2,182,221	\$ -	\$ 1,372,778	\$ -	\$ 1,372,778
2030	\$ 2,251,086	\$ -	\$ 1,348,666	\$ -	\$ 1,348,666
2031	\$ 2,322,446	\$ -	\$ 1,325,161	\$ -	\$ 1,325,161
2032	\$ 2,420,279	\$ -	\$ 1,315,222	\$ -	\$ 1,315,222
2033	\$ 2,513,579	\$ -	\$ 1,300,879	\$ -	\$ 1,300,879
2034	\$ 2,617,257	\$ -	\$ 1,290,035	\$ -	\$ 1,290,035
2035	\$ 2,699,852	\$ -	\$ 1,267,377	\$ -	\$ 1,267,377
2036	\$ 2,799,922	\$ -	\$ 1,251,764	\$ -	\$ 1,251,764
2037	\$ 2,892,482	\$ -	\$ 1,231,567	\$ -	\$ 1,231,567
2038	\$ 2,944,047	\$ -	\$ 1,193,831	\$ -	\$ 1,193,831
2039	\$ 2,967,438	\$ -	\$ 1,146,015	\$ -	\$ 1,146,015
2040	\$ 2,976,577	\$ -	\$ 1,094,804	\$ -	\$ 1,094,804
2041	\$ 2,973,717	\$ -	\$ 1,041,669	\$ -	\$ 1,041,669
2042	\$ 2,962,644	\$ -	\$ 988,372	\$ -	\$ 988,372
2043	\$ 2,944,074	\$ -	\$ 935,406	\$ -	\$ 935,406
2044	\$ 2,951,783	\$ -	\$ 893,196	\$ -	\$ 893,196
2045	\$ 2,950,153	\$ -	\$ 850,193	\$ -	\$ 850,193
2046	\$ 2,930,915	\$ -	\$ 804,427	\$ -	\$ 804,427
2047	\$ 2,951,072	\$ -	\$ 771,390	\$ -	\$ 771,390
2048	\$ 2,957,914	\$ -	\$ 736,361	\$ -	\$ 736,361
2049	\$ 2,937,974	\$ -	\$ 696,568	\$ -	\$ 696,568
2050	\$ 2,908,928	\$ -	\$ 656,840	\$ -	\$ 656,840
2051	\$ 2,872,698	\$ -	\$ 617,770	\$ -	\$ 617,770
2052	\$ 2,830,137	\$ -	\$ 579,636	\$ -	\$ 579,636
2053	\$ 2,782,996	\$ -	\$ 542,839	\$ -	\$ 542,839
2054	\$ 2,734,077	\$ -	\$ 507,902	\$ -	\$ 507,902
2055	\$ 2,678,747	\$ -	\$ 473,927	\$ -	\$ 473,927
2056	\$ 2,620,648	\$ -	\$ 441,570	\$ -	\$ 441,570
2057	\$ 2,562,864	\$ -	\$ 411,270	\$ -	\$ 411,270
2058	\$ 2,499,196	\$ -	\$ 381,955	\$ -	\$ 381,955
2059	\$ 2,434,044	\$ -	\$ 354,284	\$ -	\$ 354,284
2060	\$ 2,367,317	\$ -	\$ 328,163	\$ -	\$ 328,163