



**Municipal Pensions  
Oversight Board**

**City of Williamson  
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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January 6, 2021

Ms. Cheri Horton  
City Clerk  
City of Williamson  
142 East 4th Avenue  
Williamson, WV 25661

Chief Joey Carey  
Pension Board Secretary  
City of Williamson  
Firemen's Pension and Relief Fund

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

Dear Cheri,

The following report contains the GASB 67 and GASB 68 actuarial information for the City of Williamson 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. The discount rate assumption may have changed if a blended rate was used for GASB purposes. 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 ended June 30, 2020 is contained in the July 1, 2018 actuarial valuation report.

Based on the information provided by the Municipal Pensions Oversight Board (MPOB), we understand that the plan sponsor has not made the entire policy contribution in recent years. For this reason, the projections to determine the blended discount rate assume level dollar contributions equal to the average of the five most recent employer contributions for all future years until the plan is fully funded.

The included calculations are based on the valuation discount rate of 5.50%. The plan's expected gross rate of investment return of 5.50% 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. The discount rate did not change as a result of blending.

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.

### 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 Williamson, 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	\$ 4,546,854
Plan fiduciary net position	(1,669,415)
Employer's net pension liability	<u>\$ 2,877,439</u>
Plan fiduciary net position as a percentage of the total pension liability	36.72%

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)	5.50%
Single discount rate (EOY)	5.50%
Investment rate of return (BOY)	5.50%, net of pension plan investment expense, including inflation
Investment rate of return (EOY)	5.50%, 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	2055
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 4.50%	Current Discount Rate 5.50%	1% Increase 6.50%
Employer's net pension liability	\$ 3,589,421	\$ 2,877,439	\$ 2,312,670

City of Williamson, 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)
<b>Balances at 6/30/19</b>	\$ 4,559,606	\$ 1,667,847	\$ 2,891,759
<b>Changes for the year:</b>			
Service cost	53,942		53,942
Interest	243,905		243,905
Changes of benefit terms	-		-
Differences between expected and actual experience	(60,665)		(60,665)
Changes of assumptions	-		-
Contributions - employer (including Premium Tax Allocation)		198,328	(198,328)
Contributions - member		8,069	(8,069)
Net investment income*		45,105	(45,105)
Benefit payments, including refunds of member contributions	(249,934)	(249,934)	-
Administrative expense		-	-
Other		-	-
<b>Net Changes</b>	<u>(12,752)</u>	<u>1,568</u>	<u>(14,320)</u>
<b>Balances at 6/30/20</b>	<u>\$ 4,546,854</u>	<u>\$ 1,669,415</u>	<u>\$ 2,877,439</u>
Return on Investments		2.7%	

\*The Plan Fiduciary Net Position as of July 1, 2019 provided to Bolton by the City does not match the Plan Fiduciary Net Position as of June 30, 2019 as provided in the prior GASB report. The difference of \$831 has been included as investment income for the measurement period ending June 30, 2020.

City of Williamson, 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	\$ 53,942
B	Interest on the total pension liability	243,905
A	Changes of benefit terms	-
C	Differences between expected and actual experience	(5,197)
C	Changes of assumptions	7,390
A	Employee contributions	(8,069)
D	Projected earnings on pension plan investments	(90,535)
C	Differences between expected and actual earnings on plan investments	46,641
A	Pension plan administrative expense	-
A	Other changes in fiduciary net position	-
<b>Total Pension Expense</b>		<b>\$ 248,077</b>

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	\$ 4,559,606	100%	5.50%	\$ 250,778
Service cost (End of Year)	53,942	0%	5.50%	-
Benefit payments, including refunds of employee contributions	(249,934)	50%	5.50%	(6,873)
<b>Total interest on the total pension liability</b>				<b>\$ 243,905</b>

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	\$ 1,667,847	100%	5.50%	\$ 91,732
Employer contributions	198,328	50%	5.50%	5,454
Employee contributions	8,069	50%	5.50%	222
Benefit payments, including refunds of employee contributions	(249,934)	50%	5.50%	(6,873)
Administrative expense and other	-	50%	5.50%	-
<b>Total Projected Earnings</b>				<b>\$ 90,535</b>

City of Williamson, 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	\$ 131,858	\$ 85,236
Changes of assumptions	157,868	71,544
Net difference between projected and actual earnings on pension plan investments	73,819	-
<b>Total</b>	<b>\$ 363,545</b>	<b>\$ 156,780</b>

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

<b>Year ended June 30:</b>	
2021	\$ 29,965
2022	157,649
2023	10,065
2024	9,086
2025	-
Thereafter	-



City of Williamson, 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	\$ 53,942	\$ 62,114	\$ 57,943	\$ 66,072	\$ 40,155	\$ 61,379	\$ 68,966	\$ -	\$ -	\$ -
Interest	243,905	228,236	229,630	227,149	220,926	238,152	243,779	-	-	-
Changes of benefit terms	-	-	-	-	-	-	-	-	-	-
Differences between expected and actual experience	(60,665)	263,716	(145,664)	(66,329)	(334,044)	(118,994)	-	-	-	-
Changes of assumptions	-	315,736	(286,176)	-	457,322	-	-	-	-	-
Benefit payments, including refunds of member contributions	(249,934)	(228,256)	(225,554)	(204,577)	(229,709)	(254,266)	(244,219)	-	-	-
Net change in total pension liability	(12,752)	641,546	(369,821)	22,315	154,650	(73,729)	68,526	-	-	-
Total pension liability - beginning	4,559,606	3,918,060	4,287,881	4,265,566	4,110,916	4,184,645	4,116,119	-	-	-
<b>Total pension liability - ending (a)</b>	<b>\$ 4,546,854</b>	<b>\$ 4,559,606</b>	<b>\$ 3,918,060</b>	<b>\$ 4,287,881</b>	<b>\$ 4,265,566</b>	<b>\$ 4,110,916</b>	<b>\$ 4,184,645</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Plan fiduciary net position	2020	2019	2018	2017	2016	2015	2014	2013	2012	2011
Contributions - employer (including Premium Tax Allocation)	\$ 198,328	\$ 149,000	\$ 142,476	\$ 231,041	\$ 251,799	\$ 185,460	\$ 182,789	\$ -	\$ -	\$ -
Contributions - member	8,069	14,252	16,110	15,529	14,529	13,047	17,392	-	-	-
Net investment income	45,105	84,015	(12,997)	140,041	(25,037)	35,114	166,998	-	-	-
Benefit payments, including refunds of member contributions	(249,934)	(228,256)	(225,554)	(204,577)	(229,709)	(254,266)	(244,219)	-	-	-
Administrative expense	-	-	-	-	(14,269)	(20)	(226)	-	-	-
Other	-	(90)	-	-	-	-	-	-	-	-
Net change in plan fiduciary net position	\$ 1,568	\$ 18,921	\$ (79,965)	\$ 182,034	\$ (2,687)	\$ (20,665)	\$ 122,734	\$ -	\$ -	\$ -
Plan fiduciary net position - beginning	1,667,847	1,648,926	1,728,891	1,546,857	1,653,426	1,674,091	1,551,357	-	-	-
<b>Plan fiduciary net position - ending (b)</b>	<b>\$ 1,669,415</b>	<b>\$ 1,667,847</b>	<b>\$ 1,648,926</b>	<b>\$ 1,728,891</b>	<b>\$ 1,650,739</b>	<b>\$ 1,653,426</b>	<b>\$ 1,674,091</b>	<b>\$ -</b>	<b>\$ -</b>	<b>\$ -</b>
Employer's net pension liability - ending (a)-(b)	<u>\$ 2,877,439</u>	<u>\$ 2,891,759</u>	<u>\$ 2,269,134</u>	<u>\$ 2,558,990</u>	<u>\$ 2,614,827</u>	<u>\$ 2,457,490</u>	<u>\$ 2,510,554</u>	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Plan fiduciary net position as a percentage of the total pension liability	36.72%	36.58%	42.09%	40.32%	38.70%	40.22%	40.01%	0.00%	0.00%	0.00%
Covered payroll	\$ 135,042	\$ 144,687	\$ 154,122	\$ 164,833	\$ 122,488	\$ 218,605	\$ 249,312	\$ -	\$ -	\$ -
Employer's net pension liability as a percentage of covered payroll	2130.77%	1998.63%	1472.30%	1552.47%	2134.76%	1124.17%	1006.99%	0.00%	0.00%	0.00%
Expected average remaining service years of all participants	3.00	4.00	4.00	4.58	3.39	4.32	-	-	-	-

**Notes to Schedule:**

Benefit changes: There were no changes for FY2020.

Changes of assumptions: There were no changes for FY2020.

\*The Plan Fiduciary Net Position as of July 1, 2019 provided to Bolton by the City does not match the Plan Fiduciary Net Position as of June 30, 2019 as provided in the prior GASB report. The difference of \$831 has been included as investment income for the measurement period ending June 30, 2020.

\*The Plan Fiduciary Net Position as of July 1, 2017 provided to Bolton by the City does match the Plan Fiduciary Net Position as of June 30, 2017 as provided in the prior GASB report. The difference of (\$106,352) has been included as investment income for the measurement period ending June 30, 2018.

\*The Plan Fiduciary Net Position as of June 30, 2016 includes \$103,882 which is excluded from the Plan Fiduciary Net Position as of July 1, 2016.

City of Williamson, 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	\$ 236,979	\$ 191,713	\$ 161,643	\$ 182,768	\$ 167,681	\$ 163,947	\$ 174,161	\$ 199,991	\$ -	\$ -
Contributions in relation to the actuarially determined contribution										
Employer provided	130,000	149,000	68,697	157,262	153,163	118,505	120,820	112,916	-	-
State provided	68,328	-	73,779	73,779	98,696	66,955	61,969	91,766	-	-
Contribution deficiency (excess)	\$ 38,651	\$ 42,713	\$ 19,167	\$ (48,273)	\$ (84,178)	\$ (21,513)	\$ (8,628)	\$ (4,691)	\$ -	\$ -
Covered payroll	\$ 135,042	\$ 144,687	\$ 154,122	\$ 164,833	\$ 122,488	\$ 218,605	\$ 249,312	\$ 238,918	\$ -	\$ -
Contributions as a percentage of covered employee payroll	146.86%	102.98%	92.44%	140.17%	205.62%	84.84%	73.32%	85.67%	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	5.50%, 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 Williamson, 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	\$ 124,913	5	\$ 24,983	24,983	24,983	24,983	24,981				
2017	(56,734)	5		\$ (11,347)	(11,347)	(11,347)	(11,347)	(11,346)			
2018	114,720	5			\$ 22,944	22,944	22,944	22,944	22,944		
2019	4,887	5				\$ 977	977	977	977	979	
2020	45,430	5					\$ 9,086	9,086	9,086	9,086	9,086
Net increase (decrease) in pension expense							\$ 46,641	\$ 21,661	\$ 33,007	\$ 10,065	\$ 9,086

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	\$ 124,913	\$ -	\$ 124,913	\$ -	\$ -
2017	-	56,734	45,388	-	11,346
2018	114,720	-	68,832	45,888	-
2019	4,887	-	1,954	2,933	-
2020	45,430	-	9,086	36,344	-
				\$ 85,165	\$ 11,346

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	(118,994)	4.315159						\$ (27,576)	(27,576)	(27,576)	(27,576)	(8,690)							
2016	(334,044)	3.393531						\$ (98,436)	(98,436)	(98,436)	(38,736)								
2017	(66,329)	4.578077							\$ (14,488)	(14,488)	(14,488)	(14,488)	(8,377)						
2018	(145,664)	4.000000								\$ (36,416)	(36,416)	(36,416)	(36,416)	(36,416)					
2019	263,716	4.000000									\$ 65,929	65,929	65,929	65,929	65,929				
2020	(60,665)	3.000000										\$ (20,222)	(20,222)	(20,222)	(20,222)				
Net increase (decrease) in pension expense													\$ (5,197)	\$ 914	\$ 45,708	\$ -	\$ -	\$ -	\$ -

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	-	118,994	118,994	-	-
2016	-	334,044	334,044	-	-
2017	-	66,329	57,952	-	8,377
2018	-	145,664	109,248	-	36,416
2019	263,716	-	131,858	131,858	-
2020	-	60,665	20,222	-	40,443
				\$ 131,858	\$ 85,236

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	-	4.315159																	
2016	457,322	3.393531							\$ 134,763	134,763	134,763	53,033							
2017	-	4.578077																	
2018	(286,176)	4.000000									\$ (71,544)	(71,544)	(71,544)	(71,544)					
2019	315,736	4.000000										\$ 78,934	78,934	78,934	78,934				
2020	-	3.000000																	
Net increase (decrease) in pension expense													\$ 7,390	\$ 7,390	\$ 78,934	\$ -	\$ -	\$ -	\$ -

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	457,322	-	457,322	-	-
2017	-	-	-	-	-
2018	-	286,176	214,632	-	71,544
2019	315,736	-	157,868	157,868	-
2020	-	-	-	-	-
				\$ 157,868	\$ 71,544

City of Williamson, 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 (MOY)			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	\$ 51,130	\$ -	\$ 51,130	\$ 8,069	\$ -	\$ 8,069	\$ 43,061	\$ -	\$ 43,061	\$ -	\$ -	\$ -	\$ 130,000	\$ -	\$ 130,000	\$ 68,328	\$ -	\$ 68,328
2021	\$ 51,735	\$ -	\$ 51,735	\$ 10,763	\$ -	\$ 10,763	\$ 40,972	\$ -	\$ 40,972	\$ 2,023	\$ -	\$ 2,023	\$ 131,624	\$ -	\$ 131,624	\$ 65,506	\$ -	\$ 65,506
2022	\$ 52,572	\$ -	\$ 52,572	\$ 10,910	\$ -	\$ 10,910	\$ 41,662	\$ -	\$ 41,662	\$ 2,079	\$ -	\$ 2,079	\$ 131,624	\$ -	\$ 131,624	\$ 64,958	\$ -	\$ 64,958
2023	\$ 53,749	\$ -	\$ 53,749	\$ 11,134	\$ -	\$ 11,134	\$ 42,615	\$ -	\$ 42,615	\$ 2,003	\$ -	\$ 2,003	\$ 131,624	\$ -	\$ 131,624	\$ 68,021	\$ -	\$ 68,021
2024	\$ 55,123	\$ -	\$ 55,123	\$ 11,403	\$ -	\$ 11,403	\$ 43,720	\$ -	\$ 43,720	\$ 2,058	\$ -	\$ 2,058	\$ 131,624	\$ -	\$ 131,624	\$ 69,318	\$ -	\$ 69,318
2025	\$ 56,540	\$ -	\$ 56,540	\$ 11,682	\$ -	\$ 11,682	\$ 44,858	\$ -	\$ 44,858	\$ 2,115	\$ -	\$ 2,115	\$ 131,624	\$ -	\$ 131,624	\$ 70,548	\$ -	\$ 70,548
2026	\$ 57,932	\$ -	\$ 57,932	\$ 11,953	\$ -	\$ 11,953	\$ 45,979	\$ -	\$ 45,979	\$ 2,173	\$ -	\$ 2,173	\$ 131,624	\$ -	\$ 131,624	\$ 72,013	\$ -	\$ 72,013
2027	\$ 59,344	\$ -	\$ 59,344	\$ 12,228	\$ -	\$ 12,228	\$ 47,116	\$ -	\$ 47,116	\$ 2,233	\$ -	\$ 2,233	\$ 131,624	\$ -	\$ 131,624	\$ 73,072	\$ -	\$ 73,072
2028	\$ 56,072	\$ -	\$ 56,072	\$ 11,747	\$ -	\$ 11,747	\$ 44,325	\$ -	\$ 44,325	\$ 2,294	\$ -	\$ 2,294	\$ 131,624	\$ -	\$ 131,624	\$ 74,788	\$ -	\$ 74,788
2029	\$ 50,718	\$ -	\$ 50,718	\$ 10,912	\$ -	\$ 10,912	\$ 39,806	\$ -	\$ 39,806	\$ 2,357	\$ -	\$ 2,357	\$ 131,624	\$ -	\$ 131,624	\$ 77,887	\$ -	\$ 77,887
2030	\$ 48,896	\$ -	\$ 48,896	\$ 10,673	\$ -	\$ 10,673	\$ 38,223	\$ -	\$ 38,223	\$ 2,260	\$ -	\$ 2,260	\$ 131,624	\$ -	\$ 131,624	\$ 81,530	\$ -	\$ 81,530
2031	\$ 47,961	\$ -	\$ 47,961	\$ 10,592	\$ -	\$ 10,592	\$ 37,369	\$ -	\$ 37,369	\$ 2,322	\$ -	\$ 2,322	\$ 131,624	\$ -	\$ 131,624	\$ 83,819	\$ -	\$ 83,819
2032	\$ 47,657	\$ -	\$ 47,657	\$ 10,621	\$ -	\$ 10,621	\$ 37,036	\$ -	\$ 37,036	\$ 2,386	\$ -	\$ 2,386	\$ 131,624	\$ -	\$ 131,624	\$ 85,773	\$ -	\$ 85,773
2033	\$ 47,796	\$ -	\$ 47,796	\$ 10,725	\$ -	\$ 10,725	\$ 37,071	\$ -	\$ 37,071	\$ 2,452	\$ -	\$ 2,452	\$ 131,624	\$ -	\$ 131,624	\$ 87,369	\$ -	\$ 87,369
2034	\$ 48,194	\$ -	\$ 48,194	\$ 10,872	\$ -	\$ 10,872	\$ 37,322	\$ -	\$ 37,322	\$ 2,339	\$ -	\$ 2,339	\$ 131,624	\$ -	\$ 131,624	\$ 89,626	\$ -	\$ 89,626
2035	\$ 48,772	\$ -	\$ 48,772	\$ 11,050	\$ -	\$ 11,050	\$ 37,722	\$ -	\$ 37,722	\$ 2,403	\$ -	\$ 2,403	\$ 131,624	\$ -	\$ 131,624	\$ 91,268	\$ -	\$ 91,268
2036	\$ 41,441	\$ -	\$ 41,441	\$ 9,558	\$ -	\$ 9,558	\$ 31,883	\$ -	\$ 31,883	\$ 2,469	\$ -	\$ 2,469	\$ 131,624	\$ -	\$ 131,624	\$ 95,062	\$ -	\$ 95,062
2037	\$ 30,569	\$ -	\$ 30,569	\$ 7,266	\$ -	\$ 7,266	\$ 23,303	\$ -	\$ 23,303	\$ 2,537	\$ -	\$ 2,537	\$ 131,624	\$ -	\$ 131,624	\$ 99,199	\$ -	\$ 99,199
2038	\$ 25,288	\$ -	\$ 25,288	\$ 6,194	\$ -	\$ 6,194	\$ 19,094	\$ -	\$ 19,094	\$ 2,607	\$ -	\$ 2,607	\$ 131,624	\$ -	\$ 131,624	\$ 104,744	\$ -	\$ 104,744
2039	\$ 21,985	\$ -	\$ 21,985	\$ 5,513	\$ -	\$ 5,513	\$ 16,472	\$ -	\$ 16,472	\$ 2,473	\$ -	\$ 2,473	\$ 131,624	\$ -	\$ 131,624	\$ 107,972	\$ -	\$ 107,972
2040	\$ 19,679	\$ -	\$ 19,679	\$ 5,045	\$ -	\$ 5,045	\$ 14,634	\$ -	\$ 14,634	\$ 2,541	\$ -	\$ 2,541	\$ 131,624	\$ -	\$ 131,624	\$ 109,972	\$ -	\$ 109,972
2041	\$ 18,126	\$ -	\$ 18,126	\$ 4,737	\$ -	\$ 4,737	\$ 13,389	\$ -	\$ 13,389	\$ 2,611	\$ -	\$ 2,611	\$ 131,624	\$ -	\$ 131,624	\$ 116,194	\$ -	\$ 116,194
2042	\$ 16,990	\$ -	\$ 16,990	\$ 4,518	\$ -	\$ 4,518	\$ 12,472	\$ -	\$ 12,472	\$ 2,683	\$ -	\$ 2,683	\$ 131,624	\$ -	\$ 131,624	\$ 116,003	\$ -	\$ 116,003
2043	\$ 16,175	\$ -	\$ 16,175	\$ 4,368	\$ -	\$ 4,368	\$ 11,807	\$ -	\$ 11,807	\$ 2,527	\$ -	\$ 2,527	\$ 131,624	\$ -	\$ 131,624	\$ 117,955	\$ -	\$ 117,955
2044	\$ 12,664	\$ -	\$ 12,664	\$ 3,450	\$ -	\$ 3,450	\$ 9,214	\$ -	\$ 9,214	\$ 2,596	\$ -	\$ 2,596	\$ 131,624	\$ -	\$ 131,624	\$ 118,312	\$ -	\$ 118,312
2045	\$ 8,024	\$ -	\$ 8,024	\$ 2,178	\$ -	\$ 2,178	\$ 5,846	\$ -	\$ 5,846	\$ 2,425	\$ -	\$ 2,425	\$ 131,624	\$ -	\$ 131,624	\$ 116,018	\$ -	\$ 116,018
2046	\$ 4,994	\$ -	\$ 4,994	\$ 1,403	\$ -	\$ 1,403	\$ 3,591	\$ -	\$ 3,591	\$ 2,492	\$ -	\$ 2,492	\$ 131,624	\$ -	\$ 131,624	\$ 111,288	\$ -	\$ 111,288
2047	\$ 3,618	\$ -	\$ 3,618	\$ 1,016	\$ -	\$ 1,016	\$ 2,602	\$ -	\$ 2,602	\$ 2,561	\$ -	\$ 2,561	\$ 131,624	\$ -	\$ 131,624	\$ 100,203	\$ -	\$ 100,203
2048	\$ 2,620	\$ -	\$ 2,620	\$ 736	\$ -	\$ 736	\$ 1,884	\$ -	\$ 1,884	\$ 2,631	\$ -	\$ 2,631	\$ 131,624	\$ -	\$ 131,624	\$ 88,964	\$ -	\$ 88,964
2049	\$ 1,906	\$ -	\$ 1,906	\$ 535	\$ -	\$ 535	\$ 1,371	\$ -	\$ 1,371	\$ 2,703	\$ -	\$ 2,703	\$ 131,624	\$ -	\$ 131,624	\$ 66,949	\$ -	\$ 66,949
2050	\$ 1,355	\$ -	\$ 1,355	\$ 381	\$ -	\$ 381	\$ 974	\$ -	\$ 974	\$ 2,500	\$ -	\$ 2,500	\$ 131,624	\$ -	\$ 131,624	\$ 59,059	\$ -	\$ 59,059
2051	\$ 910	\$ -	\$ 910	\$ 256	\$ -	\$ 256	\$ 654	\$ -	\$ 654	\$ 2,569	\$ -	\$ 2,569	\$ 131,624	\$ -	\$ 131,624	\$ 42,778	\$ -	\$ 42,778
2052	\$ 610	\$ -	\$ 610	\$ 172	\$ -	\$ 172	\$ 438	\$ -	\$ 438	\$ 2,640	\$ -	\$ 2,640	\$ 131,624	\$ -	\$ 131,624	\$ 53,020	\$ -	\$ 53,020
2053	\$ 409	\$ -	\$ 409	\$ 115	\$ -	\$ 115	\$ 294	\$ -	\$ 294	\$ 2,411	\$ -	\$ 2,411	\$ 131,624	\$ -	\$ 131,624	\$ 85,070	\$ -	\$ 85,070
2054	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,477	\$ -	\$ 2,477	\$ 131,624	\$ -	\$ 131,624	\$ 120,107	\$ -	\$ 120,107
2055	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,545	\$ -	\$ 2,545	\$ 131,624	\$ -	\$ 131,624	\$ 238,350	\$ -	\$ 238,350
2056	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,288	\$ -	\$ 2,288	\$ 2,288	\$ -	\$ 2,288	\$ -	\$ -	\$ -
2057	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,351	\$ -	\$ 2,351	\$ 2,351	\$ -	\$ 2,351	\$ -	\$ -	\$ -
2058	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,416	\$ -	\$ 2,416	\$ 2,416	\$ -	\$ 2,416	\$ -	\$ -	\$ -
2059	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,128	\$ -	\$ 2,128	\$ 2,128	\$ -	\$ 2,128	\$ -	\$ -	\$ -
2060	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ -	\$ 2,187	\$ -	\$ 2,187	\$ 2,187	\$ -	\$ 2,187	\$ -	\$ -	\$ -

City of Williamson, 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	\$ 4,502,103	\$ -	\$ 4,502,103	\$ 1,667,847	37.05%	\$ 8,069	\$ 198,328	\$ 249,934	\$ -	\$ 45,105
2021	\$ 4,550,053	\$ -	\$ 4,550,053	\$ 1,669,415	36.69%	\$ 11,055	\$ 197,130	\$ 231,337	\$ 2,023	\$ 91,135
2022	\$ 4,617,273	\$ -	\$ 4,617,273	\$ 1,735,375	37.58%	\$ 11,206	\$ 196,582	\$ 234,349	\$ 2,079	\$ 94,669
2023	\$ 4,685,979	\$ -	\$ 4,685,979	\$ 1,801,404	38.44%	\$ 11,436	\$ 199,645	\$ 237,237	\$ 2,003	\$ 98,313
2024	\$ 4,756,739	\$ -	\$ 4,756,739	\$ 1,871,558	39.35%	\$ 11,712	\$ 200,942	\$ 240,496	\$ 2,058	\$ 102,124
2025	\$ 4,829,493	\$ -	\$ 4,829,493	\$ 1,943,782	40.25%	\$ 11,999	\$ 202,172	\$ 242,781	\$ 2,115	\$ 106,074
2026	\$ 4,905,397	\$ -	\$ 4,905,397	\$ 2,019,131	41.16%	\$ 12,277	\$ 203,637	\$ 245,729	\$ 2,173	\$ 110,184
2027	\$ 4,983,916	\$ -	\$ 4,983,916	\$ 2,097,327	42.08%	\$ 12,560	\$ 204,696	\$ 248,458	\$ 2,233	\$ 114,446
2028	\$ 5,065,440	\$ -	\$ 5,065,440	\$ 2,178,338	43.00%	\$ 12,066	\$ 206,412	\$ 259,798	\$ 2,294	\$ 118,625
2029	\$ 5,136,348	\$ -	\$ 5,136,348	\$ 2,253,349	43.87%	\$ 11,208	\$ 209,511	\$ 271,119	\$ 2,357	\$ 122,503
2030	\$ 5,193,880	\$ -	\$ 5,193,880	\$ 2,323,095	44.73%	\$ 10,963	\$ 213,154	\$ 277,692	\$ 2,260	\$ 126,255
2031	\$ 5,245,902	\$ -	\$ 5,245,902	\$ 2,393,515	45.63%	\$ 10,879	\$ 215,443	\$ 282,697	\$ 2,322	\$ 130,051
2032	\$ 5,294,658	\$ -	\$ 5,294,658	\$ 2,464,869	46.55%	\$ 10,909	\$ 217,397	\$ 285,712	\$ 2,386	\$ 133,946
2033	\$ 5,342,678	\$ -	\$ 5,342,678	\$ 2,539,023	47.52%	\$ 11,016	\$ 218,993	\$ 288,693	\$ 2,452	\$ 137,988
2034	\$ 5,390,424	\$ -	\$ 5,390,424	\$ 2,615,875	48.53%	\$ 11,167	\$ 221,250	\$ 290,990	\$ 2,339	\$ 142,220
2035	\$ 5,438,857	\$ -	\$ 5,438,857	\$ 2,697,183	49.59%	\$ 11,350	\$ 222,892	\$ 292,712	\$ 2,403	\$ 146,693
2036	\$ 5,488,795	\$ -	\$ 5,488,795	\$ 2,783,003	50.70%	\$ 9,817	\$ 226,686	\$ 313,656	\$ 2,469	\$ 150,905
2037	\$ 5,512,233	\$ -	\$ 5,512,233	\$ 2,854,286	51.78%	\$ 7,463	\$ 230,823	\$ 334,265	\$ 2,537	\$ 154,313
2038	\$ 5,504,322	\$ -	\$ 5,504,322	\$ 2,910,083	52.87%	\$ 6,362	\$ 236,368	\$ 344,859	\$ 2,607	\$ 157,213
2039	\$ 5,479,523	\$ -	\$ 5,479,523	\$ 2,962,560	54.07%	\$ 5,663	\$ 239,596	\$ 351,441	\$ 2,473	\$ 159,993
2040	\$ 5,443,115	\$ -	\$ 5,443,115	\$ 3,013,898	55.37%	\$ 5,182	\$ 241,596	\$ 355,797	\$ 2,541	\$ 162,738
2041	\$ 5,397,797	\$ -	\$ 5,397,797	\$ 3,065,076	56.78%	\$ 4,866	\$ 247,818	\$ 358,346	\$ 2,611	\$ 165,642
2042	\$ 5,345,730	\$ -	\$ 5,345,730	\$ 3,122,445	58.41%	\$ 4,641	\$ 247,627	\$ 359,668	\$ 2,683	\$ 168,748
2043	\$ 5,288,243	\$ -	\$ 5,288,243	\$ 3,181,110	60.15%	\$ 4,487	\$ 249,579	\$ 359,946	\$ 2,527	\$ 172,020
2044	\$ 5,226,449	\$ -	\$ 5,226,449	\$ 3,244,723	62.08%	\$ 3,544	\$ 249,936	\$ 369,300	\$ 2,596	\$ 175,247
2045	\$ 5,147,944	\$ -	\$ 5,147,944	\$ 3,301,554	64.13%	\$ 2,237	\$ 247,642	\$ 376,341	\$ 2,425	\$ 178,089
2046	\$ 5,052,994	\$ -	\$ 5,052,994	\$ 3,350,756	66.31%	\$ 1,441	\$ 242,912	\$ 379,222	\$ 2,492	\$ 180,565
2047	\$ 4,946,666	\$ -	\$ 4,946,666	\$ 3,393,960	68.61%	\$ 1,044	\$ 231,827	\$ 378,210	\$ 2,561	\$ 182,655
2048	\$ 4,834,078	\$ -	\$ 4,834,078	\$ 3,428,715	70.93%	\$ 756	\$ 220,588	\$ 375,742	\$ 2,631	\$ 184,319
2049	\$ 4,716,780	\$ -	\$ 4,716,780	\$ 3,456,005	73.27%	\$ 550	\$ 198,573	\$ 372,024	\$ 2,703	\$ 185,316
2050	\$ 4,596,096	\$ -	\$ 4,596,096	\$ 3,465,717	75.41%	\$ 391	\$ 190,683	\$ 367,340	\$ 2,500	\$ 185,764
2051	\$ 4,473,004	\$ -	\$ 4,473,004	\$ 3,472,715	77.64%	\$ 263	\$ 174,402	\$ 361,872	\$ 2,569	\$ 185,850
2052	\$ 4,348,289	\$ -	\$ 4,348,289	\$ 3,468,789	79.77%	\$ 177	\$ 184,644	\$ 355,530	\$ 2,640	\$ 186,080
2053	\$ 4,222,912	\$ -	\$ 4,222,912	\$ 3,481,520	82.44%	\$ 118	\$ 216,694	\$ 348,532	\$ 2,411	\$ 187,844
2054	\$ 4,097,615	\$ -	\$ 4,097,615	\$ 3,535,233	86.28%	\$ -	\$ 251,731	\$ 341,614	\$ 2,477	\$ 191,932
2055	\$ 3,972,101	\$ -	\$ 3,972,101	\$ 3,634,805	91.51%	\$ -	\$ 369,974	\$ 333,543	\$ 2,545	\$ 200,834
2056	\$ 3,847,974	\$ -	\$ 3,847,974	\$ 3,869,525	100.56%	\$ -	\$ 2,288	\$ 325,311	\$ 2,288	\$ 203,998
2057	\$ 3,725,475	\$ -	\$ 3,725,475	\$ 3,748,212	100.61%	\$ -	\$ 2,351	\$ 317,013	\$ 2,351	\$ 197,550
2058	\$ 3,604,762	\$ -	\$ 3,604,762	\$ 3,628,749	100.67%	\$ -	\$ 2,416	\$ 308,732	\$ 2,416	\$ 191,205
2059	\$ 3,485,915	\$ -	\$ 3,485,915	\$ 3,511,222	100.73%	\$ -	\$ 2,128	\$ 300,586	\$ 2,128	\$ 184,962
2060	\$ 3,368,899	\$ -	\$ 3,368,899	\$ 3,395,598	100.79%	\$ -	\$ 2,187	\$ 292,603	\$ 2,187	\$ 178,819

City of Williamson, 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	\$ 249,934	\$ -	\$ 243,332	\$ -	\$ 243,332	
2021	\$ 231,337	\$ -	\$ 213,485	\$ -	\$ 213,485	
2022	\$ 234,349	\$ -	\$ 204,990	\$ -	\$ 204,990	
2023	\$ 237,237	\$ -	\$ 196,697	\$ -	\$ 196,697	
2024	\$ 240,496	\$ -	\$ 189,004	\$ -	\$ 189,004	
2025	\$ 242,781	\$ -	\$ 180,853	\$ -	\$ 180,853	
2026	\$ 245,729	\$ -	\$ 173,506	\$ -	\$ 173,506	
2027	\$ 248,458	\$ -	\$ 166,287	\$ -	\$ 166,287	
2028	\$ 259,798	\$ -	\$ 164,812	\$ -	\$ 164,812	
2029	\$ 271,119	\$ -	\$ 163,028	\$ -	\$ 163,028	
2030	\$ 277,692	\$ -	\$ 158,275	\$ -	\$ 158,275	
2031	\$ 282,697	\$ -	\$ 152,728	\$ -	\$ 152,728	
2032	\$ 285,712	\$ -	\$ 146,310	\$ -	\$ 146,310	
2033	\$ 288,693	\$ -	\$ 140,129	\$ -	\$ 140,129	
2034	\$ 290,990	\$ -	\$ 133,881	\$ -	\$ 133,881	
2035	\$ 292,712	\$ -	\$ 127,652	\$ -	\$ 127,652	
2036	\$ 313,656	\$ -	\$ 129,655	\$ -	\$ 129,655	
2037	\$ 334,265	\$ -	\$ 130,970	\$ -	\$ 130,970	
2038	\$ 344,859	\$ -	\$ 128,077	\$ -	\$ 128,077	
2039	\$ 351,441	\$ -	\$ 123,717	\$ -	\$ 123,717	
2040	\$ 355,797	\$ -	\$ 118,721	\$ -	\$ 118,721	
2041	\$ 358,346	\$ -	\$ 113,338	\$ -	\$ 113,338	
2042	\$ 359,668	\$ -	\$ 107,825	\$ -	\$ 107,825	
2043	\$ 359,946	\$ -	\$ 102,283	\$ -	\$ 102,283	
2044	\$ 369,300	\$ -	\$ 99,470	\$ -	\$ 99,470	
2045	\$ 376,341	\$ -	\$ 96,082	\$ -	\$ 96,082	
2046	\$ 379,222	\$ -	\$ 91,771	\$ -	\$ 91,771	
2047	\$ 378,210	\$ -	\$ 86,754	\$ -	\$ 86,754	
2048	\$ 375,742	\$ -	\$ 81,695	\$ -	\$ 81,695	
2049	\$ 372,024	\$ -	\$ 76,670	\$ -	\$ 76,670	
2050	\$ 367,340	\$ -	\$ 71,758	\$ -	\$ 71,758	
2051	\$ 361,872	\$ -	\$ 67,004	\$ -	\$ 67,004	
2052	\$ 355,530	\$ -	\$ 62,398	\$ -	\$ 62,398	
2053	\$ 348,532	\$ -	\$ 57,981	\$ -	\$ 57,981	
2054	\$ 341,614	\$ -	\$ 53,867	\$ -	\$ 53,867	
2055	\$ 333,543	\$ -	\$ 49,853	\$ -	\$ 49,853	
2056	\$ 325,311	\$ -	\$ 46,088	\$ -	\$ 46,088	
2057	\$ 317,013	\$ -	\$ 42,571	\$ -	\$ 42,571	
2058	\$ 308,732	\$ -	\$ 39,297	\$ -	\$ 39,297	
2059	\$ 300,586	\$ -	\$ 36,266	\$ -	\$ 36,266	
2060	\$ 292,603	\$ -	\$ 33,462	\$ -	\$ 33,462	