



**City of Lansing
Police and Fire Retirement System**

**Actuarial Valuation of Retiree Healthcare Benefits
as of January 1, 2021**

November, 2021

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Executive Summary

This report presents the results of an actuarial review and analysis of the City of Lansing Police and Fire Retirement System Retiree Healthcare Benefits Plan (the Plan) as of January 1, 2021. A comparative summary of the status of the Plan is as follows:

	January 1, 2021	January 1, 2020
Plan Membership		
Active	344	358
<u>Inactive/Receiving Benefits</u>	<u>711</u>	<u>768</u>
Total Plan Participants	1,055	1,126
Valuation Results (\$ millions)		
Actuarial Accrued Liability (AAL)	\$194.7	\$252.7
<u>Plan Assets</u>	<u>45.0</u>	<u>42.2</u>
Unfunded Accrued Liability	\$ 149.7	\$210.5
Funding Ratio	23.1%	16.7%
Actuarially Determined Employer Contribution (\$ millions)		
Total ADEC	\$13.2	\$17.0
% of Payroll	45%	57%

The results above show the amount the City should contribute to the OPEB trust to establish pre-funding of benefits on an actuarial basis. The assumptions used for this valuation are consistent with the State's Uniform assumptions for fiscal year 2021. There were also several changes in assumptions based on the Retirement System's experience study completed in 2021, covering 2015 through 2019. The net impact of the changes in assumptions was a slight increase in actuarial liability and cost.

Purpose of the Report

This Report presents the results of an actuarial review and analysis of the Retiree Healthcare Plan as of January 1, 2021. The purposes of this Report are:

- To determine the actuarial contributions to pre-fund the City's OPEB
- To establish the basis for GASB74/75 reporting for fiscal year 2021
- To determine the City's OPEB liability and actuarial cost under the State's Uniform Assumptions

This valuation is based on the information provided by the City as of January 1, 2021, including member data, premium equivalents, and plan costs. The basis for the Plan provisions is also as of this date, with specific eligibility and cost sharing requirements outlined in Section 4.

Plan assets are a portion of the Police and Fire Retirement System assets held in a reserve account. The Plan assets as of the valuation date were determined based on the reserve value, as shown in the valuation report for the Retirement System.

Actuarial Certification

In this study, we conducted an examination of all participant data for reasonableness and consistency, but did not audit such data. Actuarial liabilities and costs are based on the Entry Age Normal Cost Method. Under this method, the Actuarially Determined Employer Contribution (ADEC, or employer cost) provides for current cost (normal cost) plus an amount to amortize the unfunded actuarial accrued liability (UAAL).

We certify that the valuation was performed in accordance with generally accepted actuarial principles and practices. The first undersigned is a member of the American Academy of Actuaries, and meets the Qualification Standards to provide the actuarial opinions herein.

Respectfully Submitted,



Gregory M. Stump, FSA, EA, FCA, MAAA
Chief Actuary



Marshal Banks
Senior Consultant

Section 1: Actuarial Computations

1.1: Summary of Actuarial Liabilities

	1/1/2021	1/1/2020
Discount Rate	7.00%	7.00%
Present Value of Projected Benefits (PVB)		
Total Plan	\$ 206,093,255	\$ 267,470,993
Actuarial Accrued Liability (AAL)		
Active Members	\$ 38,663,179	\$ 44,483,890
<u>Inactive Members</u>	<u>156,090,633</u>	<u>208,163,870</u>
Total AAL	\$ 194,753,812	\$ 252,647,760
Normal Cost (beginning of year)		
	\$ 1,394,995	\$ 1,738,363

The actuarial liability and cost has decreased since the last valuation. The decrease is primarily the result of a change in post-65 coverage to a lower cost plan.

1.2: Actuarially Determined Employer Contribution

The results shown below are based on full pre-funding of OPEB. This means that the full ADEC will be contributed to the OPEB trust(s), and all benefits will be paid from the trust(s).

	1/1/2021	1/1/2020
<i>Discount Rate</i>	7.00%	7.00%
Actuarial Accrued Liability (AAL)	\$ 194,753,812	\$ 252,647,760
<u>Plan Assets</u>	<u>45,031,908</u>	<u>42,174,029</u>
Unfunded AAL	\$149,721,904	\$ 210,473,731
Funding Ratio	23.1%	16.7%
Amortization of Unfunded AAL	\$10,921,362	\$ 14,168,781
Employer Normal Cost	1,394,995	1,738,363
<u>Interest to End of Year</u>	<u>862,145</u>	<u>1,113,500</u>
Actuarially Determined Employer Contribution (ADEC)	\$ 13,178,502	\$ 17,020,644
Percentage of Payroll	44.5%	57.2%
Expected Benefit Payments (Employer portion)	\$10,581,718	\$12,541,004

1.3: Actuarially Determined Employer Contribution, State Uniform Basis

The results shown below are based on the specifications outlined by the State for the indicated fiscal year. The actuarial assumptions are the same as those used for the results above, except a blended rate was required for fiscal year 2020. The Uniform Basis requires a 28-year level dollar amortization for fiscal year 2021 for closed plans.

	1/1/2021	1/1/2020
<i>Discount Rate</i>	7.00%	4.42%
Actuarial Accrued Liability (AAL)	\$ 194,753,812	\$ 362,335,342
<u>Plan Assets</u>	<u>45,031,908</u>	<u>42,174,029</u>
Unfunded AAL	\$149,721,904	\$ 320,161,313
Funding Ratio	23.1%	11.6%
Amortization of Unfunded AAL	\$ 11,528,856	\$ 18,961,478
Employer Normal Cost	1,394,995	3,976,958
<u>Interest to End of Year</u>	<u>904,670</u>	<u>1,013,879</u>
Actuarially Determined Employer Contribution (ADEC)	\$ 13,828,521	\$ 23,952,314
Percentage of Payroll	46.7%	80.4%

Section 2: Summary of Participant Data

Participant Summary

	January 1, 2021			January 1, 2020		
	Fire	Police	Total	Fire	Police	Total
Active Participants						
Number	157	187	344	164	194	358
Average Age	40.1	35.8	37.8	40.3	36.3	38.2
Average Service	11.9	10.6	11.2	11.9	11.3	11.6
Inactive Participants						
Number Receiving Benefits	326	373	699	333	422	755
Average Age	67.1	66.9	67.0	66.9	66.8	66.8
Number Terminated Vested			12			13
Average Age			48.9			48.4

Retiree Coverage Summary (2021)

Level of Coverage	Fire	Police	Total
(does not include opt-out)			
Single	105	95	200
Multiple	205	261	466
Total Retirees Covered	310	356	666

For this study, we relied on the data provided by the City. We did not verify or audit the information, but did review it for reasonableness and used information from the pension database where needed.

Section 3: Outline of Actuarial Assumptions and Methods

3.1: Actuarial Methods

Actuarial Cost Method

The Entry Age Normal Actuarial Cost Method, with level percentage of pay normal cost, is used for this valuation. The cost equals the sum of the normal cost and the amount necessary to amortize the unfunded actuarial liability as a level percent of payroll over a closed period (20 years remaining as of January 1, 2021).

Plan Assets

Plan assets are available in a separate reserve of the Police and Fire Retirement System trust. For this study, assets are used at market value, without any smoothing of investment gains and losses.

Changes in Actuarial Methods since Prior Valuation

There was one change in methods since the prior valuation: the amortization was reduced to 20 years.

3.2: Actuarial Assumptions

- Valuation Date** All assets and liabilities are computed as of January 1, 2021.
- Investment Return/
Discount Rate*** The annual rate of return on trust fund assets is assumed to be 7.00%, net of expenses and including inflation.
- Inflation and Payroll Growth** The underlying annual rate of inflation is assumed to be 2.50%.
 The basis for the non-healthcare related assumptions for this study is the analysis conducted for the Retirement System for purposes of the annual actuarial valuation to fund pension benefits. Demographic assumptions were updated based on an Experience study conducted in 2021, covering experience from 2015 through 2019.
- Mortality*** Pub2010S tables (below median) headcount weighted, projected on a generational basis with Scale MP-2019.
- Retirement*** Rates of retirement vary based on the service of the member as shown below. Rates are applied only if the member is eligible to retire.

Years of Service	Fire	Police
10-24	40%	40%
25	90%	90%
26-29	60%	25%
30+	100%	100%

- Disability** Rates of disability vary based on the age of the member as shown below. All disabilities are assumed to be duty related.
 Representative rates of disability:

Age	Assumed Rate
20	0.120%
30	0.600%
40	0.940%
50	1.125%
60	0.000%

Termination of Employment* Rates of termination are based of years of service, with sample rates as follows:

Years of Service	Fire
0	2.00%
1	1.60%
5	0.65%
10	0.20%
15	0.05%
20+	0.00%

Age	Police
20	15.0%
25	8.6%
30	4.9%
35	2.8%
40	1.6%
45	0.9%
51+	0.0%

Healthcare costs*

The following represents expected per-capita costs for 2021, based on the age of the retiree and dependents.

BCBS (Pre-65)			
Age	Retiree	Spouse	Children
45	\$6,651	\$9,312	25% additional cost, up to age 26
50	7,673	10,742	
55	9,069	12,697	
60	10,981	15,373	
65	3,274	3,274	
70	3,686	3,686	
75	4,049	4,049	
80	4,341	4,341	
85+	4,562	4,562	

PHP (Pre-65)			
Age	Retiree	Spouse	Children
45	\$7,590	\$8,420	36% additional cost, up to age 26
50	8,757	9,714	
55	10,350	11,482	
60	12,532	13,902	
65	3,274	3,274	
70	3,686	3,686	
75	4,049	4,049	
80	4,341	4,341	
85+	4,562	4,562	

The per-capita-costs shown above are based on the retiree data and premium equivalents provided for this valuation. Age based costs are based on aging rates developed from available claims information.

Dental costs are expected to be \$580.20 per year (2021 basis) for each covered member and spouse. Vision claims are expected to be \$63.84 per year (2021 basis). The costs above were updated based on recent claims/expense information and standard aging rates. Medicare Part B Reimbursements per covered person are assumed to be \$1,782 per year (2021 basis), and increase at the post-65 trend rates.

Healthcare trend*

The following increases are assumed for expected per-capita costs and premiums:

Year	Pre-65 Rate	Post-65 Rate
2021	7.50%	5.75%
2022	7.25%	5.50%
2023	7.00%	5.25%
2024	6.75%	5.00%
2025	6.50%	4.75%
2026	6.25%	4.50%
2027	6.00%	4.50%
2028	5.75%	4.50%
2029	5.50%	4.50%
2030	5.25%	4.50%
2031	5.00%	4.50%
2032	4.75%	4.50%
2033+	4.50%	4.50%

Dental and Vision costs are assumed to increase at 4.50% per year. The State employer Hard Cap is assumed to increase by 3% per year.

Participation

100% of eligible members with coverage are assumed to elect to continue coverage upon retirement.

Family Composition and Dependent Coverage

All Plan members who are currently married are assumed to be married upon retirement.

Male spouses are assumed to be three years older than their wives. 21% of retirees are assumed to have two children covered, up to age 26. Retirees are assumed to be 32 years older than their children.

* Assumption updated since last valuation

Change in Assumptions

The following assumptions were updated since the last valuation:

- Mortality projection scale
- Rates of retirement and termination
- Medical trend, expected per-capita costs

Section 4: Summary of Plan Provisions

4.1: Fire (IAFF Local 421)

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
On or before 7/1/2006	Age 55 with 10 years of service, or Any age with 25 years of service	Age 55 with 10 years of service Non Duty Disability/Death: Any age with 10 years of service	<u>Retirement prior to 7/1/2011</u> : the City pays 100% of retiree City-paid health plan coverage for spouse and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected.
From 7/2/2006 to 6/30/2010	Age 55 with 15 years of service or Any age with 25 years of service with up to 2 years of military service credit	Age 55 with 15 years of service Non Duty Disability/Death: Any age with 15 years of service	<u>Retirement between 7/1/2011 and 6/30/2013</u> : Retiree pays 15% of the cost of the coverage at the date of retirement, for pre-65 coverage, and 10% for post-65.
From 7/1/2010 to 5/18/2014	Any age with 25 years of service with up to 2 years of military service credit	Age 55 with 25 Years of service Non Duty Disability/Death: Any age with 25 years of service	<u>Retirement on or after 7/1/2013</u> : the City pays the cost of healthcare coverage, up to the State of Michigan annually-determined hard cap amount.
On or after 5/19/2014, before 3/8/2021	Age 50 with 25 years of service with up to 2 years of military service	Age 55 with 25 Years of service	City pays dental, vision, and 100% of retiree City-paid plan coverage for the retiree only, up to the State of Michigan annually-determined hard cap amount. Spouses and dependents are not covered for healthcare, but they are still eligible for dental and vision coverage.
On or after 3/8/2021	Not eligible for plan benefits		

Disability and Death Retirement (Duty Related): No age or service requirement – disability benefits payable when member begins to receive disability retirement benefits.

Disability and Death Retirement (Non-Duty Related): Disability benefits payable when member begins to receive disability retirement benefits, subject to eligibility shown above.

Medicare Coverage Eligibility: City provides Medicare Part B premium reimbursement and retiree health care, dental, and vision benefits supplemental to Medicare coverage when participant becomes Medicare-eligible.

Retiree Group Life: Employees who retire on or after 7/1/1983 are covered by a life insurance policy in the amount of \$3,000, paid by the City.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,800 in any year in which they did not receive coverage from another source.

4.2.1: Police (Capital City Lodge Program, formerly FOP Lodge No. 141) Non-Supervisory

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
On or before 7/1/2010	Age 55 with 15 years of service, or Any age with 25 years of service	Age 55 with 15 years of service Non Duty Disability/Death: Any age with 25 years of service	<u>Retirement prior to 10/13/2015:</u> City pays 100% of retiree City-paid health plan coverage for spouse and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected. <u>Retirement on or after 10/13/2015:</u> City pays the cost of healthcare coverage, up to the State of Michigan annually-determined hard cap amount. Retiree contributions toward City-paid plan coverage is capped at 1% of monthly pension benefit.
From 7/2/2010 to 7/31/2014	Any age with 25 years of service with up to 2 years of military service credit	Age 55 with 25 years of service Non Duty Disability/Death: Any age with 25 years of service	Spouses and dependents are not covered. City pays the cost of healthcare coverage, up to the State of Michigan annually-determined hard cap amount. Retiree contributions toward City-paid plan coverage is capped at 1% of monthly pension benefit. Retiree dental and vision coverage remains for spouse and eligible dependents.
On or after 8/1/2014, before 10/28/2019	Age 50 with 25 years of service with up to 2 years of military service credit	Age 55 with 25 years of service Non Duty Disability/Death: Any age with 25 years of service	Spouses and dependents are not covered. City pays the cost of healthcare coverage, up to the State of Michigan annually-determined hard cap amount. Retiree contributions toward City-paid plan coverage is capped at 1% of monthly pension benefit. Retiree dental and vision coverage remains for spouse and eligible dependents.
On or after 10/28/2019	Not eligible for plan benefits.		

Disability and Death Retirement (Duty Related): No age or service requirement – disability benefits payable when member begins to receive disability retirement benefits.

Disability and Death Retirement (Non-Duty Related): Disability benefits payable when member begins to receive disability retirement benefits, subject to eligibility shown above.

Medicare Coverage Eligibility: The City provides Medicare Part B premium reimbursement and retiree healthcare, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare-eligible.

Retiree Group Life: Employees who retire on or after 7/1/1982 are covered by a life insurance policy in the amount of \$3,000, paid by the city.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,500 in any year in which they did not receive coverage from another source.

4.2.2: Police (Capital City Lodge Program, formerly FOP Lodge No. 141) Supervisory

The following is an outline of the information used as the basis for this actuarial valuation. It does not imply a promise or obligation on behalf of the City, and does not take the place of applicable ordinances and collective bargaining agreements.

Date of Hire	Normal Retirement Eligibility	Deferred Retirement Eligibility	Benefits Payable for Healthcare, Dental, and Vision
Before 7/15/2010	Age 55 with 15 years of service, or Any age with 25 years of service	Age 55 with 15 years of service Non Duty Disability/Death: Any age with 25 years of service	<u>Retirement prior to 7/15/2010:</u> City pays 100% of retiree City-paid health plan coverage for spouse and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected.
From 7/15/2010 to 7/31/2014	Any age with 25 years of service with up to 2 years of military service credit	Age 55 with 25 years of service Non Duty Disability/Death: Any age with 25 years of service	<u>Retirement on or after 7/15/2010 and before 10/13/2015:</u> City pays coverage for spouse and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected, subject to \$650 family/\$550 2-person/\$250 single annual premium sharing for pre-Medicare coverage, with the premium sharing limited to five years immediately following retirement. <u>Retirement on or after 10/13/2015:</u> City pays coverage for spouse and eligible dependents if Joint & Survivor pension option is elected, but only through the retiree's lifetime if straight life pension option is elected, up to the State of Michigan annually-determined hard cap amount. Retiree contributions toward City-paid plan coverage is capped at 1% of monthly pension benefit.
On or after 8/1/2014, before 10/28/2019	Age 50 with 25 years of service with up to 2 years of military service credit	Age 55 with 25 years of service Non Duty Disability/Death: Any age with 25 years of service	Spouses and dependents are not covered. City pays the cost of healthcare coverage, up to the State of Michigan annually-determined hard cap amount. Retiree contributions toward City-paid plan coverage is capped at 1% of monthly pension benefit. Retiree dental and vision coverage remains for spouse and eligible dependents.
On or after 10/28/2019	Not eligible for plan benefits.		

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Disability and Death Retirement (Duty Related): No age or service requirement – disability benefits payable when member begins to receive disability retirement benefits.

Disability and Death Retirement (Non-Duty Related): Disability benefits payable when member begins to receive disability retirement benefits, subject to eligibility shown above.

Medicare Coverage Eligibility: The City provides Medicare Part B premium reimbursement and retiree healthcare, dental, and vision benefits supplemental to Medicare coverage when participants become Medicare-eligible.

Retiree Group Life: Employees who retire on or after 7/1/1982 are covered by a life insurance policy in the amount of \$3,000, paid by the city.

Opt Out Benefit: Retirees who opt out of health care coverage are eligible to receive \$1,500 in any year in which they did not receive coverage from another source.

The Plan provision summaries shown in this Report were provided by the City and were not independently verified by BCG.

Glossary of Actuarial Terms

Actuarial Accrued Liability

A plan's actuarial accrued liability is the level of assets estimated by the system actuary to be needed as of the valuation date to

- Finance all previously earned benefits for actively employed members of the plan (and their beneficiaries, if applicable) for when they eventually retire, die or terminate with deferred vested benefits
- Finance all currently payable benefits of current pensioners and their beneficiaries (if applicable).

The Actuarial Accrued Liability is not a debt; instead, it is an asset target set by the actuarial cost method to produce an orderly accumulation of assets to pay for the plan's obligations.

Actuarially Determined Contribution (ADC)

The annual cost of the plan, on a funding basis. The ADC is the sum of the Normal Cost and the amortization of unfunded actuarial accrued liability.

Normal Cost

The Normal Cost is calculated as the annual amount necessary to fund each member's benefits from that member's Plan entry date to the end of his or her projected working life.

Other Postemployment Benefits (OPEB)

Postemployment benefits other than pensions. OPEB generally takes the form of health insurance and dental, vision, prescription drugs or other healthcare benefits.

Unfunded Actuarial Accrued Liability

When the actuarial value of assets is below the Actuarial Accrued Liability, there is an Unfunded Actuarial Accrued Liability which must be paid off or amortized on a schedule. When the actuarial value of assets is in excess of the Actuarial Accrued Liability, this can lead to a reduction in future contributions on an amortization schedule.

Appendix: Benefit Costs by Group

Employee Group	Number of Employees	Total Normal Cost	Normal Cost per Employee
Police NS I	60	\$290,597	\$4,483
Police NS II	85	271,975	3,200
Police Sup	42	183,791	4,376
Fire I	90	428,905	4,766
Fire II	<u>67</u>	<u>219,727</u>	<u>3,280</u>
All Police and Fire Employees included in OPEB Valuation	344	\$1,394,995	\$4,055

Police NS I: Police, Non-Supervisory hired before 8/1/2014
Police NS II: Police, Non-Supervisory hired on or after 8/1/2014
Police Sup: Police, Supervisory
Fire I: hired before 5/19/2014
Fire II: hired on or after 5/19/2014

**City of Lansing Police/Fire OPEB Funding and Contribution Projections
Based on Valuation as of January 1, 2021**

