City of Pontiac
General Employees' Retirement System
Annual Actuarial Valuation Report
December 31, 2017

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GRS Retirement Consulting

800.521.0498 | P: 248.799.9000 | F: 248.799.9020 | www.grsconsulting.com

May 18, 2018

Retirement Board
City of Pontiac General Employees' Retirement System
Pontiac, Michigan

Dear Board Members:

Submitted in this report are the results of the December 31, 2017 actuarial valuation of the liabilities, funded position and contribution requirements associated with benefits provided by the City of Pontiac General Employees' Retirement System. The purpose of the valuation was to measure the System's funding progress, provide related valuation results and determine the employer contribution for the 2019-2020 fiscal year. This report should not be relied upon for any other purpose. This report may be provided to parties other than the Retirement Board only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The valuation was based upon the actuarial assumptions and methods adopted by the Retirement Board, information furnished by the Retirement System, including System benefits, financial transactions, and individual members, terminated members, retirees and beneficiaries. Data was checked for internal and year to year consistency, but was not audited by us. As a result, we are unable to assume responsibility for the accuracy or completeness of the data provided.

Future actuarial measurements may differ significantly from those presented in this report due to such factors as experience differing from that anticipated by actuarial assumptions, changes in plan provisions, actuarial assumptions/methods or applicable law. Due to the limited scope of this assignment, we did not perform an analysis of the potential range of future measurements. This valuation assumes the continuing ability of the plan sponsor to make any contributions necessary to fund this plan. A determination of the plan sponsor's ability to make any necessary contributions in the future is beyond the scope of our expertise and was not performed by GRS.

This report was prepared by actuaries who have substantial experience valuing public employee retirement systems. To the best of our knowledge, this report is complete and accurate and the valuation was conducted in accordance with standards of practice prescribed by the Actuarial Standards Board in compliance with the applicable state statutes. Louise M. Gates and James D. Anderson are independent of the plan sponsor and are Members of the American Academy of Actuaries (MAAA) who meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinions contained herein. It is our opinion that the actuarial assumptions used for the valuation produce results which are reasonable.

Respectfully submitted,

Louise Gates
Louise M. Gates, ASA, FCA, MAAA

James D. Anderson
James D. Anderson, FSA, EA, FCA, MAAA

SECTION A

EXECUTIVE SUMMARY

1. Computed Employer Contributions – Fiscal Year Beginning July 1, 2019

The computed City contributions are as follows:

Computed Employer Contributions
$0

2. Reasons for Change

There are three general reasons why contributions change from one valuation to the next. The first is a change in the benefits or eligibility conditions of the plan. The second is a change in the valuation assumptions used to predict future occurrences. The third is the difference during the year between the plan's actual experience and what the assumptions predicted. Although there was no change in the employer contribution from the prior year, there was an increase in the Retirement System's funding surplus.

There were no changes in actuarial assumptions since the last valuation of the System. The following plan changes were reported to the actuary and are reflected in this valuation of the System:

- Certain terminated vested members of the System were given an opportunity to begin receiving pension benefits upon attainment of age 43 (instead of age 60 per Retirement System provisions). This change in plan provisions increased System liabilities by $7.2 million.
- The plan will extend the $400 per month stipend benefit payment to all eligible pension benefit recipients through August 2018. This provision increased System liabilities by $3.5 million.

3. System Experience

For the year ended December 31, 2017, System experience was overall favorable. The recognized rate of return on System assets during calendar year 2017 was higher than long term expectations (7.0% per year). This favorable experience was offset in part by additional stipend payments made during the last 4 months of calendar year 2017 per City Council resolution. Additional information related to System assets is shown on pages C-3 and C-4 of this report.

4. Reserve Transfers

In accordance with Ordinance Section 92-39(6), we have calculated the actuarial liability for members who have already retired (and their beneficiaries). This amount, along with the reported retiree reserve account balance is shown below:

Retiree Liability	$237,856,579
Retiree Reserve	231,193,313
Difference	$ 6,663,266

The Board may wish to transfer the difference shown above from the pension reserve fund to the retirement reserve fund.

5. System Funded Percent

The System's funding percent based on the actuarial value of assets is 178.9% as of December 31, 2017. As of December 30, 2016, the funding percent was 176.1%. If the market value of assets were used for the measurement as of December 31, 2017 the result would be a funding percent of 189.5%.

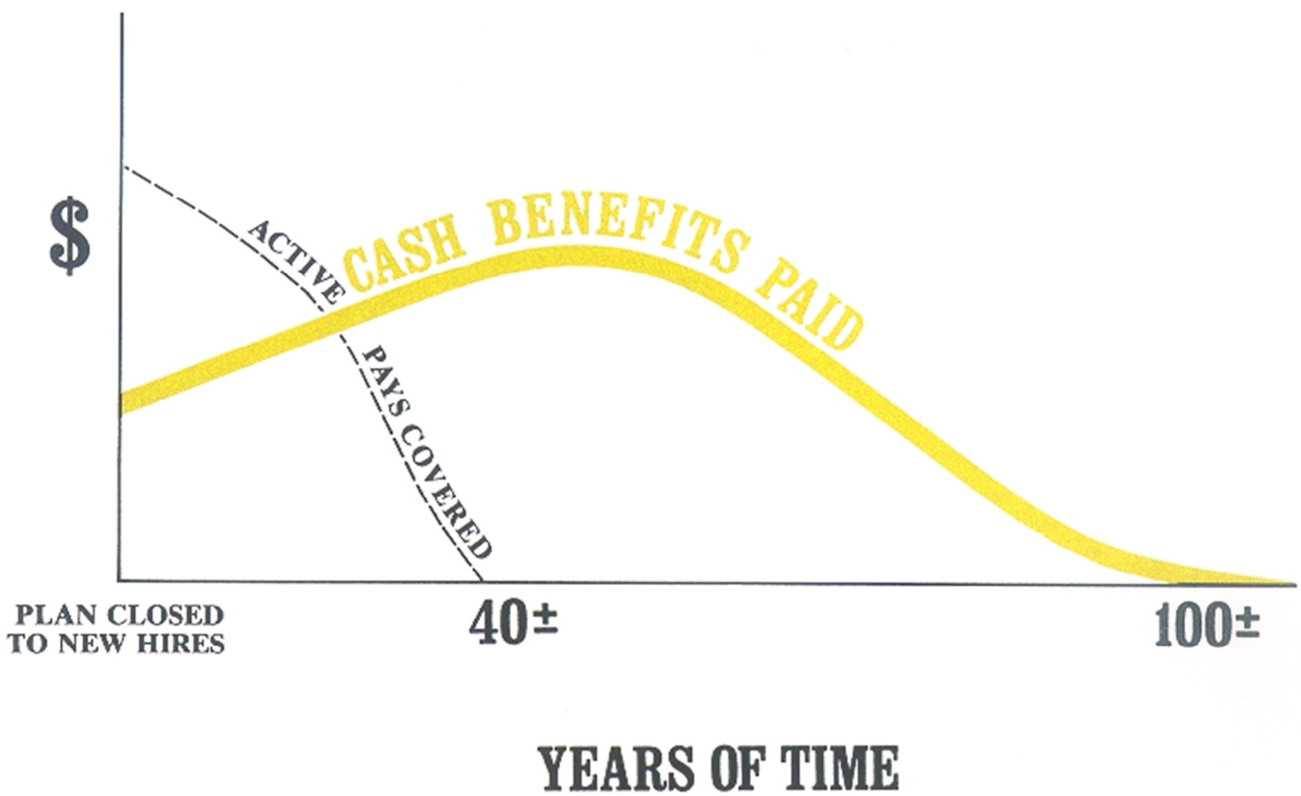
Unless otherwise indicated, a funding status measurement presented in this report is based upon the System's actuarial accrued liability and the actuarial value of System assets. It is important to note that the funding status measurement presented in this report is inappropriate for assessing the sufficiency of plan assets to cover the estimated cost of settling the plan's benefit obligations and the need for or the amount of future employer contributions.

6. Other

We understand that currently the Board does not have a formal funding policy. Based on the provisions of GASB statement No. 67 the System is required to have a funding policy. We recommend that the Board establish a funding policy.

Michigan Public Act 202 of 2017 has created new reporting and other requirements for local units of government. The Retirement Board may be asked to assist the City in its efforts to comply with these new requirements. We would be happy to work with the Board to develop a funding policy that documents System procedures and facilitates compliance.

A CLOSED PENSION PLAN



A plan becomes closed when no new hires are admitted to active membership. The persons covered by the plan at the time of closing continue their normal activities and continue to be covered by the plan, until the last survivor dies.

CASH BENEFITS LINE. After a pension plan becomes closed, the usual pattern is for cash benefits to continue to increase for decades of time. Eventually the cash benefits will peak, and then gradually decrease over more decades of time, ultimately to zero. The last cash benefit is likely to occur a century after the time the plan is closed.

The precise amounts of cash benefits cannot be known now, and must be estimated by assumptions of future experiences in a variety of financial risk areas.

SECTION B

VALUATION RESULTS

Computed Employer Contribution for the Fiscal Year Beginning July 1, 2019

	Contributions for	Expressed as Dollar Amounts
A	Normal Cost of Benefits	
	Age & Service	$ 193,779
	Disability	26,021
	Death-in-service	6,729
	Total Normal Cost	$ 226,529
B	Member Contributions	0.00
C	Employer Normal Cost	226,529
D	UAL Credit*	(16,421,118)
E	Total Employer Contribution (D+C)	$0

** Unfunded Accrued Liabilities (UAL) were amortized over a period of 30 years using level dollar financing.*

Determination of Unfunded Actuarial Accrued Liability as of December 31, 2017

A. Accrued Liability		
1. For retirees and beneficiaries	$	237,856,579
2. For vested and other terminated members		23,086,965
3. For present active members		
a. Value of expected future benefit payments		7,689,465
b. Value of future normal costs		1,428,610
c. Active member accrued liability: (a) - (b)		6,260,855
4. Total accrued liability		267,204,399
B. Valuation Assets		478,026,270
C. Unfunded Accrued Liability: (A.4) - (B)		(210,821,871)
D. Funding Ratio: (B) / (A.4)		178.9%

The accrued liability for current retirees and beneficiaries shown above includes a liability for stipend benefit payments guaranteed through August 2018.

Development of Experience Gain/(Loss)
Period Ended December 31, 2017

Actual experience will never (except by coincidence) exactly match assumed experience. It is hoped that gains and losses will cancel each other over a period of years, but sizable year-to-year fluctuations are common. Detail on the derivation of the experience gain (loss) is shown below.

(1) UAAL at start of period	($201,406,637)
(2) Normal cost for period	255,665
(3) Actual contributions	0
(4) Interest accrual on (1), (2) and (3)	(14,089,516)
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	(215,240,488)
(6) Change from plan provisions	7,180,076
(7) 2018 Stipend Liability	3,478,738
(8) Expected UAAL after changes: (5) + (6) + (7)	(204,581,674)
(9) Actual UAAL at end of period	(210,821,871)
(10) Gain/(loss): (8) - (9)	6,240,197

SECTION C

SUMMARY OF BENEFIT PROVISIONS AND VALUATION DATA

Summary of Benefit Provisions as of December 31, 2017

Regular Retirement

Employee Group	Eligibility ^ Age	Eligibility ^ Years of Service	Benefit Multiplier^	Post Retirement Adjustments+
Teamsters #214	50 55 60	with 30 or with 25 or with 10	2.50%	2.00% of original retirement income for 18 years
MAPE –hired after 6/30/16	60 Any	with 10 or with 30	1.50%	2.50% of original retirement income for 14 years
-hired before 7/1/16	50 55	with 25 or with 10	2.00%	
PPFDA	50 60	with 25 or with 10	2.25%	2.00% of original retirement income for 18 years
SAEA	50 60	with 25 or with 10	3.00%/2.50%/1.00%@	2.00% of original retirement income for 18 years
AFSCME #2002/PPMA	50 60	with 25 or with 10	2.50%	2.00% of original retirement income for 18 years
Non-Union	50 55 60	with 25 or with 20 or with 10	2.50%	2.00% of original retirement income for 18 years
PMEA			2.00%	2.00% of original retirement income for 14 years
Hospital	55 60	with 25 or with 10	2.00%	Not eligible

@ *For retirements after July 1, 2010, 3.0% for the first 20 years, 2.5% for the next 5 years and 1.0% thereafter (until maximum benefit is reached).*

\+ *Varies by retirement date.*

^ *Varies by retirement date and /or hire or other effective date.*

Summary of Benefit Provisions as of December 31, 2017

Eligibility	Amount
DEFERRED RETIREMENT	
10 or more years of service, benefit begins at age 60 (age 55 for MAPE if hired before 7/1/16); or with 25 or more years of service, benefit begins at age 55 (age 50 for MAPE if hired before 7/1/16).	Computed as a regular retirement but based upon service and final average earnings at termination date.
DUTY DEATH-IN-SERVICE	
No age or service requirements.	Payable upon expiration of workers compensation to the survivors of a member who died in the line of duty. Same amount that was paid by worker's compensation to widow, dependent widower, children under 18 and dependent parents.
NON-DUTY DEATH-IN-SERVICE	
10 years of service.	Computed as a regular retirement but actuarially reduced in accordance with a 100% joint and survivor election provided the member has an Option II election form on file with the Retirement Office.
DUTY DISABILITY	
No age or service requirements.	Computed as a regular retirement benefit. Upon termination of worker's compensation additional service credit is granted for period in receipt of worker's compensation and benefit is recomputed. Minimum benefit prior to voluntary retirement age is the greater of a) 15% of final average earnings, or b) an amount equal to worker's compensation benefit.
NON-DUTY DISABILITY	
10 or more years of service.	Same as a regular retirement, with a minimum benefit of 15% of final average earnings.
MEMBER CONTRIBUTIONS	
None	

The Retirement System is closed to all new City employees except for new employees of the MAPE employment group.

Reported Financial Information at Market Value
Year Ended December 31, 2017

Revenue and Disbursements

Market Value of Assets Beginning of Year:		$466,143,339
	Audit Adjustment	8,692
Revenues:		
a.	Member contributions	
b.	Employer contributions	
c.	Net investment income	67,897,897
d.	Total	67,897,897
Disbursements:		
a.	Pension benefits paid	26,916,912
b.	Administrative expenses	696,340
c.	Total	27,613,252
Market Value of Assets End of Year:		$506,436,676

The net market value yield on plan assets during calendar year 2017 was 14.84%

Assets and Reserves as of December 31, 2017

Assets:

a.	Cash and Short Term [1]	$ 15,775,234
b.	Interest and Dividends	63,669
c.	Fixed Income	109,249,045
d.	Equities	356,601,932
e.	Real Estate	25,580,369
f.	Other	-
g.	Accounts Payable	(833,573)
	Total	$ 506,436,676

Reserve Accounts:

a.	Employee contributions	$ 485,126
b.	Reserve for retired benefit payments	231,193,313
c.	Reserve for employer contributions	274,758,237
	Total	$506,436,676

[1] *Includes receivables / "pre-paid amounts".*

Development of Valuation Assets

		2017
A.	Funding Value Beginning of Year	$466,152,031
B.	Market Value End of Year	506,436,676
C.	Market Value Beginning of Year *	466,152,031
D.	Non-Investment Net Cash Flow	(26,916,912)
E.	Investment Income	
	E1. Market Total: B - C - D	67,201,557
	E2. Assumed Rate	7.00%
	E3. Amount for Immediate Recognition:	
	7.00% x (A + D/2)	31,688,550
	E4. Amount for Phased-In Recognition: E1-E3	35,513,007
F.	Phased-In Recognition of Investment Income	
	F1. Current Year: E4/5	7,102,601
	F2. First Prior Year	0
	F3. Second Prior Year	0
	F4. Third Prior Year	0
	F5. Fourth Prior Year	0
	F6. Total Recognized Investment Gain/(Loss)	7,102,601
G.	**Funding Value End of Year: A + D + E3 + F6**	**$478,026,270**
H.	Difference Between Market & Funding Value	28,410,406
I.	**Recognized Rate of Return**	**8.57%**
J.	**Market Value Rate of Return**	**14.84%**

**reflects an audit adjustment of $8,692*

Retirees and Beneficiaries as of December 31, 2017
Tabulated by Retirement Type

Age	Age and Service		Death-in-Service Survivor		Disability		Totals	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances
Under 20	1	$ 2,579	1	$ 22,644			2	$ 25,223
20 - 24								
25 - 29					1	$ 10,937	1	10,937
30 - 34								
35 - 39	1	5,026	1	44,075			2	49,101
40 - 44	1	3,911	1	12,114	2	19,711	4	35,736
45 - 49	9	176,020					9	176,020
50 - 54	14	400,823	1	15,093	2	48,152	17	464,068
55 - 59	54	1,474,399	2	27,598	5	101,716	61	1,603,713
60 - 64	146	3,574,007	3	88,587	11	205,820	160	3,868,414
65 - 69	226	5,394,855	1	9,233	16	294,729	243	5,698,817
70-74	181	3,869,999	5	62,886	5	123,769	191	4,056,654
75-79	132	2,127,039	4	74,117	12	111,793	148	2,312,949
80-84	100	1,672,949	1	16,352	9	130,334	110	1,819,635
85-89	85	1,333,169	2	8,297	4	29,089	91	1,370,555
90+	37	416,964			2	6,533	39	423,497
Totals	**987**	**$20,451,740**	**22**	**$380,996**	**69**	**$1,082,583**	**1,078**	**$21,915,319**

Valuation Division	Number	Total Benefits
General	642	$ 17,813,701
Hospital	436	4,101,618

The annual benefits shown in the schedule above do not include the temporary stipend benefit of $400 per month.

Inactive Members as of December 31, 2017
Tabulated by Attained Age

Inactive members included in the valuation and their estimated annual pension benefits are summarized in the table below. An inactive member is a person who has left covered employment after becoming eligible for a retirement benefit, but has not yet applied for a retirement allowance, and who has not withdrawn his or her accumulated contributions from the Employees' Savings Fund.

Valuation Division	Number of Members	Estimated Benefits
General	154	$1,946,154
Hospital	29	69,307
Total	183	$2,015,461

Active Members as of December 31, 2017
by Age and Years of Service

Age	Years of Service on Valuation Date							Totals	
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
30-34	1		2					3	$ 105,741
35-39	1			1				2	76,904
40-44		1	2	2				5	235,548
45-49		3		4	1			8	463,548
50-54					1			1	47,511
55-59		1	1	1	2			5	264,418
60		1						1	59,987
61				1				1	64,222
64					1			1	53,388
67		1						1	36,289
68		1						1	42,796
Totals	**2**	**8**	**5**	**9**	**5**	**0**	**0**	**29**	**$1,450,352**

While not used in the financial computations, the following group averages are computed and shown because of their general interest.

Age: 48.9 years
Service: 13.7 years
Annual Pay: $ 50,012

The chart above includes 13 non-union employees and 16 MAPE employee members of the System.

SECTION D

ACTUARIAL METHODS, ACTUARIAL ASSUMPTIONS AND GLOSSARY

Valuation Methods

The Individual Entry-Age Actuarial Cost Method is a method for determining the normal cost and the allocation of benefit values between service rendered before and after the valuation date. It has the following characteristics:

(i) the annual normal cost for each individual active member, payable from the date of employment to the date of retirement, is sufficient to accumulate the value of the member's benefit at the time of retirement; and
(ii) each annual normal cost is a constant percentage of the member's year by year projected covered pay.

Actuarial gains/(losses), as they occur, reduce (increase) the Unfunded Actuarial Accrued Liability.

Financing Unfunded Actuarial Accrued Liabilities - As of the valuation date, System assets exceed System Actuarial Accrued Liabilities resulting in a funding surplus. This surplus was amortized over an open 30-year period using a level dollar amortization method.

Valuation Assets - The funding value of assets recognizes assumed investment income fully each year. Differences between actual and assumed investment income are phased-in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, funding value of assets will tend to be lower than market value. During periods when investment performance is less than the assumed rate, funding value of assets will tend to be greater than market value. The funding value of assets is unbiased with respect to market value. At any time it may be either greater or less than market value.

Actuarial Assumptions Used for the Valuation

Investment Return: 7.00% per year net of administrative and investment expenses.

This assumption is used to equate the value of payments due at different points in time and was first used for the December 31, 2016 valuation.

Pay Projections: These assumptions are used to project current pays to those upon which benefits will be based. The base economic assumption was first used for the December 31, 2016 valuation.

Sample Ages	Annual Rate of Pay Increase for Sample Ages Base (Economic)	Merit & Longevity	Total
20	2.50%	4.90%	7.40%
25	2.50	3.70	6.20
30	2.50	2.90	5.40
35	2.50	2.10	4.60
40	2.50	1.60	4.10
45	2.50	1.40	3.90
50	2.50	1.30	3.80
55	2.50	1.10	3.60
60	2.50	1.10	3.60

Other Liability Adjustments: Retirement liabilities were loaded by 8.25% for non-union members (7.0% for MAPE members) to account for the member's right to use lump sum payments for unused sick leave at retirement.

Mortality: The RP-2014 Healthy Annuitant Mortality Table (unadjusted) projected to 2021 using a static projection based on the 2-dimensional MP-2014 improvement scales. This assumption was first used for the December 31, 2016 valuation. Sample values follow:

Sample Ages	Future Life Expectancy (Years)	
	Men	Women
50	33.50	36.20
55	29.15	31.69
60	24.96	27.26
65	20.91	22.97
70	17.05	18.88
75	13.44	15.06
80	10.17	11.58

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. The membership size in this group is not sufficiently large to determine if there is a margin for mortality improvements. However, based upon our experience with a broad cross section of public sector plans similar in nature to this plan, it is our opinion that there is a provision for future mortality improvement in the current mortality assumption.

Rates of Separation from Active Membership: The rates do not apply to members eligible to retire and do not include separation on account of death or disability. This assumption measures the probabilities of members remaining in City employment.

Sample Ages	Completed Years of Service	% of Active Members Separating within Next Year All Members
ALL	0	20.00%
	1	18.00%
	2	15.00%
	3	12.00%
	4	10.00%
25	5 & Over	7.00%
30		6.00%
35		4.75%
40		3.50%
45		2.40%
50		1.50%
55		1.00%
60		1.00%
65		1.00%

Rates of Disability: These rates represent the probabilities of active members becoming disabled.

Sample Ages	Percent Becoming Disabled within Next Year All Members
20	0.42%
25	0.42
30	0.45
35	0.51
40	0.67
45	0.92
50	1.36
55	2.20

All disabilities were assumed to be non-duty disabilities.

Rates of Retirement: These rates are used to measure the probabilities of an eligible member retiring during the next year.

Percent of Active Members Retiring within One Year	
All Members	
Ages	**%**
50	35%
51	30
52	25
53	25
54	25
55	25
56	25
57	50
58	50
59	50
60	20
61	25
62	30
63	30
64	25
65	50
66	100

Eligibility for retirement benefits is shown in Section C of this report.

Glossary

Actuarial Accrued Liability - The difference between (i) the actuarial present value of future plan benefits, and (ii) the actuarial present value of future normal cost. Sometimes referred to as "accrued liability" or "past service liability." Under the actuarial cost method used the "AAL" differs somewhat from the value of future payments based on benefits earned as of the valuation date.

Accrued Service - The service credited under the plan which was rendered before the date of the actuarial valuation.

Actuarial Assumptions - Estimates of future plan experience with respect to rates of mortality, disability, retirement, investment income and salary increases. Decrement assumptions (rates of mortality, separation and retirement) are generally based on past experience, often modified for projected changes in conditions. Economic assumptions (salary increases and investment income) consist of an underlying rate appropriate in an inflation-free environment plus a provision for a long-term average rate of inflation.

Actuarial Cost Method - A mathematical budgeting procedure for allocating the dollar amount of the "actuarial present value of future plan benefits" between the normal costs to be paid in the future and the actuarial accrued liability. Sometimes referred to as the "actuarial funding method."

Actuarial Equivalent - Benefits whose actuarial present values are equal.

Actuarial Present Value - The amount of funds presently required to provide a payment or series of payments in the future. It is determined by discounting the future payments at a predetermined rate of interest, taking into account the probability of payment.

Amortization - Paying off an interest-bearing liability by means of periodic contributions of interest and principal, as opposed to a lump sum payment.

Experience Gain (Loss) - A measure of the difference between actual experience and experience anticipated by a set of actuarial assumptions during the period between two actuarial valuation dates, in accordance with the actuarial cost method being used.

Normal Cost - The annual cost assigned, under the actuarial funding method, to current and subsequent plan years. Sometimes referred to as "current service cost." An amortization payment toward the unfunded actuarial accrued liability is in addition to the normal cost.

Glossary

Plan Termination Liability - The actuarial present value of future plan benefits based on the assumption that there will be no further accruals for the future service and salary. The termination liability will generally be less than the liabilities computed on a "going-concern" basis and is not normally determined in a routine actuarial valuation.

Reserve Account - An account used to indicate that funds have been set aside for a specific purpose and are not generally available for other uses.

Unfunded Actuarial Accrued Liability - The difference between the actuarial accrued liability and valuation assets. Sometimes referred to as "unfunded accrued liability."

Valuation Assets - The value of current plan assets recognized for valuation purposes.

SECTION E

OTHER FINANCIAL DISCLOSURES

Schedule of Funding Progress

Actuarial Valuation Date	Actuarial Value of Assets (a)	Entry Age Accrued Liability (b)	Unfunded AAL (UAAL) (b) – (a)	Funded Percent (a) / (b)	Valuation Payroll (c)	UAAL as a % of Valuation Payroll [(b) – (a)] / (c)
12/31/1996@	$256,723,386	$184,624,697	$ (72,098,689)	139.1 %	$15,915,806	- -
12/31/1997@#	287,764,412	189,207,579	(98,556,833)	152.1	18,295,631	- -
12/31/1998	315,420,281	194,984,577	(120,435,704)	161.8	18,362,384	- -
12/31/1999@	350,846,897	209,172,136	(141,674,761)	167.7	18,747,510	- -
12/31/2000@	378,063,942	217,942,909	(160,121,033)	173.5	18,728,688	- -
12/31/2001@#	395,743,819	227,901,435	(167,842,384)	173.6	19,887,803	- -
12/31/2002@	393,214,033	235,422,367	(157,791,666)	167.0	20,039,136	- -
12/31/2003	394,367,065	247,396,857	(146,970,208)	159.4	20,807,612	- -
12/31/2004	394,807,254	258,365,787	(136,441,467)	152.8	21,320,477	- -
12/31/2005	391,409,757	260,103,260	(131,306,497)	150.5	16,751,815	- -
12/31/2006	409,983,490	266,457,429	(143,526,061)	153.9	14,996,753	- -
12/31/2007	433,028,186	257,940,349	(175,087,837)	167.9	N/A	- -
12/31/2008	416,678,512	261,497,756	(155,180,756)	159.3	N/A	- -
12/31/2009	405,193,572	255,720,207	(149,473,365)	158.5	N/A	- -
12/31/2010	399,573,669	253,866,554	(145,707,115)	157.4	N/A	- -
12/31/2011	383,349,729	249,739,988	(133,609,741)	153.5	N/A	- -
12/31/2012	369,621,671	247,968,743	(121,652,928)	149.1	N/A	- -
12/31/2013	396,857,874	279,931,726	(116,926,148)	141.8	N/A	- -
12/31/2014	413,418,482	270,139,151	(143,279,331)	153.0	N/A	- -
12/31/2015#	417,151,476	252,615,769	(164,535,707)	165.1	1,528,731	- -
12/31/2016#@	466,143,339	264,736,702	(201,406,637)	176.1	1,540,472	- -
12/31/2017@	478,026,270	267,204,399	(210,821,871)	178.9	1,450,352	- -

Results for the 2007-2015 valuations were prepared by previous actuarial firms and are shown here for comparison.

 # Assumption/method change.

@ Plan provision changes.

Schedule of Employer Contributions

Valuation Date December 31,	Fiscal Year Beginning July 1,	Actuarially Computed Employer Contribution[1]
1996 [2]		$1,596,409
1997 [2,3]		1,068,980
1998		598,231
1999 [2]		133,572
2000 [2]		158,921
2001 [2,3]		140,226
2002 [2]		49,456
2003	2005	49,163
2004	2006	0
2005	2007	0
2006	2008	0
2007	2009	0
2008	2010	0
2009 [2]	2011	0
2010	2012	0
2011	2013	0
2012	2014	0
2013	2015	0
2014	2016	0
2015 [3]	2017	0
2016 [3]	2018	0
2017 [2]	2019	0

[1] *For years prior to 2016, information was provided by the Retirement System. Contribution amounts for valuation years 2007-2015 were prepared by prior actuaries.*

[2] *Plan provision change*

[3] *Assumption/method change*

GRS Retirement Consulting

800.521.0498 | P: 248.799.9000 | F: 248.799.9020 | www.grsconsulting.com

May 18, 2018

Ms. Deborah Munson
Executive Director
City of Pontiac General Employees'
Retirement System
2201 Auburn Road, Suite B
Auburn Hills, Michigan 48326

Dear Deborah:

Enclosed are 15 copies of the report of the December 31, 2017 annual actuarial valuation of the pension liabilities covering the City of Pontiac General Employees' Retirement System.

Sincerely,

Louise Gates

Louise M. Gates, ASA, FCA, MAAA

Enclosures

One Towne Square | Suite 800 | Southfield, Michigan 48076-3723