GRS Gabriel Roeder Smith & Company
Consultants & Actuaries

CENTRAL COUNTY TRANSPORTATION AUTHORITY PENSION PLAN

ANNUAL ACTUARIAL VALUATION

DECEMBER 31, 2016

CONTENTS

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June 5, 2017

Retirement Investment Committee
Board of Trustees
Central County Transportation Authority Pension Plan
Kalamazoo, Michigan

Re: Central County Transportation Authority Pension Plan
Annual Actuarial Valuation as of December 31, 2016 Actuarial Disclosures

Ladies and Gentlemen:

The results of the December 31, 2016 Annual Actuarial Valuation of the Central County Transportation Authority (CCTA) Pension Plan are presented in this report.

The computed contribution rate shown on page B-2 may be considered as a minimum contribution rate that complies with the Board's funding policy. Users of this report should be aware that contributions made at that rate do not guarantee benefit security. Given the importance of benefit security to any pension plan, we suggest that contributions to the Plan in excess of those presented in this report be considered.

The contribution rate in this report is determined using the actuarial assumptions and methods disclosed in Section D of this report. Additional assessment of risks was outside the scope of this assignment. We encourage a review and assessment of investment and other significant risks that may have a material effect on the Plan's financial condition.

This report was prepared at the request of the Board and is intended for use by the Pension Plan and those designated or approved by the Board. This report may be provided to parties other than the Plan only in its entirety and only with the permission of the Board. GRS is not responsible for unauthorized use of this report.

The purposes of the valuation are to measure the Plan's funding progress, and to determine the employer contribution rate for the fiscal year ending December 31, 2016. This report should not be relied on for any purpose other than the purposes described herein. Determinations of financial results, associated with the benefits described in this report, for purposes other than those identified above may be significantly different.

The findings in this report are based on data and other information through December 31, 2016. 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 scope of an actuarial valuation does not include an analysis of the potential range of such future measurements.

This valuation assumed the continuing ability of the plan sponsor to make the contributions necessary to fund this Plan. A determination regarding whether or not the plan sponsor is actually able to do so is outside our scope of expertise and was not performed.

The valuation was based upon information furnished by the City of Kalamazoo concerning Pension Plan benefits, financial transactions, plan provisions and active members, terminated members, retirees and beneficiaries. We checked for internal reasonability and year-to-year consistency, but did not audit the data. We are not responsible for the accuracy or completeness of the information provided by the City of Kalamazoo.

In addition, this report was prepared using certain assumptions approved by the Board as described in the section of this report entitled Actuarial Cost Methods and Assumptions.

This report has been prepared by actuaries who have substantial experience valuing public employee pension plans. To the best of our knowledge the information contained in this report is accurate and fairly presents the actuarial position of the Central County Transportation Authority Pension Plan as of the valuation date. All calculations have been made in conformity with generally accepted actuarial principles and practices, and with the Actuarial Standards of Practice issued by the Actuarial Standards Board.

James D. Anderson and Rebecca L. Stouffer are Members of the American Academy of Actuaries (MAAA) and meet the Academy's Qualification Standards to render the actuarial opinions contained herein.

The signing actuaries are independent of the plan sponsor.

Gabriel, Roeder, Smith & Company will be pleased to review this valuation and report with the Board and to answer any questions pertaining to the valuation.

Respectfully submitted,

James D. Anderson   Rebecca L. Stouffer

James D. Anderson, FSA, EA, MAAA   Rebecca L. Stouffer, ASA, MAAA

JDA/RLS:dj

SECTION A
EXECUTIVE SUMMARY

EXECUTIVE SUMMARY

Computed Employer Contributions - Fiscal Year Beginning October 1, 2017.

CCTA employer contributions will not be required for the fiscal year ending 2018.

The pensions provided by the CCTA to its employees through the Pension Plan are valuable financial benefits. Every year that CCTA employees earn another year of credit toward their pensions, there is a cost associated with that credit. The cost of benefits accruing during the year, known as the normal cost, totals $580 thousand for fiscal year beginning October 1, 2017. Refer to page B-2 for additional information. The reason that CCTA employer contributions are not currently needed to support the Retirement Plan is that favorable experience over decades, including time when covered under the City of Kalamazoo Employees Retirement System, and member contributions have resulted in assets in excess of the accrued liability as of the valuation date. This overfunded liability is currently supporting the pension costs that would otherwise require CCTA employer contributions. As employees accrue larger pensions by earning additional service each year, the cost of those larger pensions may use up the overfunded liability.

2016 Funding Position

This year valuation assets represent 134.0% of accrued liabilities; last year the ratio was 128.3% (under the City's Plan). The increase in funding position is primarily the result of experience gains outlined on page A-3.

Contribution Requirements Longer Term

The Plan continues to have an overfunding credit and application of the credit brings the required Employer contribution amount to $0. Contributions are based on a smoothed (actuarial) value of assets that recognize a given year's asset gain or loss over the current and subsequent four years. Future investment gains could offer additional support to the overfunding. Conversely, future investment losses would reduce the credit. Any significant losses will hasten the emergence of a CCTA contribution requirement.

EXECUTIVE SUMMARY (CONTINUED)

Reasons for Changes

There are three general reasons why contribution requirements 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 and the methods used to finance the benefits. The third is the difference during the year between the Plan's actual experience and what the assumptions predicted, or the plan experience.

Changes in Plan Provisions

Effective October 1, 2016, the City of Kalamazoo's existing transit operations spun off to become part of the Central County Transportation Authority (CCTA). The CCTA Pension Plan is a stand alone single-employer pension plan. Comparisons made within this report to prior years' plan experience are based upon the "Metro Transit" group within the City of Kalamazoo Employees Retirement System.

There have been no plan provision changes since the 2014 valuation.

Changes in Cost Methods and Actuarial Assumptions

As a result of the CCTA's spin-off and the similar relative values of the Market Value of Assets (City and CCTA combined) to the Actuarial Value of Assets (City and CCTA combined), the December 31, 2016 Actuarial Value of Assets was reset to the Market Value. Implications of this action follow:

1) Provision of a clean starting point for the separate City and CCTA asset values. The 2017 valuation will smooth investment gains/(losses) separately for the City and CCTA, utilizing the same method in place historically.
2) A slight 0.9% increase in total valuation assets as of December 31, 2016.
3) Full recognition of historical deferred assets gains/(losses).

The initial December 31, 2016 actuarial asset value was determined in accordance with the methodology described in the Appendix of the Annual Actuarial Valuation of the City of Kalamazoo Employees Retirement System as of December 31, 2016. A mark-to-market adjustment of $5.8 million reset the Actuarial Value of Assets to Market Value of Assets as the valuation date.

Changes in Cost Methods and Actuarial Assumptions (Concluded)

The contributions included in this report cover the fiscal year beginning October 1, 2017. This represents a change in the lag compared with the December 31, 2015 valuation, which developed the contribution requirement for calendar year 2016. For the period January 1, 2017 through September 30, 2017, the recommended employer contribution equals $0. Given the employer contribution requirement is $0 in both the December 31, 2015 (as part of the City Plan) and the December 31, 2016 (separately as CCTA) valuations, either valuation would be an appropriate basis for determination of the January 1, 2017 through September 30, 2017 employer contribution requirement. We recommend confirming this approach with your auditor.

2016 Plan Experience

There was an experience gain of $745,915 during 2016, primarily due to investment return greater than anticipated. This represents 3.31% of the 2015 accrued liabilities. The effect of this gain is an increase in the overfunding credit.

Causes of the Gain

The market value of assets returned 12.67% in 2016 and the return on the (smoothed) valuation assets was 11.23%. Net investment income on the smoothed basis was larger than the long-term assumption of 7.5%, resulting in a gain of $761,437. The remaining loss of $15,522 represents demographic experience different than assumed.

Investment gain (loss)	$ 761,437
Remaining gain (loss)	(15,522)
Gain (loss) from all causes	$ 745,915

Other Observations

Given the plan's contribution allocation procedure, if all actuarial assumptions are met (including the assumption of the plan earning 7.5% on the actuarial value of assets for the plan), it is expected that:

(1) Employer normal cost amounts as a percentage of payroll will remain approximately level year to year;
(2) the overfunding credit will be used up over a period of years; and
(3) the funded status of the plan will decrease towards a 100% funded ratio.

EXECUTIVE SUMMARY (CONCLUDED)

Unless otherwise indicated, a funded status measurement presented in this report is based upon the actuarial accrued liability and the actuarial value of assets. Unless otherwise indicated, with regard to any funded status measurements presented in this report:

(1) The measurement is inappropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations.
(2) The measurement is inappropriate for assessing the need for or the amount of future employer contributions.

Conclusion

The overfunded position of the Plan has generated a funding credit which allows the CCTA to temporarily reduce annual contribution requirements to the Plan.

SECTION B

VALUATION RESULTS

COMPUTED CONTRIBUTIONS TO PROVIDE BENEFITS

The Pension Plan is supported by contributions from the CCTA (when required) and active members and by the investment income earned on Plan assets. Member contribution rates are determined by the benefit provisions of the Plan and are summarized in Section B of this report. The CCTA provides an actuarially determined contribution, the remainder, if any, needed to meet the financial objective.

Member and CCTA contributions cover both (i) normal cost, and (ii) financing of the unfunded accrued liability over a period of future years. The normal cost is the portion of Plan costs allocated to the current year by the valuation method described in Section D. The unfunded accrued liability is the portion of Plan costs not covered by present Plan assets and future normal costs.

For a plan that is overfunded, contribution income needs to cover the normal cost less an amortization credit on the overfunding. When a plan is extremely overfunded, the amortization credit can completely offset the normal cost, eliminating the need for employer contribution income. This can persist for years as long as investment income is sufficient to maintain the overfunding.

When contributions are once again required, we recommend one of the following procedures for determining CCTA contributions to the Pension Plan.

(1) Contribute dollar amounts for a period which are equal to the CCTA's percent-of-payroll contribution requirements on page B-2 multiplied by the covered active member payroll for the period. Adjustments should be made as necessary to exclude items of pay that are not covered compensation for Pension Plan benefits and to include non-payroll payments that are covered compensation.

(2) Contribute the dollar amounts on page B-2.

COMPUTED CONTRIBUTIONS TO PROVIDE BENEFITS EXPRESSED AS PERCENTS AND DOLLARS OF ACTIVE MEMBER PAYROLL

Contributions for the Year Beginning October 1,	**2017**
Normal cost of benefits	
Age & service	9.92 %
Disability	1.46
Pre-retirement survivor	0.35
Refunds of member contributions	0.19
Total normal cost	11.92
Administrative expense allowance	0.65
Less: Member contributions*	1.36
Employer normal cost	11.21
Unfunded actuarial accrued liabilities^	(18.71)
Employer Contribution Requirement@	**(7.50)**

Contributions for the Year Beginning October 1,	**2017**
Normal cost of benefits	
Age & service	$ 482,878
Disability	71,069
Pre-retirement survivor	17,037
Refunds of member contributions	9,249
Total normal cost	580,233
Administrative expense allowance	31,640
Less: Member contributions*	66,201
Employer normal cost	545,672
Unfunded actuarial accrued liabilities^	(910,751)
Employer Contribution Requirement@	**$ (365,079)**
Valuation Payroll	**$ 4,582,818**
Recommended Employer Contribution	**$ 0**

* *Weighted average of various contribution rates.*

@ *As the Plan cannot contribute back to the employer, no employer contribution is required. Payroll used to develop the Employer Contribution Requirement is adjusted for pay increases assumed to occur between the valuation date and the fiscal year of contribution.*

^ *Page B-4 displays the unfunded accrued liabilities (or overfunding) that are amortized by the contribution rates shown above.*

HISTORY OF CCTA'S CONTRIBUTION RATES

Fiscal Year	Valuation Date Dec. 31*	Contribution as Percent of Valuation Payroll	Recommended	Actual
2017 - 2018	2016	0.00 %	0	!

* *Prior to the December 31, 2016 valuation, the CCTA was part of the City of Kalamazoo Employees Retirement System.*

! *Not yet available.*

UNFUNDED ACCRUED LIABILITY

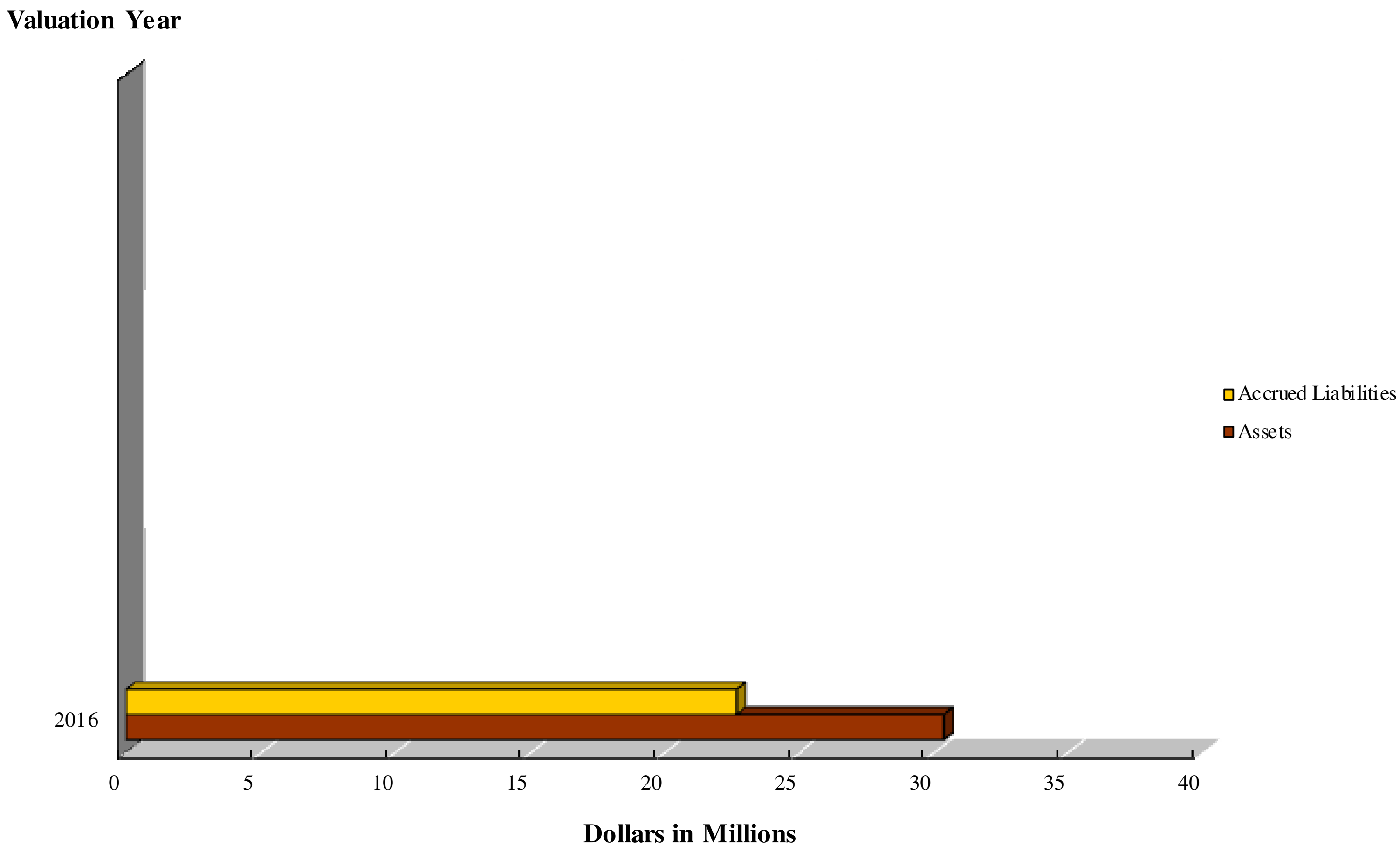
	Year Ending December 31, 2016
A. Accrued Liability	
1. For Retirees and Beneficiaries	$13,777,708
2. For Vested Terminated Members	521,696
3. For Present Active Members	
a. Value of expected future benefit payments	12,097,706
b. Value of future normal costs	3,768,837
c. Active member liability: (a) - (b)	8,328,869
4. Total	22,628,273
B. Present Assets	
1. Valuation Basis	30,330,134
2. Market Basis	30,330,134
C. Unfunded Accrued Liability (Excess Assets)	
1. Valuation Basis: (A.4) - (B.1)	(7,701,861)
2. Market Basis: (A.4) - (B.2)	(7,701,861)
D. Funded percent	
1. Valuation Basis: (B.1) / (A.4)	134.0%
2. Market Basis: (B.2) / (A.4)	134.0%

SCHEDULE OF FUNDING PROGRESS

Actuarial Valuation Date*	Actuarial Value of Assets (a)	Actuarial Accrued Liability (AAL) Entry-Age (b)	Unfunded AAL (UAAL) (b)-(a)	Funded Ratio (a)/(b)	Covered Payroll (c)	UAAL as a Percentage of Covered Payroll [(b)-(a)]/(c)
12/31/2016	$30,330,134	$22,628,273	$ (7,701,861)	134.0%	$4,582,818	(168.1)%

* *Prior to the December 31, 2016 valuation, the CCTA was part of the City of Kalamazoo Employees Retirement System.*

Assets and Accrued Liabilities



2016 assets equaled 134% of accrued liabilities.

DEVELOPMENT OF EXPERIENCE GAIN (LOSS)
YEAR ENDED DECEMBER 31, 2016

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 development of the experience gain (loss) is shown below:

	Year Ending December 31, 2016
(1) UAAL* at start of year	$(6,709,813)
(2) Normal cost from prior year	569,186
(3) Actual contributions**	54,159
(4) Interest accruals on (1), (2), and (3)	(484,155)
(5) Expected UAAL before changes: (1) + (2) - (3) + (4)	(6,678,941)
(6) Change from benefit increases	0
(7) Change from revised actuarial assumptions and/or methods	(277,005)
(8) Expected UAAL after changes: (5) + (6) + (7)	(6,955,946)
(9) Actual UAAL at end of year	(7,701,861)
(10) Gain (loss): (8) - (9)	745,915
(11) Gain (loss) as percent of actuarial accrued liabilities at start of year	3.31%

* *Unfunded Actuarial Accrued Liabilities, based upon Appendix-2 of the December 31, 2015 Annual Actuarial Valuation of the City of Kalamazoo Employees Retirement System.*
** *Actual contributions as reported in the member data file for 2016.*

2016 Gain (Loss)		
Total	**Investment**	**Non-Investment**
$745,915	$761,437	$(15,522)

Development of Valuation Assets

Year Ended December 31:	2014	2015	2016	2017	2018	2019	2020
A. City: Valuation Assets Beginning of Year	$547,923,629	$580,220,033	$596,998,070				
B. City + CCTA: Market Value End of Year	625,472,082	589,527,061	634,741,566				
C. City: Market Value Beginning of Year	610,613,257	625,472,082	589,527,061				
D. Non-Investment Net Cash Flow	(26,206,621)	(25,970,504)	(27,725,487)				
E. Investment Income							
E1. Market Total: B - C - D	41,065,446	(9,974,517)	72,939,992				
E2. Amount for Immediate Recognition (7.5%)	40,111,524	42,542,609	43,735,149				
E3. Amount for Phased-In Recognition: E1-E2	953,922	(52,517,126)	29,204,843				
F. Phased-In Recognition of Investment Income							
F1. Current Year: 0.2 x E3	190,784	(10,503,425)	5,840,969				
F2. First Prior Year	13,562,349	190,784	(10,503,425)				
F3. Second Prior Year	6,845,641	13,562,349	190,784	0			
F4. Third Prior Year	(9,889,418)	6,845,641	13,562,349		0		
F5. Fourth Prior Year	7,682,145	(9,889,417)	6,845,641	0	0	0	
F6. Mark to Market	0	0	5,797,516	0	0	0	0
F7. Total Phased-In Recognition	18,391,501	205,932	21,733,834	0	0	0	0
G. City + CCTA: Valuation Assets End of Year: A + D + E2 + F7	580,220,033	596,998,070	634,741,566				
H. Difference between Market & Valuation Assets: B - G	45,252,049	(7,471,009)	0	0	0	0	0
I. Valuation Asset Recognized Rate of Return	10.94%	7.54%	11.23%				
J. Market Value Recognized Rate of Return	6.87%	(1.63)%	12.67%				
K. End of Year Assets By Plan (as determined in Appendix A of the City of Kalamazoo Employees Retirement System valuation report)							
K1. City							
a. Market Value of Assets			604,411,432				
b. Funding Value of Assets			604,411,432				
K2. CCTA							
a. Market Value of Assets			30,330,134				
b. Funding Value of Assets			30,330,134				

The Valuation Assets recognizes assumed investment income (line E2) fully each year. Differences between actual and assumed investment income (line E3) are phased-in over a closed 5-year period. During periods when investment performance exceeds the assumed rate, Valuation Assets will tend to be less than Market Value. During periods when investment performance is less than the assumed rate, Valuation Assets will tend to be greater than Market Value. The Valuation Assets are unbiased with respect to Market Value. At any time, it may be either greater or less than Market Value. If assumed rates are exactly realized for 4 consecutive years, it will become equal to Market Value.

Valuation Asset Growth History

Year	Net Contribution Income	Net Investment Return	Benefit Payments and Refunds	Year End Assets
2016 *				$30,330,134

* *After reflecting CCTA spin-off into a stand alone single employer Plan.*

DEVELOPMENT OF VALUATION INVESTMENT GAIN (LOSS)
YEAR ENDED DECEMBER 31, 2016

The December 31, 2015 valuation assumed an average 7.5% net return on valuation assets for future years. Net investment return in excess of 7.5% represents a gain. If net investment return falls short of 7.5%, the difference between an income of 7.5% and the net return represents a loss. For the year ended December 31, 2016, the valuation anticipated investment return of $43,735,149 (see item E2 on page B-8). Total phased-in recognition amounted to a gain of $15,936,318 for the year (see item F7-F6 on page B-8), resulting in a return of 10.23% (11.23% after reflecting the mark-to-market) on a valuation basis (see item I on page B-8).

Please note that this analysis uses asset values and investment income as defined for the actuarial valuation (dollar weighted). It is not, therefore, appropriate as a measure of manager performance.

RATES OF RETURN AND CHANGE IN PAYS AND LIABILITIES

	Year Ended December 31,					5-Year
	2016	**2015**	**2014**	**2013**	**2012**	**Average***
Increase in average salary#	5.9%					N/A
Return on assets^	11.2					N/A
Liability growth	0.3					N/A

* *Compound rate of increase.*

\# *For members employed throughout the most recent two years.*

^ *The nominal rate of return was computed using the approximate formula i = I divided by 1/2 (A + B - I), where I is actual investment income net of expenses, A is the beginning of year asset value, and B is the end of year asset value.*

SECTION C

SUMMARY OF THE INFORMATION SUBMITTED FOR THE VALUATION

BRIEF SUMMARY OF BENEFIT PROVISIONS *
AS OF DECEMBER 31, 2016

Benefit Groups:

Exempt Employees (Non-Union)
Amalgamated Transit Union (ATU)
Kalamazoo Municipal Employees Association (KMEA)

Final Average Compensation (FAC): Highest 3 consecutive years out of the last 10.

Benefit Multiplier: Varies by Benefit Group.

Non-Union: 2.3% of FAC.
ATU: 2.1% of FAC.
KMEA: 2.1% of FAC.

Normal Retirement:

Non-Union Eligibility:

Hired Prior to 9/1/2010: Age 62 with 5 years of service or age 57 with 25 years of service.
Hired On or After 9/1/2010: Age 62 with 10 years of service or age 57 with 25 years of service.

ATU Eligibility: Age 62 with 10 years of service or age 57 with 25 years of service.

KMEA Eligibility:

Hired Prior to 1/1/2009: Age 62 with 8 years of service or age 57 with 25 years of service.
Hired On or After 1/1/2009: Age 62 with 10 years of service or age 57 with 25 years of service.

Amount of Benefit: Benefit Multiplier x FAC x Years of Credited Service.

Early Retirement:

Non-Union Eligibility:

Hired Prior to 9/1/2010: Age 62 with 5 years of service or rule of 70 with minimum age 55.
Hired On or After 9/1/2010: Age 60 with 10 years of service or rule of 70 with minimum age 55.

ATU Eligibility:

Hired Prior to 9/1/2010: Age 62 with 5 years of service or rule of 70 with minimum age 55.
Hired On or After 9/1/2010: Age 60 with 10 years of service or rule of 70 with minimum age 55.

KMEA Eligibility:

Hired Prior to 1/1/2009: Age 62 with 8 years of service or rule of 70 with minimum age 55.
Hired On or After 1/1/2009: Age 60 with 10 years of service or rule of 70 with minimum age 55.

Amount of Benefit: Normal Retirement Benefit reduced for early commencement.

Amount of Reduction: 4/10 of 1% for each month retirement is prior to age 62 (from age 57 if retired with 25 or more years of credited service).

Deferred Vested Retirement:

Eligibility: Satisfaction of the service requirement for Early Retirement.

Amount of Benefit: Normal Retirement Benefit based upon FAC and years of credited service at termination.

Commencement of Benefit: Upon attainment of minimum age requirement for Normal Retirement.

* *This represents a brief summary of Plan provisions, as understood by the Actuary. Official Plan documents and any applicable Collective Bargaining Agreements will ultimately govern the benefits payable from the Plan.*

Brief Summary of Benefit Provisions *
as of December 31, 2016 (Concluded)

Disability Retirement:

Eligibility: Satisfaction of the minimum service requirement for Early Retirement.

Amount of Benefit: Normal Retirement Benefit based upon FAC and years of credited service at termination.

Duty Disability Special Conditions:

1. Minimum service requirement is waived.
2. Benefit Minimum is Normal Retirement Benefit based upon FAC at termination and the minimum service requirement for a non-duty disability retirement.

Death Retirement:

Eligibility: Satisfaction of the minimum service requirement for Early Retirement.

Amount of Benefit: Normal Retirement Benefit based upon FAC and years of credited service at termination, reduced in accordance with a 100% joint and survivor election.

Duty Death Special Conditions:

1. Minimum service requirement is waived.
2. Benefit Minimum is:
   a. 33 1/3% of FAC payable to surviving spouse; plus
   b. Unmarried children under 18 years of age receive equal shares of 25% of FAC.

Annual Pension Adjustment:

Non- Union:

Eligibility: Members making election by May 30, 2006 who make increased member contributions annually.
Amount of Increase: 1.5% compounded annually granted on the anniversary of retirement. Increases are granted on January 1 annually, following one full year of retirement.

ATU:

Eligibility: Retired on or after March 1, 2000. Participants retiring before the Normal Retirement Date are excluded.
Amount of Increase: 1.0% compounded annually granted on the anniversary of retirement. Upon attainment of age 75, increases are 2.0% compounded annually.

KMEA:

Eligibility: Retired on or after March 13, 2000. Participants retiring before the Normal Retirement Date are excluded.
Amount of Increase: 1.5% compounded annually granted on the anniversary of retirement. Increases begin the later of attainment of age 64 or the first anniversary of the date of retirement.

Member Contributions:

Non-Union Amount: Varies by date of hire. Members electing the annual pension adjustment by May 30, 2006, pay additional 2.0% above the following.

Hired before 6/1/2006: 1.5% of compensation.
Hired on or after 6/1/2006: 3.0% of compensation.

ATU Amount: 1% of compensation.
KMEA Amount: 1% of compensation.

Periodic Payment:

Description: Subject to section 15.5 of the CCTA Pension Plan document, certain retirees are eligible for a nonguaranteed payment, with a potential payment every third year. The payment is subject to additional requirements related to the need for projected employer contributions to the Plan and can be reduced or eliminated based on CCTA Board recommendation.

* *This represents a brief summary of Plan provisions, as understood by the Actuary. Official Plan documents and any applicable Collective Bargaining Agreements will ultimately govern the benefits payable from the Plan.*

REPORTED FINANCIAL INFORMATION
YEAR ENDED DECEMBER 31, 2016
MARKET VALUE

CITY AND CCTA COMBINED

INCOME AND EXPENSES

Revenues:		
a. Member contributions	$ 1,100,129	
b. Employer contributions	0	
c. Interest and dividends	16,890,114	
d. Gain on sale of investments	15,000,871	
e. Unrealized gains and losses	43,071,080	
f. Miscellaneous	1,427	
g. Total		$76,063,621
Expenditures:		
a. Refunds of member contributions	22,652	
b. Benefits paid	28,474,218	
c. Administrative expenses	328,746	
d. Investment expenses	2,023,500	
Total		30,849,116
Reserve Increase:		
Total revenues minus total expenditures		$45,214,505

Please note that the above exhibit shows the combined experience for the City of Kalamazoo and the CCTA.

REPORTED FINANCIAL INFORMATION (VALUATION BASIS)
YEAR ENDED DECEMBER 31, 2016

CITY AND CCTA COMBINED

ASSETS AND RESERVES ON VALUATION BASIS

Assets:		Reserve Accounts:	
a. Cash or equivalents	$ 251,608	a. Member contributions	$ 43,640,870
b. Receivables net of payables	(67,186)	b. Employer contributions	243,144,234
c. Stocks	435,933,185	c. Retired benefit payments	347,956,463
d. Fixed income	165,345,079		
e. Real Estate Investment Fund	33,278,881		
f. Funding Value Adjustment	0		
Total	$634,741,567	Total	$634,741,567

Please note that the above exhibit shows the combined experience for the City of Kalamazoo and the CCTA.

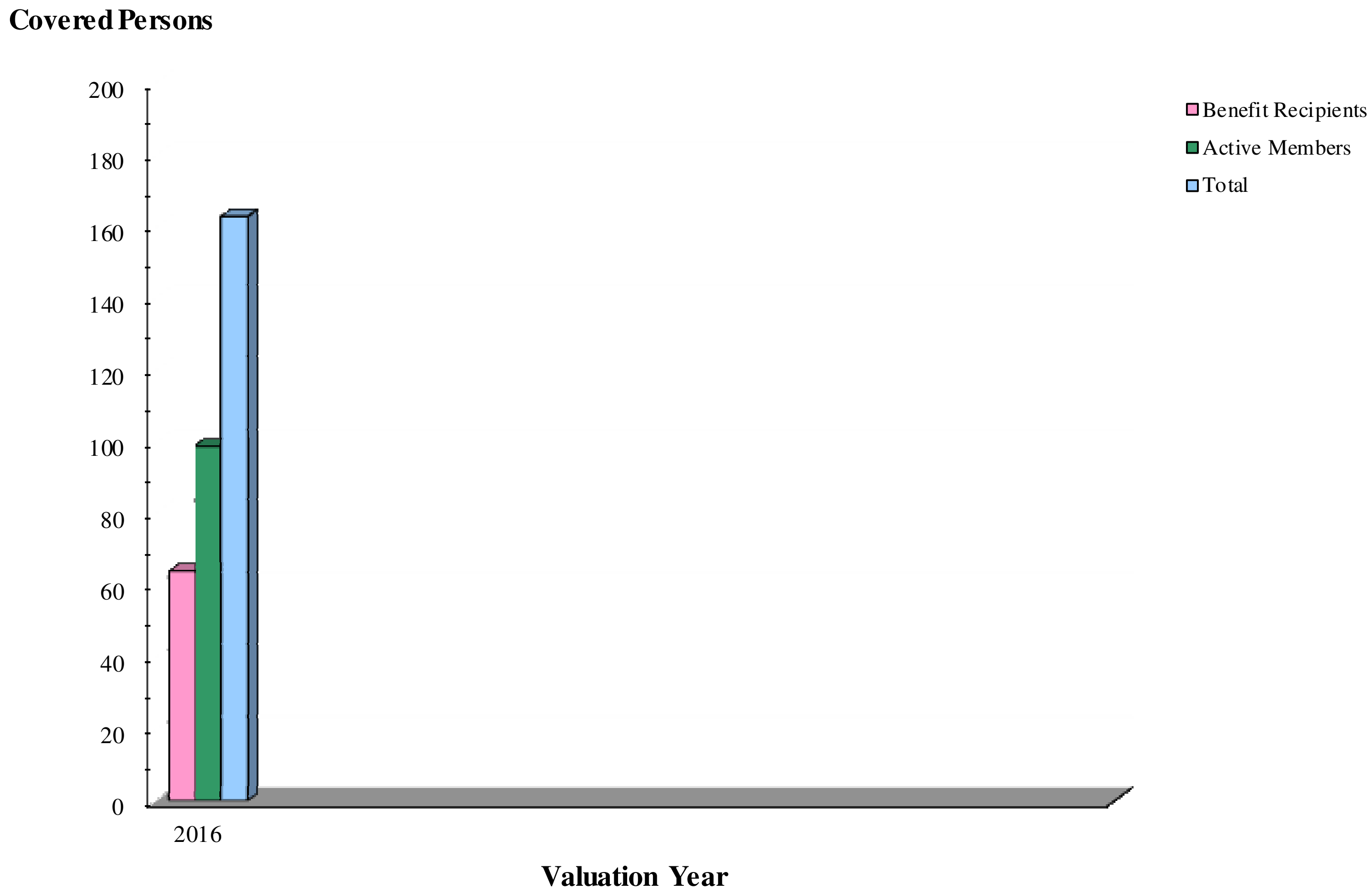
CCTA ALONE

The value of future benefit payments to retirees and beneficiaries as of December 31, 2016 is $13,777,708. The value of the Reserve for Retired Benefit Payments was $0. The figures below compare the retired liabilities to the reported retiree reserve balance.

Accrued Liability	Reported Retiree Reserve	Unfunded Liability (Excess Assets)
$ 13,777,708	$ 0	$ 13,777,708

Our valuation assumes that amounts equal to the unfunded retiree liabilities for all divisions have been transferred effective January 1, 2017 from the employer reserves to the retiree reserves, to fully fund the retiree accrued liabilities.

ACTIVE MEMBERS AND BENEFIT RECIPIENTS



Retirees and Beneficiaries as of December 31, 2016

Tabulated by Nearest Age and Type of Retirement

Attained Age	Age and Service No.	Age and Service Annual Allowances	Disability No.	Disability Annual Allowances	Survivors No.	Survivors Annual Allowances	Totals No.	Totals Annual Allowances
45 - 49			1	$ 14,145			1	$ 14,145
50 - 54	1	$ 39,004	2	25,959			3	64,963
55 - 59	4	130,628	2	45,603			6	176,231
60 - 64	11	327,997	5	66,487			16	394,484
65 - 69	11	234,752	1	10,873			12	245,625
70 - 74	13	208,153	3	26,218			16	234,371
75 - 79								
80 - 84	4	34,751	2	18,792			6	53,543
85 - 89	1	15,112	1	4,580			2	19,692
90 & Over	1	4,327			1	$ 3,537	2	7,864
Totals	**46**	**$994,724**	**17**	**$ 212,657**	**1**	**$ 3,537**	**64**	**$1,210,918**

Average Age at Retirement: 58.4 Years.

Average Age Now: 67.8 Years.

Tabulated by Type of Allowances Being Paid

Option Elected	Age & Service	Disability Non-Duty	Disability Duty	Death Non-Duty	Death Duty	Totals
Regular	26	1	2			29
B-100% J & S	11		8			19
C-50% J & S	7	1	1			9
D-10 Year Certain						
E-15 Year Certain			1			1
Survivor	2	3		1		6
Totals	**46**	**5**	**12**	**1**		**64**

RETIREE AND BENEFICIARY COMPARATIVE SCHEDULE

Year Ended Dec. 31	Added to Rolls		Removed from Rolls		Rolls End of Year		% Incr. in Annual Allowances	Average Allowances	Discounted Value of Allowances	
	No.	Annual Allowances	No.	Annual Allowances	No.	Annual Allowances			Totals	Average
2016	2	$ 22,756	1	$ 4,327	64	$ 1,210,918	N/A	$ 18,921	$ 13,777,708	$ 215,277

TERMINATED MEMBERS WITH A DEFERRED VESTED BENEFIT AS OF DECEMBER 31, 2016 TABULATED BY NEAREST AGE AND ESTIMATED ALLOWANCE

Attained Age	No.	Deferred Allowances
36	1	$ 5,164
39	1	10,601
45	1	14,313
47	2	29,730
57	1	13,148
59	1	13,107
Totals	**7**	**$86,063**

ACTIVE MEMBERS AS OF DECEMBER 31, 2016
BY ATTAINED AGE AND YEARS OF SERVICE

Attained	Years of Service to Valuation Date							Totals	
Age	0-4	5-9	10-14	15-19	20-24	25-29	30 Plus	No.	Valuation Payroll
20-24	2							2	$ 89,268
25-29	1	2						3	143,618
30-34	8		1					9	318,180
35-39	5	3						8	289,367
40-44	10	2	1	2				15	648,457
45-49	8	1	2	10			1	22	1,055,818
50-54	4	4	3	2	3	1		17	843,268
55-59	3	3	3		1			10	506,142
60	1				2			3	188,632
61		1	1		1			3	159,554
62			1	2				3	129,191
63				1				1	72,588
64	1				1			2	102,394
65+		1						1	36,341
Totals	**43**	**17**	**12**	**17**	**8**	**1**	**1**	**99**	**$4,582,818**

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

Age: 46.8 years.

Service: 9.0 years.

Annual Pay: $46,291.

SECTION D

ACTUARIAL COST METHODS AND ASSUMPTIONS

VALUATION METHODS AND ASSUMPTIONS

The normal cost was computed as follows:

The series of contributions necessary to accumulate the present value at time of retirement of the portion of a member's pension attributable to service likely to be rendered after the valuation date was computed so that each contribution in the series was a constant percentage of the member's year-by-year projected covered compensation. This is the individual entry age normal actuarial cost method.

The accrued liability was computed and financed as follows:

Retirees and Beneficiaries: The discounted value of pensions likely to be paid retirees and beneficiaries was computed using the investment return and mortality assumptions. This amount was financed by applicable accrued assets.

Active and Inactive members: The discounted value of benefits likely to be paid active and inactive members on account of service rendered prior to the valuation date was computed using the assumptions outlined on the following pages. The computed amount was reduced by applicable valuation assets and the remainder (or overfunding) was financed as a level percent-of-payroll over a rolling period of 10 years.

Asset valuation method: Last year's valuation assets are increased by contributions and expected investment income on last year's valuation assets and non-investment net cash flow and reduced by refunds, benefit payments and expenses. To this amount is added the phased-in recognition of investment income. The phased-in recognition is the sum over the five years ending on the valuation date of 20% of the difference between each year's expected return and actual market return.

The December 31, 2016 valuation reflected a one-time mark-to-market value of assets. The initial December 31, 2016 asset value was determined in accordance with the methodology described in the Appendix of the December 31, 2016 Annual Actuarial Valuation of the City of Kalamazoo Employees Retirement System.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION

Section 13.4 of the Plan document provided the Board of Trustees the authority to manage and administer the Plan. Subsection (h) provides the Board the ability to require and obtain appropriate Actuary reports. The actuarial assumptions used for this report were based upon the results of such reports; specifically an Experience Study for the City of Kalamazoo Employees Retirement System covering the period January 1, 2009 through December 31, 2013. A report dated February 19, 2015 presented the results of this Experience Study. The actuarial assumptions represent estimates of future experience. Unless otherwise noted the assumptions were first used with the actuarial valuation date of December 31, 2014.

INVESTMENT RETURN. The rate of investment return is compounded annually net of investment expenses.

Investment Return	7.50%
Wage Inflation	3.50%
Price Inflation	2.75%
Spread Between Investment Return and Wage Inflation	4.00%
Spread Between Investment Return and Price Inflation	4.75%

These assumptions are used to equate the value of payments due at different points in time.

INVESTMENT EXPENSES. 0.50% of average valuation assets.

ADMINISTRATIVE EXPENSES. 0.65% of covered member payroll was added to the Normal Cost in anticipation of administrative expenses expected to be paid during the fiscal year.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONTINUED)

PAY PROJECTIONS. These assumptions are used to project current pays to those upon which benefits will be based.

The annual rate of pay increases consists of two parts:

(i) a long-term rate of pay inflation equal to 3.5%.

(ii) merit and longevity increases which vary according to age or length of service. These rates are illustrated below:

Years of Service	KMEA	Non-Union	ATU
1	6.0%	6.0%	7.0%
2	5.0	6.0	7.0
3	4.0	0.5	6.0
4	2.0	0.5	5.0
5	1.0	0.5	4.0
6	1.0	0.3	0.0
7	1.0	0.3	0.0
8	1.0	0.3	0.0
9	0.0	0.3	0.0
10	0.0	0.3	0.0
11	0.0	0.3	0.0
12	0.0	0.3	0.0
13	0.0	0.3	0.0
14	0.0	0.3	0.0
thereafter	0.0	0.3	0.0

If the number and distribution of active members remain constant, then the total active member payroll is expected to increase 3.5% annually for the base portion of the salary increase assumptions. This increasing payroll was recognized in amortizing unfunded actuarial accrued liabilities.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONTINUED)

The mortality table used was the RP-2000 Mortality Combined Healthy Tables, projected 20 years with U.S. Projection Scale BB.

	Value at Retirement of $1 Monthly for Life*		Future Life Expectancy (years)	
Ages	**Men**	**Women**	**Men**	**Women**
50	$144.67	$147.85	32.99	35.59
55	137.49	141.58	28.37	30.90
60	128.51	133.44	23.94	26.34
65	117.58	123.33	19.74	21.98
70	104.59	111.45	15.83	17.93
75	89.73	97.95	12.26	14.25
80	73.73	83.02	9.13	10.95

* *Values are before post-retirement increases are reflected.*

This assumption is used to measure the probabilities of members dying before retirement and the probabilities of each benefit payment being made after retirement. Rates for disabled members were set-forward 7 years.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONTINUED)

The rates of retirement used to measure the probability of eligible members retiring during the next year were as follows:

Retirement Ages	KMEA	Non-Union	ATU
55	2%	10%	10%
56	2	10	10
57	5	25	25
58	5	25	25
59	7	20	20
60	15	25	25
61	15	30	30
62	50	30	30
63	15	15	15
64	10	15	15
65	100	100	100

Retirement probabilities were applied for members after both attaining age 55 and completing 15 years of service, or age 62 with 10 years of service (5 years for Non-Union members hired before 9/1/2010 and 8 years for KMEA members hired before 1/1/2009). The assumptions above were first used for the December 31, 2009 valuation.

ACTUARIAL ASSUMPTIONS USED FOR THE VALUATION (CONCLUDED)

Rates of disability were as follows:

	% of Active Members Becoming Disabled Within Next Year	
Sample Ages	**ATU**	**KMEA and Non-Union**
20	0.23%	0.04%
25	0.27	0.04
30	0.32	0.04
35	0.40	0.04
40	0.55	0.10
45	0.76	0.13
50	1.45	0.25
55	2.84	0.45
60	0.00	0.71

Rates of separation from active membership were as shown below (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 employment.

		% of Active Members Separating within Next Year		
Sample Ages	**Years of Service**	**KMEA**	**Non-Union**	**ATU**
	0	15.0%	15.0%	15.0%
	1	14.0	14.0	14.0
	2	9.0	9.0	9.0
	3	8.0	8.0	8.0
	4	7.0	7.0	7.0
25	5 or Over	7.4	7.4	7.4
30		5.8	5.8	5.8
35		5.0	5.0	5.0
40		4.0	4.0	4.0
45		3.3	3.3	3.3
50		2.5	2.5	2.5
55		2.0	2.0	2.0
60		2.0	2.0	2.0

The assumptions above were first used for the December 31, 2009 valuation.

Miscellaneous and Technical Assumptions

Active Member Group Size	The number of active members was assumed to remain constant.
Marriage Assumption	100% of males and 100% of females are assumed to be married for purposes of death-in-service benefits. Male spouses are assumed to be three years older than female spouses.
Pay Increase Timing	Was assumed to occur in the middle of the year. This means that the pays reported for the valuation are assumed to be rates of pay on the valuation date.
Decrement Timing	Decrements are assumed to occur at the middle of the fiscal year.
Eligibility Testing	Eligibility for benefits is determined based upon the age nearest birthday and service nearest whole year on the date the decrement is assumed to occur.
Benefit Service	Exact fractional service is used to determine the amount of benefit payable.
Decrement Relativity	Decrement rates are used directly from the experience study, without adjustment for multiple decrement table effects.
Decrement Operation	Death-in-service decrement does not operate until member becomes vested. Withdrawal does not operate during retirement eligibility.
Normal Form of Benefit	The assumed normal form of benefit is straight life form.
Incidence of Contributions	Contributions are assumed to be received continuously throughout the year based upon the computed percent of payroll shown in this report, and the actual payroll payable at the time contributions are made. New entrant normal cost contributions are applied to the funding of new entrant benefits.
Actuarial Equivalence Basis for Optional Forms of Payment	7.5% interest with an 85%/15% unisex blend of the RP-2000 Mortality Combined Healthy Tables, projected 20 years with U.S. Projection Scale BB, effective October 1, 2016.
Post-Retirement Adjustment Timing	Post-retirement adjustments (PRAs) were assumed to be paid on January 1 of each year for Exempt retirees (beginning the second year following retirement). PRAs were assumed to be paid on the first of the month immediately following the retiree's birthday for all other groups.
Active Member Pay Adjustments	New hire pays were annualized. Pays were adjusted for members on Worker's Compensation of Leave of Absence for part of the valuation year.

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. Payment of 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 (CONCLUDED)

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.