



**FRANKLIN REGIONAL RETIREMENT SYSTEM**

**FINANCIAL REPORTING AND DISCLOSURES UNDER**

**GASB 67 and GASB 68**

**as of**

**December 31, 2016**

Prepared by:

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May 31, 2017

Mr. Dale Kowacki  
Executive Director  
Franklin Regional Retirement System  
278 Main Street, Suite 311  
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Dear Dale:

We are pleased to present the enclosed report providing financial reporting and disclosures under Governmental Accounting Standards Board (GASB) Statement No. 67, Financial Reporting for Pension Plans (GASB 67), and GASB Statement No. 68, Accounting and Financial Reporting for Pensions (GASB 68) for the Franklin Regional Retirement System and participating employers. Results are based on liabilities developed in an actuarial valuation performed as of January 1, 2016 and rolled forward to the plan's measurement date of December 31, 2016.

The Principal Valuation Results are provided in Section 1. The Notes to the Financial Statements and the Required Supplementary Information are provided in Sections 2 and 3, respectively. Employer Reporting Amounts Under GASB 68 are provided in Section 4. Finally, a Glossary of Terms is provided in Section 5.

The financial reporting and disclosures contained in this report are based on the member data provided by the Franklin Regional Retirement Board, asset information reported to the Public Employee Retirement Administration Commission (PERAC) by the Retirement Board and plan provisions contained in Chapter 32 of the Massachusetts General Laws. Although we did not audit the data used in the valuation and disclosure calculations, we believe that the information is complete and reliable.

Liabilities presented in this report are based on a long-term investment return rate of 7.75%, net of investment expense, compounded annually.

This report was completed in accordance with generally accepted actuarial standards and procedures, and conforms to the Code of Professional Conduct of the American Academy of Actuaries. The actuarial assumptions used in the determination of costs are reasonably related to the experience of the Plan and to reasonable expectations, and represent our best estimate of anticipated long-term experience under the Plan.

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K M S A C T U A R I E S

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Mr. Dale Kowacki  
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Future actuarial valuation results may differ significantly from the current results presented in this report. Examples of potential sources of volatility include plan experience differing from that anticipated by the economic or demographic assumptions, the effect of new entrants, changes in economic or demographic assumptions, the effect of law changes and the delayed effect of smoothing techniques.

Our valuation follows generally accepted actuarial methods and we perform such tests as we consider necessary to assure the accuracy of the results. The amounts presented in this report have been appropriately determined according to the actuarial assumptions and methods stated herein.

This report is intended for the sole use of the Franklin Regional Retirement System and participating employers and is intended to provide information to comply with the stated purpose of the report. It may not be appropriate for other purposes.

The undersigned credentialed actuaries are Members of the American Academy of Actuaries and meet the Qualification Standards of the American Academy of Actuaries necessary to render the actuarial opinion contained herein. They are available to answer any questions with regard to this report.

Respectfully submitted,



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## INTRODUCTION

### **GASB 67 and GASB 68**

In June 2012, the GASB approved two related Statements that significantly change the way pension plans and governments account and report pension liabilities. The Franklin Regional Retirement System implemented GASB Statement No. 67, Financial Reporting for Pension Plans for the fiscal year ending December 31, 2014.

GASB 67 requires defined benefit pension plans, such as the Franklin Regional Retirement System, to present a statement of fiduciary net position (pension plan assets) and a statement of changes in fiduciary net position. Further, the statement requires that notes to financial statements include descriptive information such as the types of benefits provided, the classes of plan members covered and the composition of the pension plan's retirement board. Finally, GASB 67 requires pension plans to present in required supplementary information the sources of the changes in the net pension liability and information about the actuarially determined contributions compared with the actual contributions made to the plan and related ratios.

GASB 67 and GASB 68 require projected benefit payments be discounted to their actuarial present value using the single rate that reflects:

- (1) a long-term expected rate of return on pension plan investments *to the extent that the pension plan's assets are sufficient to pay benefits and pension plan assets are expected to be invested using a strategy to achieve that return and*
- (2) a tax-exempt, high-quality municipal bond rate *to the extent that the conditions for use of the long-term expected rate of return are not met.*

The pension plan's fiduciary net position was projected to be available to make all projected benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the total pension liability.

GASB 68 establishes standards for measuring and recognizing liabilities, deferred outflows of resources, deferred inflows of resources and pension expense by state and local governments.

### **Net Fiduciary Position**

Pension plan investments are reported at market value as of the measurement date. The fiduciary net position as of the current and prior measurement dates are shown in Exhibit 1.1.

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## INTRODUCTION

### **Total Pension Liability**

The Total Pension Liability as of December 31, 2016 shown in this report is based on a roll-forward of liabilities determined as of the most recent valuation date, January 1, 2016. The Total Pension Liability as of the measurement date included a COLA base of \$17,000, increased from \$16,000, effective July 1, 2016, an Early Retirement Incentive program accepted by the Town of Erving and changes to the mortality rates and the expected future salary increases. The Total Pension Liability is developed in Exhibit 1.2.

### **Benefit Changes**

Effective July 1, 2016, the COLA base was increased from \$16,000 to \$17,000. Further, an Early Retirement Incentive program was implemented for one employee from the Town of Erving, providing two additional years of service. All other benefits remained the same from the prior measurement date. The Benefit Change is reflected in the changes in Total Pension Liability in Exhibit 3.1 and is immediately recognized in the 2016 Pension Expense, shown in Exhibit 4.2.

### **Assumption Changes**

Some assumptions have changed since the prior measurement date, including the mortality rates which have been updated to reflect fully generational mortality improvement, and the expected future salary increases.

### **Pension Expense**

The Pension Expense for the fiscal year ending December 31, 2016 is \$9,991,253 and is developed in Exhibit 4.2. Pension Expense, as well as the Net Pension Liability and Deferred Outflows of Resources and Deferred Inflows of Resources, are developed for each member unit and is shown in Appendix C. Amounts by employer are developed using a proportionate share, the proportion of each employer's contribution to the aggregate amount of employer contributions, as shown in Exhibit 4.3.

## SECTION 1 - PRINCIPAL VALUATION RESULTS

### Exhibit 1.1 - Plan Assets

Asset information was provided by the Franklin Regional Retirement System. The Trust Fund Composition, Asset Activity and the Computed Rate of Return for the current and prior fiscal years are as follows:

<b>Fiscal Year Ended December 31</b>	<u><b>2016</b></u>	<u><b>2015</b></u>
<b>Trust Fund Composition at Fiscal Year-End</b>		
Domestic Equity	\$ 47,185,900	\$ 40,968,202
International Equity	15,409,935	15,275,986
Emerging Markets Int'l Equity	3,942,209	3,884,422
Core Fixed Income	22,949,842	20,212,982
Value-Added Fixed Income	4,857,672	4,798,738
Real Estate	18,240,661	18,687,739
Timber/Natural Resources	2,105,563	1,822,953
Alternatives-Private Equity	6,373,907	6,479,716
Hedge Funds	4,886,280	4,844,170
Liquidating Portfolio and Portfolio Completion	898,297	607,651
Overlay	560,721	528,145
Cash	927,926	1,027,504
Other	(1,288,467)	(928,062)
<b>Total Market Value of Assets</b>	<u><u><b>\$ 127,050,446</b></u></u>	<u><u><b>\$ 118,210,146</b></u></u>
<b>Asset Activity</b>		
Market value as of beginning of year	\$ 118,210,146	\$ 118,718,993
Contributions - employer	5,875,820	5,645,345
Contributions - member	3,098,432	2,971,069
Net investment income	10,050,389	579,359
Benefit payments, including refunds of member contributions	(9,686,040)	(9,235,255)
Administrative expenses	(498,301)	(469,365)
Other	-	-
<b>Market Value as of end of year</b>	<u><u><b>\$ 127,050,446</b></u></u>	<u><u><b>\$ 118,210,146</b></u></u>
<b>Money-Weighted Rate of Return</b>	8.24%	0.57%
<b>(Gain) / Loss on Pension Plan Investments</b>		
Projected earnings	\$ 9,114,395	\$ 9,158,554
Actual earnings	10,050,389	579,359
<b>(Gain) / Loss on pension plan investments</b>	<u><u><b>\$ (935,994)</b></u></u>	<u><u><b>\$ 8,579,195</b></u></u>

## SECTION 1 - PRINCIPAL VALUATION RESULTS

### Exhibit 1.2 - Actuarial Liabilities

The **Total Pension Liability**, developed using the Entry Age Normal funding method, is the portion of the actuarial present value of projected benefit payments that is attributed to past periods of member service. The Total Pension Liability as of January 1, 2016, the date of the most recent actuarial valuation, is presented below, recognizing the increase in the COLA base from \$16,000 to \$17,000 and a change in actuarial assumptions, along with the Total Pension Liability as of January 1, 2014, recognizing the increase in the COLA base from \$15,000 to \$16,000:

<u>Valuation Date:</u>	<u>January 1, 2016</u>	<u>January 1, 2014</u>
Discount Rate	7.75%	7.75%
Actives	\$ 77,480,218	\$ 71,606,740
Retired and Disabled Members and Beneficiaries	90,277,914	77,214,818
Inactive Members	3,384,545	3,500,750
Total Pension Liability	\$ 171,142,677	\$ 152,322,308

The **Service Cost** is the portion of the actuarial present value of projected benefit payments that is attributed to a valuation year. Only active employees who have not reached Normal Retirement Age incur a Service Cost. Below is the Service Cost from the two most recent actuarial valuations and using a 7.75% discount rate:

Service Cost, beginning of year	\$ 4,833,029	\$ 4,383,811
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The Total Pension Liability was determined from the use of update procedures to roll forward to the pension plan's most recent fiscal year-end, or measurement date, December 31, 2016, amounts from an actuarial valuation as of January 1, 2016. Changes in the Total Pension Liability between the prior and current measurement dates recognize the increase in the COLA base from \$16,000 to \$17,000, the Erving Early Retirement Incentive program and the changes in the actuarial assumptions.

<u>Measurement Date:</u>	<u>December 31, 2016</u>	<u>December 31, 2015</u>
Discount Rate	7.75%	7.75%
Actives	\$ 88,692,523	\$ 93,315,137
Retired and Disabled Members and Beneficiaries	87,249,302	67,420,430
Inactive Members	3,646,847	4,064,392
Total Pension Liability	\$ 179,588,672	\$ 164,799,959
Service Cost		\$ 5,089,632

The Total Pension Liability increased due to the increase in the COLA base from \$16,000 to \$17,000, the Erving Early Retirement Incentive (ERI) program and changes in assumptions, as shown below:

<u>Change in Total Pension Liability:</u>		
Assumption changes	\$ 5,736,511	\$ -
Benefit change (COLA Base increase, ERI)	\$ 1,003,761	\$ 962,410



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## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.1 - Plan Description

*Plan administration:*

The Franklin Regional Retirement System (the "System") is a cost-sharing, multiple-employer defined benefit pension plan that provides pensions for eligible employees of 38 participating employers. The System is a member of the Massachusetts Contributory Retirement System and is governed by Chapter 32 of the Massachusetts General Laws. The System does not have the authority to amend benefit provisions.

The System is governed by a Retirement Board made up of five elected and appointed members.

*Plan membership:*

At December 31, 2016, pension plan membership consisted of the following:

Inactive plan members or beneficiaries currently receiving benefits	581
Inactive plan members entitled to but not yet receiving benefits	557
Active plan members	987
	<u>2,125</u>

*Benefits provided:*

The System provides retirement, disability and death benefits. Retirement benefits are determined as a percentage of the member's final 3-year (5-year for members hired after April 1, 2012) final average compensation times the member's years of service. The percentage is based on the age of the member at retirement and his or her Group classification. Cost-of-living adjustments of 3% of the first \$17,000 of the annual retirement allowance are provided at the discretion of the System's Retirement Board. A summary of the benefits is outlined in the January 1, 2016 actuarial valuation report.

*Contributions:*

Plan members are required to contribute a percentage of their annual compensation that varies according to their membership date, as follows:

Prior to 1975:	5% of Salary
1975 - 1983:	7% of Salary
1984 - June 30, 1996:	8% of Salary
July 1, 1996 - present:	9% of Salary
1979 - present:	An additional 2% of Salary in excess of \$30,000.
Group 1 members hired on or after April 2, 2012:	6% of Salary with 30 or more years of creditable service.

Employer contributions are determined in accordance with the requirements set forth in Section 22D and Section 22F of Chapter 32 of the Massachusetts General Laws ("M.G.L."). The appropriation is comprised of the annual employer normal cost and amortization payments to pay the unfunded actuarial accrued liability.

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## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.2 - Net Pension Liability

The components of the Net Pension Liability at December 31, 2016, were as follows:

Total Pension Liability	\$ 179,588,672
Fiduciary Net Position	(127,050,446)
Net Pension Liability	<u>\$ 52,538,226</u>

Fiduciary Net Position as a percentage of the Total Pension Liability 70.75%

*Actuarial assumptions:*

The Total Pension Liability was determined by an actuarial valuation as of January 1, 2016, rolled forward to the measurement date of December 31, 2016 using the following actuarial assumptions, applied to all periods included in the measurement:

Inflation	3% per year
Salary increases	Group 1: 6% - 4.25%, based on service Group 4: 7% - 4.75%, based on service
Investment rate of return	7.75%, net of pension plan investment expense, including inflation

Mortality rates were based on the RP-2000 Mortality Table (base year 2009) with full generational mortality improvement using Scale BB. For disabled lives, the mortality rates were based on the RP-2000 Mortality Table (base year 2012) with full generational mortality improvement using Scale BB.

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## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.2 - Net Pension Liability

The long-term expected rate of return on pension plan investments was determined using a building-block method in which best-estimate ranges of expected future real rates of return (expected returns, net of pension plan investment expense and inflation) are developed for each major asset class. These ranges are combined to produce the long-term expected rate of return by weighting the expected future real rates of return by the target asset allocation percentage and by adding expected inflation. Best estimates of arithmetic real rates of return for each major asset class included in the pension plan's target asset allocation as of December 31, 2016 (see the discussion of the pension plan's investment policy) are summarized in the following table:

<u>Asset Class</u>	<u>Target Allocation</u>	<u>Long-Term Expected Real Rates of Return<sup>1</sup></u>
PRIT Core	45%	5.30%
Domestic Equity	27%	6.60%
International Equity	5%	3.70%
Real Estate	10%	7.00%
Fixed Income	13%	5.40%
Total	100%	

<sup>1</sup> Provided by Dahab Associates, Inc. (inclusive of fees). Inflation of 2.2% is added to the long-term expected real rates of return to approximate the long-term expected rate of return.

#### *Discount rate:*

The discount rate used to measure the Total Pension Liability is 7.75%. The projection of cash flows used to determine the discount rate assumed that contributions from plan members will be made at the current contribution rates and that contributions from participating employers will be made in accordance with Sections 22D and 22F of Chapter 32 of the Massachusetts General Laws. Based on those assumptions, the pension plan's Fiduciary Net Position was projected to be available to make all projected benefit payments of current plan members. Therefore, the long-term expected rate of return on pension plan investments was applied to all periods of projected benefit payments to determine the Total Pension Liability.

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## SECTION 2 - NOTES TO THE FINANCIAL STATEMENTS

### Exhibit 2.2 - Net Pension Liability

*Sensitivity of the Net Pension Liability to changes in the discount rate:*

The following presents the Net Pension Liability calculated using the discount rate of 7.75%, as well as what the Net Pension Liability would be if it were calculated using a discount rate 1-percentage point lower (6.75%) or 1-percentage point higher (8.75%) than the current rate:

	<b>1% Decrease (6.75%)</b>	<b>Current Discount Rate (7.75%)</b>	<b>1% Increase (8.75%)</b>
Net Pension Liability	\$ 73,195,363	\$ 52,538,226	\$ 35,061,481

## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

**Exhibit 3.1 - Changes in Net Pension Liability and Related Ratios**

Fiscal Year Ended December 31	2016	2015	2014
<b>Total Pension Liability</b>			
Service cost	\$ 5,089,632	\$ 4,703,273	\$ 4,703,273
Interest	12,791,108	12,116,265	11,306,271
Changes of benefit terms	1,003,761	962,410	-
Differences between expected and actual experience	(146,259)	-	-
Changes of assumptions	5,736,511	-	-
Benefit payments, including refunds of member contributions	(9,686,040)	(9,235,255)	(11,287,291)
<b>Net change in Total Pension Liability</b>	<b>\$ 14,788,713</b>	<b>\$ 8,546,693</b>	<b>\$ 4,722,253</b>
<b>Total Pension Liability—beginning</b>	<b>164,799,959</b>	<b>156,253,266</b>	<b>151,531,013</b>
<b>Total Pension Liability—ending (a)</b>	<b>\$ 179,588,672</b>	<b>\$ 164,799,959</b>	<b>\$ 156,253,266</b>
<b>Fiduciary Net Position</b>			
Contributions—employer	\$ 5,875,820	\$ 5,645,345	\$ 5,418,158
Contributions—member	3,098,432	2,971,069	3,270,956
Net investment income	10,050,389	579,359	8,362,434
Benefit payments, including refunds of member contributions	(9,686,040)	(9,235,255)	(11,287,291)
Administrative expenses	(498,301)	(469,365)	(403,802)
Other	-	-	-
<b>Net change in Fiduciary Net Position</b>	<b>\$ 8,840,300</b>	<b>\$ (508,847)</b>	<b>\$ 5,360,455</b>
<b>Fiduciary Net Position—beginning</b>	<b>118,210,146</b>	<b>118,718,993</b>	<b>113,358,538</b>
<b>Fiduciary Net Position—ending (b)</b>	<b>\$ 127,050,446</b>	<b>\$ 118,210,146</b>	<b>\$ 118,718,993</b>
<b>Net Pension Liability—ending (a) – (b)</b>	<b>\$ 52,538,226</b>	<b>\$ 46,589,813</b>	<b>\$ 37,534,273</b>
Fiduciary Net Position as a percentage of the Total Pension Liability	70.75%	71.73%	75.98%
Covered Payroll <sup>1</sup>	\$ 33,556,164	\$ 32,088,838	\$ 30,854,652
Net Pension Liability as a percentage of Covered Payroll	156.57%	145.19%	121.65%

<sup>1</sup> Covered Payroll for 2016 is the valuation payroll from the January 1, 2016 funding valuation.

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## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

### Exhibit 3.2 - Schedule of Employer Contributions

<b>Fiscal Year Ended December 31</b>	<b><u>2016</u></b>	<b><u>2015</u></b>	<b><u>2014</u></b>
Actuarially Determined Contribution	\$ 5,875,820	\$ 5,645,345	\$ 5,888,495
Contributions in relation to the Actuarially Determined Contribution	<u>5,875,820</u>	<u>5,645,345</u>	<u>5,888,495</u>
Contribution deficiency (excess)	<u>\$ -</u>	<u>\$ -</u>	<u>\$ -</u>
Covered Payroll	\$ 33,556,164	\$ 32,088,838	\$ 30,854,652
Contributions as a percentage of Covered Payroll	17.51%	17.59%	19.08%

The contribution shown above, \$5,875,820, represents the actual contributions made by member units of the Franklin Regional Retirement System for the 2017 fiscal year.

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## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

### Exhibit 3.3 - Investment Returns

<b>Fiscal Year Ended December 31</b>	<b><u>2016</u></b>	<b><u>2015</u></b>	<b><u>2014</u></b>
Annual money-weighted rate of return, net of investment expense	8.24%	0.57%	7.37%

The money-weighted rate of return considers the changing amounts actually invested during a period and weights the amount of pension plan investments by the proportion of time they are available to earn a return during that period. The rate of return is then calculated by solving, through an iterative process, for the rate that equates the sum of the weighted external cash flows into and out of the pension plan investments to the ending fair value of pension plan investments.

Appendix A shows the details of the calculation of the money-weighted rate of return for the current fiscal year.

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## SECTION 3 - REQUIRED SUPPLEMENTARY INFORMATION

### Exhibit 3.4 - Notes to the Required Supplementary Information

*Changes of benefit terms:*

The COLA base was increased from \$15,000 to \$16,000 effective July 1, 2015 and to \$17,000 effective July 1, 2016 and the Town of Erving accepted an Early Retirement Incentive program for one employee.

*Changes of assumptions:*

The mortality improvement scale and the expected increases in future salaries were updated.

*Methods and assumptions used in calculations of Actuarially Determined Contributions:*

The Actuarially Determined Contributions in the schedule of employers' contributions are calculated as of July 1 of the fiscal year in which contributions are reported. The following actuarial methods and assumptions were used to determine contributions reported in that schedule:

Actuarial cost method	Entry Age Normal
Amortization method	UAAL: Increasing dollar amount at 4% to reduce the Unfunded Actuarial Accrued Liability to zero on or before June 30, 2035. The annual increase in appropriation is further limited to 5.5%. 2002 & 2003 ERI Level dollar amount to reduce the 2002 and 2003 ERI Actuarial Accrued Liability to zero on or before June 30, 2019 and June 30, 2020, respectively.
Asset valuation method	The Actuarial Value of Assets is the market value of assets as of the valuation date reduced by the sum of:  a) 75% of gains and losses of the prior year, b) 50% of gains and losses of the second prior year and c) 25% of gains and losses of the third prior year.  Investment gains and losses are determined by the excess or deficiency of the expected return over the actual return on the market value. The actuarial valuation of assets is further constrained to be not less than 90% or more than 110% of market value.
Inflation	3% per year
Salary increases	Group 1: 6% - 4.25%, based on service Group 4: 7% - 4.75%, based on service
Payroll growth	4% per year
Investment rate of return	7.75%, net of pension plan investment expense, including inflation.



## SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

### Exhibit 4.1 - Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between expected and actual experience are recognized in Pension Expense over the average expected remaining service life of all active and inactive members.

Year	Experience Losses (a)	Experience Gains (b)	Amounts Recognized in Pension Expense through December 31, 2016 (c)	Balances at December 31, 2016	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	\$ -	\$ 146,259	\$ (32,216)	\$ -	\$ 114,043
				<u>\$ -</u>	<u>\$ 114,043</u>

Deferred Outflows of Resources and Deferred Inflows of Resources arising from changes of assumptions are recognized in Pension Expense over the average expected remaining service life of all active and inactive members.

Year	Increases in the Total Pension Liability (a)	Decreases in the Total Pension Liability (b)	Amounts Recognized in Pension Expense through December 31, 2016 (c)	Balances at December 31, 2016	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2016	\$ 5,736,511	\$ -	\$ 1,263,549	\$ 4,472,962	\$ -
				<u>\$ 4,472,962</u>	<u>\$ -</u>

Deferred Outflows of Resources and Deferred Inflows of Resources arising from differences between projected and actual earnings on Pension Plan investments are recognized in Pension Expense over five years.

Year	Investment Earnings Less Than Projected (a)	Investment Earnings Greater Than Projected (b)	Amounts Recognized in Pension Expense through December 31, 2016 (c)	Balances at December 31, 2016	
				Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2014	\$ 306,526	\$ -	\$ 183,915	\$ 122,611	\$ -
2015	\$ 8,579,195	\$ -	\$ 3,431,678	\$ 5,147,517	\$ -
2016	\$ -	\$ 935,994	\$ (187,199)	\$ -	\$ 748,795
				<u>\$ 4,521,333</u>	<u>\$ -</u>

## SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

### Exhibit 4.1 - Deferred Outflows of Resources and Deferred Inflows of Resources

Deferred Outflows of Resources and Deferred Inflows of Resources arising from changes in proportion and differences between employer contributions and proportionate share of contributions are recognized in Pension Expense over the average expected remaining service life of all active and inactive members.

			Balances at December 31, 2016		
Year	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (Outflows) (a)	Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions (Inflows) (b)	Amounts Recognized in Pension Expense through December 31, 2016 (c)	Deferred Outflows of Resources (a) - (c)	Deferred Inflows of Resources (b) - (c)
2015	\$ 2,688,535	\$ 2,688,535	\$ 1,151,406	\$ 1,537,129	\$ 1,537,129
2016	\$ 686,573	\$ 686,573	\$ 151,227	\$ 535,346	\$ 535,346
				<u>\$ 2,072,475</u>	<u>\$ 2,072,475</u>

Amounts reported as Deferred Outflows of Resources and Deferred Inflows of Resources will be recognized in Pension Expense as follows:

Year ended December 31		
2017	\$	2,821,278
2018	\$	2,821,279
2019	\$	2,759,973
2020	\$	477,722
2021	\$	-
Thereafter	\$	-

## SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

### Exhibit 4.2 - Pension Expense

Fiscal Year Ended December 31	<u>2016</u>
1. Service cost	\$ 5,089,632
2. Interest on the total pension liability	
a. Total Pension Liability, beginning of year	164,799,959
b. Service cost, beginning of year	5,089,632
c. Benefit payments, including refunds of employee contributions	<u>(9,686,040)</u>
d. Interest on Total Pension Liability	12,791,108
3. Differences between expected and actual experience	(32,216)
4. Changes of benefit terms	1,003,761
5. Changes of assumptions	1,263,549
6. Employee contributions	(3,098,432)
7. Projected earnings on pension plan investments	
a. Fiduciary Net Position, beginning of year	118,210,146
b. Employer contributions	5,875,820
c. Employee contributions	3,098,432
d. Benefit payments, including refunds of employee contributions	(9,686,040)
e. Administrative expenses and other	<u>(498,301)</u>
f. Total projected earnings	(9,114,395)
8. Differences between projected and actual earnings on plan investments	1,589,945
9. Pension plan administrative expenses	498,301
10. Other changes in Fiduciary Net Position	<u>-</u>
<b>11. Total Pension Expense</b>	<b><u><u>\$ 9,991,253</u></u></b>

## SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

### Exhibit 4.3 - Proportionate Share of Contributions

The basis of an employer's allocation of the collective pension amount is consistent with the manner in which contributions to the plan are made. The schedule of employer allocations for 2016 and 2015, based on employer contributions made for the 2017 fiscal year and 2016 fiscal year, respectively, shows the proportionate relationship of each employer to all employers and each employer's allocation percentage.

Entity	2016		2015	
	Employer Contribution	Proportionate Share of Total Employer Contribution	Employer Contribution	Proportionate Share of Total Employer Contribution
Town of Ashfield	76,280	1.298202%	74,532	1.320238%
Town of Bernardston	84,756	1.442454%	81,061	1.435891%
Bernardston Fire & Water District	2,825	0.048078%	3,264	0.057818%
Town of Buckland	111,084	1.890528%	105,042	1.860683%
Town of Charlemont	59,894	1.019330%	57,667	1.021496%
Town of Colrain	75,567	1.286067%	72,565	1.285395%
Town of Conway	155,386	2.644499%	144,712	2.563386%
Town of Deerfield	496,669	8.452761%	462,969	8.200898%
Town of Erving	285,529	4.859390%	231,212	4.095622%
Franklin County Regional Housing Authority	256,709	4.368905%	262,681	4.653055%
Franklin County Solid Waste Management Dis	24,412	0.415465%	23,505	0.416363%
Franklin Regional Transit Authority	55,831	0.950182%	48,214	0.854049%
Frontier Regional School District	353,718	6.019892%	335,336	5.940044%
Town of Gill	86,479	1.471778%	80,442	1.424926%
Hawlemont Regional School District	51,419	0.875095%	51,683	0.915498%
Town of Hawley	22,037	0.375046%	20,129	0.356559%
Town of Heath	49,159	0.836632%	44,611	0.790226%
Town of Leverett	185,032	3.149041%	181,364	3.212629%
Town of Leyden	23,167	0.394277%	21,217	0.375832%
Mahar Regional School District	279,129	4.750469%	261,677	4.635270%
Mohawk Regional School District	539,612	9.183603%	536,412	9.501846%
Town of Monroe	18,646	0.317334%	17,953	0.318014%
Town of New Salem	41,247	0.701979%	38,626	0.684210%
New Salem/Wendell Union School District	118,022	2.008605%	114,511	2.028415%
Town of Northfield	163,467	2.782029%	157,001	2.781070%
Town of Orange	895,582	15.241822%	905,685	16.043040%
Orange Housing Authority	9,040	0.153851%	8,161	0.144562%
Pioneer Valley Regional School District	417,342	7.102702%	399,141	7.070267%
Town of Rowe	125,895	2.142595%	121,064	2.144492%

## SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

### Exhibit 4.3 - Proportionate Share of Contributions

The basis of an employer's allocation of the collective pension amount is consistent with the manner in which contributions to the plan are made. The schedule of employer allocations for 2016 and 2015, based on employer contributions made for the 2017 fiscal year and 2016 fiscal year, respectively, shows the proportionate relationship of each employer to all employers and each employer's allocation percentage.

Entity	2016		2015	
	Employer Contribution	Proportionate Share of Total Employer Contribution	Employer Contribution	Proportionate Share of Total Employer Contribution
Town of Shelburne	109,618	1.865578%	104,998	1.859904%
Shelburne Falls Fire District	37,292	0.634669%	35,906	0.636028%
Town of Shutesbury	164,426	2.798350%	159,401	2.823583%
South Deerfield Fire District	10,736	0.182715%	10,336	0.183089%
South Deerfield Water Supply District	28,817	0.490434%	27,201	0.481831%
Town of Sunderland	218,104	3.711890%	216,523	3.835425%
Town of Warwick	46,333	0.788537%	45,698	0.809481%
Town of Wendell	42,303	0.719951%	38,677	0.685113%
Town of Whately	154,256	2.625268%	144,168	2.553750%
<b>Total</b>	<b>5,875,820</b>	<b>100.000000%</b>	<b>5,645,345</b>	<b>100.000000%</b>

## SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

### Exhibit 4.4 - Pension Amounts by Employer

The schedule of Pension Amounts by Employer is provided in Appendix C. The schedule shows the Net Pension Liability, the various categories of Deferred Outflows of Resources and Deferred Inflows of Resources and Pension Expense for each employer. The schedule includes the differences between expected and actual economic experience, differences between projected and actual investment earnings and changes of assumptions. Further, each employer is required to recognize Deferred Outflows of Resources and Deferred Inflows of Resources related to (1) the net impact from changes in proportion between periods and (2) differences between actual contributions made by an employer and their proportionate share of contributions.

Each employer's allocation of Pension Expense and Net Pension Liability can be based on the proportion of its contributions to the aggregate amount of employer contributions.

Under GASB 68, gains and losses (investment, experience or assumption changes) and changes in employer's proportionate shares related to pensions are recognized in Pension Expense systematically over time.

The first amortized amounts are recognized in Pension Expense for the year the gain or loss occurs. The remaining amounts are categorized as Deferred Inflows and Deferred Outflows to be recognized in future Pension Expense.

The amortization period differs depending on the source of the gain or loss:

Difference between projected and actual earnings	5 year straight-line amortization
All other amounts	Straight-line amortization over the average expected remaining service lives of all members that are provided with benefits (actives, inactives and retirees) as of the beginning of the measurement period

For 2016:

- ◆ Net Pension Liability, Deferred Outflows of Resources, Deferred Inflows of Resources and Pension Expense are allocated to each employer based on its proportionate share of Total Employer Contribution shown in Exhibit 4.3.
- ◆ The difference between expected and actual experience is amortized over the average of the expected future service lives of all participants, with the first amortized amount recognized in Pension Expense in 2016.
- ◆ Net difference between projected and actual investment earnings (gain on pension plan investments for 2016) is amortized over 5 years, with the first amortized amount recognized in pension expense in 2016. Similar Deferred Outflows of Resources and Deferred Inflows of Resources were established during prior years, with the first amortized amount recognized in Pension Expense in 2014.
- ◆ The increase in Total Pension Liability as a result of changes in assumptions (mortality rates and expected future salary increases) is amortized over the average of the expected future service lives of all participants, with the first amortized amount recognized in Pension Expense in 2016.

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## SECTION 4 - EMPLOYER REPORTING AMOUNTS UNDER GASB 68

### Exhibit 4.4 - Pension Amounts by Employer

For 2016 (continued):

- ◆ There are no differences between employer contributions and the proportionate share of contributions because the Plan utilizes employer contributions as the method of allocation.
  
- ◆ The net effect of the change in the employer's proportionate shares of the collective Net Pension Liability, collective Deferred Outflows and Deferred Inflows is amortized over the average expected remaining service lives of all members, with the first amortized amount recognized in Pension Expense in 2016.
  
- ◆ No adjustments have been made for employer contributions made subsequent to the measurement date as defined in paragraph 57 of GASB 68.

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## SECTION 5 - GLOSSARY OF TERMS

**Actuarial Assumptions** – Assumptions, based upon past experience or standard tables, used to predict the occurrence of future events affecting the commencement, amount and duration of pension benefits, such as: changes in compensation, mortality, withdrawal, disablement and retirement; rates of investment earnings and asset appreciation or depreciation; and any other relevant items.

**Actuarial Cost Method (or Funding Method)** – A procedure for allocating the Actuarial Present Value of projected benefit payments to the current year (Service Cost) and the past (Total Pension Liability).

**Actuarial Gain or Loss (or Experience Gain or Loss)** – A measure of the difference between actual experience and that expected based upon the set of Actuarial Assumptions during the period between the valuation date and the most recent immediately preceding valuation date.

**Actuarial Present Value of Projected Benefit Payments** – The dollar value on the valuation date of all benefits expected to be paid to current members based upon the Actuarial Assumptions and the terms of the Plan.

**Actuarially Determined Contribution** – A target or recommended contribution to a defined benefit pension plan for the reporting period, determined in conformity with Actuarial Standards of Practice based on the most recent measurement available when the contribution for the reporting period was adopted.

**Actuarial Valuation Date** – The date as of which an actuarial valuation is performed. This date may be up to 24 months prior to the measurement date and up to 30 months prior to the employer's reporting date.

**Deferred Inflow of Resources** – Acquisition of resources by a government that is applicable to future reporting periods. Under GASB 68, deferred inflows of resources are made up of experience gains, assumption changes reducing the Total Pension Liability and investment gains that are recognized in future reporting periods.

**Deferred Outflow of Resources** – Consumption of resources by a government that is applicable to future reporting periods. Under GASB 68, deferred outflows of resources are made up of experience losses, assumption changes increasing the Total Pension Liability and investment losses that are recognized in future reporting periods.

**Entry Age Normal Actuarial Cost Method** – A method under which the actuarial present value of the projected benefits of each individual in an actuarial valuation is allocated on a level basis over the earnings or service of the individual between entry age and assumed exit age.

**Fiduciary Net Position** – The fair market value of assets as of the measurement date.

**Funded Ratio** – The Actuarial Value of Assets expressed as a percentage of the Actuarial Accrued Liability.



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## SECTION 5 - GLOSSARY OF TERMS

**GASB** – Governmental Accounting Standards Board.

**Measurement Date** – The date as of which the Total Pension Liability and Fiduciary Net Position are measured.

**Net Pension Liability** – The liability of the employer for benefits provided through a defined benefit pension plan. It is calculated as the Total Pension Liability less the Fiduciary Net Position.

**Present Value of Future Benefits** – The actuarial present value of the cost to finance benefits payable in the future, discounted to reflect the expected effects of the time value of money and the probabilities of payment.

**Reporting Date** – The last day of the Plan or employer's fiscal year.

**Service Cost** – The portion of the actuarial present value of projected benefit amounts that is attributed to a valuation year.

**Total Pension Liability** – The portion of the actuarial present value of projected benefit amounts that is attributed to past periods of employee service.

**Unfunded Actuarial Accrued Liability** – The excess of the Actuarial Accrued Liability over the Actuarial Value of Assets.

## APPENDIX A - CALCULATION OF MONEY-WEIGHTED RATE OF RETURN

	Plan Investments/ Net External Cash Flows (a)	Periods Invested (b)	Period Weight (c)=(b)÷12	(d)=(a) x (1+r <sub>mw</sub> ) <sup>(c)</sup>
Beginning value - January 1, 2016	\$ 118,210,146	12	1.00	\$ 127,951,908
Monthly net external cash flows:				
January	(604,272)	11	0.92	(649,768)
February	(357,289)	10	0.83	(381,663)
March	(777,212)	9	0.75	(824,771)
April	(611,158)	8	0.67	(644,290)
May	(205,730)	7	0.58	(215,457)
June	(305,146)	6	0.50	(317,471)
July	4,942,450	5	0.42	5,108,252
August	(632,793)	4	0.33	(649,719)
September	(641,709)	3	0.25	(654,540)
October	(448,277)	2	0.17	(454,233)
November	(559,949)	1	0.08	(563,656)
December	(654,146)	0	0.00	(654,146)
Ending value - December 31, 2016				\$ 127,050,446
Money-weighted rate of return				8.24%

Note: Beginning and ending values are based on amounts reported in the System's 2016 Annual Statement, adjusted for GAAP financial statement adjustments, and monthly cash flows are based on amounts provided by the Retirement System.

**APPENDIX B - SCHEDULE OF DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES**

Year	Differences between Expected and Actual Experience	Recognition Period (Years)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
			2016	\$ (146,259)	4.54	-	-	(32,216)	(32,216)	(32,216)	(32,216)	(17,395)
Net Increase (Decrease) in Pension Expense			-	-	(32,216)	(32,216)	(32,216)	(32,216)	(17,395)	-	-	-

Year	Changes of Assumptions	Recognition Period (Years)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
			2016	\$ 5,736,511	4.54	-	-	1,263,549	1,263,549	1,263,549	1,263,549	682,315
Net Increase (Decrease) in Pension Expense			-	-	1,263,549	1,263,549	1,263,549	1,263,549	682,315	-	-	-

Year	Differences between Projected and Actual Earnings on Pension Plan Investments	Recognition Period (Years)	2014	2015	2016	2017	2018	2019	2020	2021	2022	2023
			2014	\$ 306,526	5	61,305	61,305	61,305	61,305	61,306	-	-
2015	\$ 8,579,195	5	-	1,715,839	1,715,839	1,715,839	1,715,839	1,715,839	-	-	-	-
2016	\$ (935,994)	5	-	-	(187,199)	(187,199)	(187,199)	(187,199)	(187,198)	-	-	-
Net Increase (Decrease) in Pension Expense			61,305	1,777,144	1,589,945	1,589,945	1,589,946	1,528,640	(187,198)	-	-	-

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Ashfield
◆ Current Proportionate Share		1.298202%
◆ Prior Proportionate Share		1.320238%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 615,096</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 682,052</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	58,696
◆ Changes of Assumptions	4,472,962	58,068
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	2,183
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 118,947</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 1,481
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 6,794
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 8,275</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 129,707
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(1,102)
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 128,605</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 425,293
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 682,052
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 950,224
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 455,169
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 35,525
◆ 2018	\$ 2,821,279	\$ 35,524
◆ 2019	\$ 2,759,973	\$ 34,458
◆ 2020	\$ 477,722	\$ 5,165
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Bernardston
◆ Current Proportionate Share		1.442454%
◆ Prior Proportionate Share		1.435891%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 668,979</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 757,840</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	65,218
◆ Changes of Assumptions	4,472,962	64,520
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	5,412
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 135,150</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 1,645
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ -
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 1,645</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 144,119
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	1,841
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 145,960</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 527,875
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 757,840
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 1,055,809
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 505,746
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 42,537
◆ 2018	\$ 2,821,279	\$ 42,536
◆ 2019	\$ 2,759,973	\$ 41,233
◆ 2020	\$ 477,722	\$ 7,199
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Bernardston Fire & Water District
◆ Current Proportionate Share		0.048078%
◆ Prior Proportionate Share		0.057818%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 26,937</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 25,260</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	2,174
◆ Changes of Assumptions	4,472,962	2,151
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	1,667
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 5,992</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 55
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 3,003
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 3,058</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 4,804
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(224)
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 4,580</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 8,556
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 25,260
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 35,191
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 16,857
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 1,133
◆ 2018	\$ 2,821,279	\$ 1,131
◆ 2019	\$ 2,759,973	\$ 897
◆ 2020	\$ 477,722	\$ (227)
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Buckland
◆ Current Proportionate Share		1.890528%
◆ Prior Proportionate Share		1.860683%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 866,889</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 993,250</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	85,477
◆ Changes of Assumptions	4,472,962	84,563
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	34,931
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 204,971</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 2,156
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ -
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 2,156</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 188,887
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	12,237
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 201,124</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 675,560
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 993,250
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 1,383,779
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 662,847
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 65,572
◆ 2018	\$ 2,821,279	\$ 65,574
◆ 2019	\$ 2,759,973	\$ 61,233
◆ 2020	\$ 477,722	\$ 10,436
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Charlemont
◆ Current Proportionate Share		1.019330%
◆ Prior Proportionate Share		1.021496%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 475,913</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 535,538</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	46,087
◆ Changes of Assumptions	4,472,962	45,594
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	319
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 92,000</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 1,162
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 668
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 1,830</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 101,844
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(69)
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 101,775</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 385,739
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 535,538
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 746,102
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 357,392
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 28,688
◆ 2018	\$ 2,821,279	\$ 28,690
◆ 2019	\$ 2,759,973	\$ 28,024
◆ 2020	\$ 477,722	\$ 4,768
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016



## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Colrain
◆ Current Proportionate Share		1.286067%
◆ Prior Proportionate Share		1.285395%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 598,863</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 675,677</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	58,147
◆ Changes of Assumptions	4,472,962	57,525
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	39,732
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 155,404</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 1,467
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ -
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 1,467</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 128,494
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	14,863
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 143,357</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 439,835
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 675,677
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 941,342
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 450,914
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 51,145
◆ 2018	\$ 2,821,279	\$ 51,147
◆ 2019	\$ 2,759,973	\$ 45,471
◆ 2020	\$ 477,722	\$ 6,174
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Conway
◆ Current Proportionate Share		2.644499%
◆ Prior Proportionate Share		2.563386%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 1,194,277</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 1,389,373</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	119,567
◆ Changes of Assumptions	4,472,962	118,287
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	25,009
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 262,863</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 3,016
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 1,410
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 4,426</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 264,219
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	6,537
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 270,756</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 877,177
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 1,389,373
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 1,935,651
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 927,201
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 81,146
◆ 2018	\$ 2,821,279	\$ 81,145
◆ 2019	\$ 2,759,973	\$ 79,698
◆ 2020	\$ 477,722	\$ 16,448
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Deerfield
◆ Current Proportionate Share		8.452761%
◆ Prior Proportionate Share		8.200898%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 3,820,783</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 4,440,931</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	382,177
◆ Changes of Assumptions	4,472,962	378,089
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	105,563
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 865,829</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 9,640
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 9,640</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 844,537
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	32,389
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 876,926</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 3,046,806
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 4,440,931
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 6,187,029
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 2,963,663
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 270,865
◆ 2018	\$ 2,821,279	\$ 270,864
◆ 2019	\$ 2,759,973	\$ 262,234
◆ 2020	\$ 477,722	\$ 52,226
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Erving
◆ Current Proportionate Share		4.859390%
◆ Prior Proportionate Share		4.095622%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 1,908,143</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 2,553,037</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	219,709
◆ Changes of Assumptions	4,472,962	217,359
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	235,490
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 672,558</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 5,542
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 5,197
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 10,739</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 485,514
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	64,576
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 550,090</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 1,371,637
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 2,553,037
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 3,556,848
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 1,703,774
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 201,673
◆ 2018	\$ 2,821,279	\$ 201,673
◆ 2019	\$ 2,759,973	\$ 199,337
◆ 2020	\$ 477,722	\$ 59,136
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Franklin County Regional Housing Authority
◆ Current Proportionate Share		4.368905%
◆ Prior Proportionate Share		4.653055%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 2,167,850</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 2,295,345</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	197,533
◆ Changes of Assumptions	4,472,962	195,419
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	128,568
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 521,520</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 4,982
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 87,610
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 92,592</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 436,508
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	23,403
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 459,911</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 1,246,505
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 2,295,345
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 3,197,836
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 1,531,803
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 146,664
◆ 2018	\$ 2,821,279	\$ 146,663
◆ 2019	\$ 2,759,973	\$ 128,094
◆ 2020	\$ 477,722	\$ 7,507
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Franklin County Solid Waste Management District
◆ Current Proportionate Share		0.415465%
◆ Prior Proportionate Share		0.416363%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 193,983</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 218,278</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	18,785
◆ Changes of Assumptions	4,472,962	18,584
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	5,620
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 42,989</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 474
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 278
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 752</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 41,510
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	2,027
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 43,537</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 139,094
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 218,278
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 304,101
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 145,668
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 13,747
◆ 2018	\$ 2,821,279	\$ 13,748
◆ 2019	\$ 2,759,973	\$ 12,798
◆ 2020	\$ 477,722	\$ 1,944
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Franklin Regional Council of Governments
◆ Current Proportionate Share		0.000000%
◆ Prior Proportionate Share		0.000000%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ -</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ -</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	-
◆ Changes of Assumptions	4,472,962	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ -</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ -
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 1,477,437
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 1,477,437</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ -
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(553,347)
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ (553,347)</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ -
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ -
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ -
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ -
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ (553,347)
◆ 2018	\$ 2,821,279	\$ (553,347)
◆ 2019	\$ 2,759,973	\$ (370,743)
◆ 2020	\$ 477,722	\$ -
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Franklin Regional Transit Authority
◆ Current Proportionate Share		0.950182%
◆ Prior Proportionate Share		0.854049%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 397,900</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 499,209</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	42,961
◆ Changes of Assumptions	4,472,962	42,501
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	29,640
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 115,102</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 1,084
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 16,192
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 17,276</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 94,935
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	2,308
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 97,243</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 401,188
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 499,209
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 695,489
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 333,148
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 29,116
◆ 2018	\$ 2,821,279	\$ 29,115
◆ 2019	\$ 2,759,973	\$ 30,535
◆ 2020	\$ 477,722	\$ 9,060
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Frontier Regional School District
◆ Current Proportionate Share		6.019892%
◆ Prior Proportionate Share		5.940044%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 2,767,456</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 3,162,744</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	272,179
◆ Changes of Assumptions	4,472,962	269,267
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	41,684
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 583,130</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 6,865
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 6,865</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 601,463
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	13,346
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 614,809</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 2,179,604
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 3,162,744
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 4,406,282
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 2,110,663
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 183,184
◆ 2018	\$ 2,821,279	\$ 183,184
◆ 2019	\$ 2,759,973	\$ 177,384
◆ 2020	\$ 477,722	\$ 32,513
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Gill
◆ Current Proportionate Share		1.471778%
◆ Prior Proportionate Share		1.424926%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 663,870</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 773,246</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	66,544
◆ Changes of Assumptions	4,472,962	65,832
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	58,135
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 190,511</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 1,678
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 1,678</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 147,049
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	20,444
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 167,493</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 451,792
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 773,246
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 1,077,273
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 516,027
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 61,967
◆ 2018	\$ 2,821,279	\$ 61,967
◆ 2019	\$ 2,759,973	\$ 55,664
◆ 2020	\$ 477,722	\$ 9,235
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Hawlemont Regional School District
◆ Current Proportionate Share		0.875095%
◆ Prior Proportionate Share		0.915498%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 426,529</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 459,759</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	39,566
◆ Changes of Assumptions	4,472,962	39,143
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	5,436
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 84,145</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 998
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 12,458
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 13,456</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 87,433
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(1,483)
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 85,950</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 301,154
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 459,759
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 640,529
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 306,821
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 23,206
◆ 2018	\$ 2,821,279	\$ 23,206
◆ 2019	\$ 2,759,973	\$ 21,996
◆ 2020	\$ 477,722	\$ 2,281
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Hawley
◆ Current Proportionate Share		0.375046%
◆ Prior Proportionate Share		0.356559%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 166,120</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 197,042</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	16,957
◆ Changes of Assumptions	4,472,962	16,776
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	5,700
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 39,433</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 428
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 2,866
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 3,294</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 37,472
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	537
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 38,009</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 140,044
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 197,042
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 274,516
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 131,497
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 11,117
◆ 2018	\$ 2,821,279	\$ 11,118
◆ 2019	\$ 2,759,973	\$ 11,243
◆ 2020	\$ 477,722	\$ 2,661
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Heath
◆ Current Proportionate Share		0.836632%
◆ Prior Proportionate Share		0.790226%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 368,165</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 439,552</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	37,827
◆ Changes of Assumptions	4,472,962	37,422
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	14,309
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 89,558</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 954
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 4,215
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 5,169</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 83,590
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	2,463
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 86,053</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 325,194
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 439,552
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 612,376
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 293,336
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 26,068
◆ 2018	\$ 2,821,279	\$ 26,067
◆ 2019	\$ 2,759,973	\$ 26,075
◆ 2020	\$ 477,722	\$ 6,179
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Leverett
◆ Current Proportionate Share		3.149041%
◆ Prior Proportionate Share		3.212629%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 1,496,758</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 1,654,450</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	142,379
◆ Changes of Assumptions	4,472,962	140,855
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	81,575
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 364,809</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 3,591
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 19,606
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 23,197</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 314,629
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	25,014
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 339,643</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 1,005,061
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 1,654,450
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 2,304,952
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 1,104,101
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 113,857
◆ 2018	\$ 2,821,279	\$ 113,857
◆ 2019	\$ 2,759,973	\$ 101,845
◆ 2020	\$ 477,722	\$ 12,053
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Leyden
◆ Current Proportionate Share		0.394277%
◆ Prior Proportionate Share		0.375832%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 175,099</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 207,146</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	17,827
◆ Changes of Assumptions	4,472,962	17,636
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	5,687
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 41,150</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 450
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 3,020
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 3,470</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 39,393
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	475
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 39,868</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 181,625
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 207,146
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 288,592
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 138,239
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 11,599
◆ 2018	\$ 2,821,279	\$ 11,600
◆ 2019	\$ 2,759,973	\$ 11,730
◆ 2020	\$ 477,722	\$ 2,751
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Mahar Regional School District
◆ Current Proportionate Share		4.750469%
◆ Prior Proportionate Share		4.635270%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 2,159,564</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 2,495,812</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	214,785
◆ Changes of Assumptions	4,472,962	212,487
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	100,601
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 527,873</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 5,418
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 5,418</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 474,631
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	34,409
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 509,040</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 1,887,828
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 2,495,812
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 3,477,123
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 1,665,585
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 168,432
◆ 2018	\$ 2,821,279	\$ 168,434
◆ 2019	\$ 2,759,973	\$ 157,477
◆ 2020	\$ 477,722	\$ 28,112
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Mohawk Regional School District
◆ Current Proportionate Share		9.183603%
◆ Prior Proportionate Share		9.501846%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 4,426,892</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 4,824,902</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	415,221
◆ Changes of Assumptions	4,472,962	410,779
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	100,595
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 926,595</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 10,473
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 98,123
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 108,596</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 917,557
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	9,957
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 927,514</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 3,315,043
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 4,824,902
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 6,721,972
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 3,219,907
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 269,053
◆ 2018	\$ 2,821,279	\$ 269,052
◆ 2019	\$ 2,759,973	\$ 250,990
◆ 2020	\$ 477,722	\$ 28,904
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Monroe
◆ Current Proportionate Share		0.317334%
◆ Prior Proportionate Share		0.318014%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 148,162</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 166,722</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	14,348
◆ Changes of Assumptions	4,472,962	14,194
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	3,840
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 32,382</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 362
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 209
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 571</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 31,706
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	1,380
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 33,086</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 113,567
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 166,722
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 232,274
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 111,262
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 10,332
◆ 2018	\$ 2,821,279	\$ 10,332
◆ 2019	\$ 2,759,973	\$ 9,663
◆ 2020	\$ 477,722	\$ 1,484
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of New Salem
◆ Current Proportionate Share		0.701979%
◆ Prior Proportionate Share		0.684210%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 318,772</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 368,807</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	31,739
◆ Changes of Assumptions	4,472,962	31,399
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	8,509
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 71,647</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 801
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 801</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 70,136
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	2,682
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 72,818</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 447,919
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 368,807
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 513,816
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 246,124
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 22,488
◆ 2018	\$ 2,821,279	\$ 22,487
◆ 2019	\$ 2,759,973	\$ 21,682
◆ 2020	\$ 477,722	\$ 4,189
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	New Salem/Wendell Union School District
◆ Current Proportionate Share		2.008605%
◆ Prior Proportionate Share		2.028415%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 945,035</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 1,055,285</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	90,816
◆ Changes of Assumptions	4,472,962	89,844
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	27,378
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 208,038</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 2,291
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 6,108
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 8,399</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 200,685
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	8,527
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 209,212</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 692,126
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 1,055,285
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 1,470,206
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 704,247
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 65,197
◆ 2018	\$ 2,821,279	\$ 65,196
◆ 2019	\$ 2,759,973	\$ 60,582
◆ 2020	\$ 477,722	\$ 8,664
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Northfield
◆ Current Proportionate Share		2.782029%
◆ Prior Proportionate Share		2.781070%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 1,295,695</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 1,461,629</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	125,785
◆ Changes of Assumptions	4,472,962	124,439
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	45,295
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 295,519</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 3,173
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ -
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 3,173</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 277,960
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	16,937
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 294,897</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 919,977
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 1,461,629
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 2,036,316
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 975,420
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 95,426
◆ 2018	\$ 2,821,279	\$ 95,426
◆ 2019	\$ 2,759,973	\$ 88,159
◆ 2020	\$ 477,722	\$ 13,335
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Orange
◆ Current Proportionate Share		15.241822%
◆ Prior Proportionate Share		16.043040%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 7,474,423</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 8,007,780</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	689,133
◆ Changes of Assumptions	4,472,962	681,763
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	655,155
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 2,026,051</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 17,382
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 247,042
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 264,424</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 1,522,847
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	175,592
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 1,698,439</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 3,873,126
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 8,007,783
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 11,156,307
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 5,344,008
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 605,605
◆ 2018	\$ 2,821,279	\$ 605,605
◆ 2019	\$ 2,759,973	\$ 515,287
◆ 2020	\$ 477,722	\$ 35,130
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Orange Housing Authority
◆ Current Proportionate Share		0.153851%
◆ Prior Proportionate Share		0.144562%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 67,351</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 80,831</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	6,956
◆ Changes of Assumptions	4,472,962	6,882
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	2,865
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 16,703</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 175
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 1,159
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 1,334</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 15,372
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	374
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 15,746</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 45,814
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 80,831
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 112,612
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 53,942
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 4,717
◆ 2018	\$ 2,821,279	\$ 4,716
◆ 2019	\$ 2,759,973	\$ 4,764
◆ 2020	\$ 477,722	\$ 1,172
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Pioneer Valley Regional School District
◆ Current Proportionate Share		7.102702%
◆ Prior Proportionate Share		7.070267%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 3,294,024</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 3,731,634</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	321,137
◆ Changes of Assumptions	4,472,962	317,701
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	101,732
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 740,570</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 8,100
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 8,100</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 709,649
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	37,181
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 746,830</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 2,277,641
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 3,731,634
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 5,198,849
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 2,490,313
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 237,568
◆ 2018	\$ 2,821,279	\$ 237,568
◆ 2019	\$ 2,759,973	\$ 221,877
◆ 2020	\$ 477,722	\$ 35,457
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016



## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Rowe
◆ Current Proportionate Share		2.142595%
◆ Prior Proportionate Share		2.144492%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 999,115</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 1,125,681</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	96,874
◆ Changes of Assumptions	4,472,962	95,837
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	43,596
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 236,307</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 2,443
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 586
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 3,029</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 214,072
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	16,164
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 230,236</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 635,952
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 1,125,681
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 1,568,280
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 751,225
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 76,611
◆ 2018	\$ 2,821,279	\$ 76,612
◆ 2019	\$ 2,759,973	\$ 69,909
◆ 2020	\$ 477,722	\$ 10,146
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Shelburne
◆ Current Proportionate Share		1.865578%
◆ Prior Proportionate Share		1.859904%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 866,526</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 980,142</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	84,349
◆ Changes of Assumptions	4,472,962	83,447
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	29,444
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 197,240</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 2,128
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ -
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 2,128</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 186,395
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	10,866
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 197,261</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 623,092
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 980,142
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 1,365,517
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 654,099
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 63,500
◆ 2018	\$ 2,821,279	\$ 63,499
◆ 2019	\$ 2,759,973	\$ 58,933
◆ 2020	\$ 477,722	\$ 9,180
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Shelburne Falls Fire District
◆ Current Proportionate Share		0.634669%
◆ Prior Proportionate Share		0.636028%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 296,324</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 333,444</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	28,695
◆ Changes of Assumptions	4,472,962	28,388
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 57,083</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 724
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 5,530
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 6,254</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 63,411
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(2,032)
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 61,379</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 210,877
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 333,444
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 464,548
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 222,524
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 15,873
◆ 2018	\$ 2,821,279	\$ 15,873
◆ 2019	\$ 2,759,973	\$ 16,117
◆ 2020	\$ 477,722	\$ 2,966
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Shutesbury
◆ Current Proportionate Share		2.798350%
◆ Prior Proportionate Share		2.823583%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 1,315,502</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 1,470,203</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	126,523
◆ Changes of Assumptions	4,472,962	125,169
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	34,875
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 286,567</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 3,191
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 7,781
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 10,972</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 279,590
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	10,864
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 290,454</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 970,866
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 1,470,203
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 2,048,262
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 981,143
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 89,813
◆ 2018	\$ 2,821,279	\$ 89,813
◆ 2019	\$ 2,759,973	\$ 83,787
◆ 2020	\$ 477,722	\$ 12,182
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

Franklin Regional Retirement System  
Financial Reporting and Disclosures as of December 31, 2016

## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	South Deerfield Fire District
◆ Current Proportionate Share		0.182715%
◆ Prior Proportionate Share		0.183089%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 85,301</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 95,995</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	8,261
◆ Changes of Assumptions	4,472,962	8,173
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	659
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 17,093</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 208
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 115
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 323</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 18,256
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	213
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 18,469</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 66,543
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 95,995
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 133,739
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 64,063
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 5,370
◆ 2018	\$ 2,821,279	\$ 5,369
◆ 2019	\$ 2,759,973	\$ 5,176
◆ 2020	\$ 477,722	\$ 855
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	South Deerfield Water Supply District
◆ Current Proportionate Share		0.490434%
◆ Prior Proportionate Share		0.481831%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 224,484</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 257,665</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	22,174
◆ Changes of Assumptions	4,472,962	21,937
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	20,099
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 64,210</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 559
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 559</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 49,000
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	7,283
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 56,283</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 125,876
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 257,665
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 358,975
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 171,953
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 21,120
◆ 2018	\$ 2,821,279	\$ 21,120
◆ 2019	\$ 2,759,973	\$ 18,663
◆ 2020	\$ 477,722	\$ 2,748
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Sunderland
◆ Current Proportionate Share		3.711890%
◆ Prior Proportionate Share		3.835425%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 1,786,918</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 1,950,161</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	167,827
◆ Changes of Assumptions	4,472,962	166,031
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	20,344
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 354,202</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 4,233
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 38,089
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 42,322</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 370,864
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(3,140)
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 367,724</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 1,401,653
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 1,950,161
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 2,716,932
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 1,301,444
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 101,583
◆ 2018	\$ 2,821,279	\$ 101,583
◆ 2019	\$ 2,759,973	\$ 96,792
◆ 2020	\$ 477,722	\$ 11,922
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Warwick
◆ Current Proportionate Share		0.788537%
◆ Prior Proportionate Share		0.809481%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 377,136</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 414,283</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	35,652
◆ Changes of Assumptions	4,472,962	35,271
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	4,153
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 75,076</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 899
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 6,459
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 7,358</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 78,785
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(268)
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 78,517</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 279,838
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 414,283
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 577,172
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 276,473
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 21,977
◆ 2018	\$ 2,821,279	\$ 21,979
◆ 2019	\$ 2,759,973	\$ 20,980
◆ 2020	\$ 477,722	\$ 2,782
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Wendell
◆ Current Proportionate Share		0.719951%
◆ Prior Proportionate Share		0.685113%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 319,193</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 378,249</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	32,551
◆ Changes of Assumptions	4,472,962	32,203
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	24,624
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 89,378</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 821
◆ Changes of Assumptions	-	-
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	-
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 821</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 71,932
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	8,233
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 80,165</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 202,967
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 378,249
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 526,970
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 252,425
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 28,546
◆ 2018	\$ 2,821,279	\$ 28,546
◆ 2019	\$ 2,759,973	\$ 26,387
◆ 2020	\$ 477,722	\$ 5,078
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX C - SCHEDULE OF PENSION AMOUNTS BY EMPLOYER

Pension Amounts as of December 31, 2016	Franklin Regional Retirement System	Town of Whately
◆ Current Proportionate Share		2.625268%
◆ Prior Proportionate Share		2.553750%
<b>Beginning Net Pension Liability</b>	<b>\$ 46,589,813</b>	<b>\$ 1,189,787</b>
<b>Ending Net Pension Liability</b>	<b>\$ 52,538,226</b>	<b>\$ 1,379,269</b>
<b>Total Deferred Outflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ -	\$ -
◆ Net Difference Between Projected and Actual Investment Earnings on Pension Plan Investments	4,521,333	118,697
◆ Changes of Assumptions	4,472,962	117,427
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	22,051
◆ Total Deferred Outflows of Resources	<u>\$ 11,066,770</u>	<u>\$ 258,175</u>
<b>Total Deferred Inflows of Resources:</b>		
◆ Differences Between Expected and Actual Experience	\$ 114,043	\$ 2,994
◆ Changes of Assumptions	-	\$ -
◆ Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	2,072,475	\$ 20,520
◆ Total Deferred Inflows of Resources	<u>\$ 2,186,518</u>	<u>\$ 23,514</u>
<b>Employer Pension Expense:</b>		
◆ Proportionate Share of Plan Pension Expense	\$ 9,991,253	\$ 262,297
◆ Net Amortization of Deferred Amounts from Changes in Proportion and Differences Between Employer Contributions and Proportionate Share of Contributions	-	(1,457)
◆ Total Employer Pension Expense	<u>\$ 9,991,253</u>	<u>\$ 260,840</u>
<b>Covered Payroll:</b>	\$ 33,556,164	\$ 993,582
<b>Sensitivity of the Net Pension Liability to changes in the discount rate:</b>		
◆ Current discount rate: 7.75%	\$ 52,538,226	\$ 1,379,269
◆ 1% decrease in the discount rate: 6.75%	\$ 73,195,363	\$ 1,921,574
◆ 1% increase in the discount rate: 8.75%	\$ 35,061,481	\$ 920,458
<b>Deferred Outflows of Resources and Deferred Inflows of Resources recognized in Pension Expense:</b>		
◆ 2017	\$ 2,821,278	\$ 72,610
◆ 2018	\$ 2,821,279	\$ 72,609
◆ 2019	\$ 2,759,973	\$ 73,537
◆ 2020	\$ 477,722	\$ 15,905
◆ 2021	\$ -	\$ -
◆ Thereafter	\$ -	\$ -

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## APPENDIX D - CALCULATION OF SINGLE DISCOUNT RATE

Under GASB 67, a series of projections and calculations are used to determine the discount rate for the purpose of the measurement of the Total Pension Liability. The discount rate is the single rate that reflects (1) the long-term expected rate of return on pension plan investments that are expected to be used to finance the payment of benefits, to the extent that the pension plan's Fiduciary Net Position is projected to be sufficient to make projected benefit payments and pension plan assets are expected to be invested using a strategy to achieve that return, and (2) a yield or index rate for 20-year, tax-exempt general obligation municipal bonds with an average rating of AA/Aa or higher, to the extent that the conditions for use of the long-term expected rate of return are not met.

Projected cash flows into and out of the pension plan are assumed to be contributions to the pension plan, benefit payments, pension plan administrative expenses and pension plan investment earnings. These projected cash flows are used to project the pension plan's Fiduciary Net Position at the beginning of each period. The pension plan's projected Fiduciary Net Position at the beginning of each period is compared to the amount of benefit payments projected to occur in that period.

It is assumed that the pension plan's Fiduciary Net Position is expected to always be invested using a strategy to achieve the long-term expected rate of return on pension plan investments.

The benefit payments that are projected to occur in a period are discounted using the long-term expected rate of return on pension plan investments if the amount of the pension plan's beginning Fiduciary Net Position is projected to be sufficient to make the benefit payments in that period. In periods in which benefit payments are projected to be greater than the amount of the pension plan's Fiduciary Net Position, they are discounted using a municipal bond rate as required by GASB 67.

For purposes of this valuation, the long-term expected rate of return on pension plan investments is 7.75%; the municipal bond rate is 3.78%, based on the December 2016 Bond Buyer Index as published by the Federal Reserve. For each period, the pension plan's Fiduciary Net Position is projected to be sufficient to make the benefit payments in that period, therefore, the resulting single discount rate is based solely on the long-term expected rate of return of 7.75%.