PensionBenefits, Inc.

RTA Employees' Defined Benefit Plan & Trust

Actuarial Valuation Report as of January 1, 2018 for the Plan Year Ending December 31, 2018

June 2018

Prepared by:

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PensionBenefits
Total HR & Benefits Solutions

June 26, 2018

Ms. Sandy Roddel
Director of Finance
Regional Transportation Authority
5658 Bear Lane
Corpus Christi, TX 78405

Re: Actuarial Valuation of the *RTA Employees' Defined Benefit Plan & Trust* as of January 1, 2018

Dear Ms. Roddel:

We are pleased to present our Report of the actuarial valuation of the *RTA Employees' Defined Benefit Plan & Trust* as of January 1, 2018.

In additional to the actuarial valuation results, various accounting and employee listings are also included which should help you compare this plan year with prior years.

Based upon the actuarial valuation as of January 1, 2018, it is our opinion that the *RTA Employees' Defined Benefits Plan & Trust* is actuarially sound and that these results reasonably reflect the funding status and requirements of the plan. The assumptions and methods used in the actuarial valuation are reasonable and appropriate.

We would like to thank you for your assistance in providing all necessary data to complete this valuation. Please do not hesitate to let us know if you have any questions or need additional information.

Sincerely,

Kien Liew, EA, FCA, MAAA
Senior Actuary

Mark A. Cavazos, ASA
Manager, Pension Services

EXECUTIVE HIGHLIGHTS

1. The target long-term sustainability goal is 9.4% of compensation as discussed in Section 2.2 of the 2011 Report on Retirement Benefits.

2. 2018 Normal Cost was unchanged at 10.0% of payroll (v. 10.0% for 2017). Normal cost represents the annual cost of providing an additional year of pension benefits (2% of average compensation) for the active participants. This is the only cost each year if the plan does not have any unfunded liability.

3. The 2017 annual contribution decreased to 11.2% of payroll (v. 14.3% for 2017). The annual contribution is the sum of the Normal Cost plus the Amortization Payment of the unfunded liability.

4. The key to reduce contribution volatility is to identify the volatility risks and proactively manage these risks. These were discussed in the 2011 Report on Retirement Benefits. Long term sustainability of the pension plan relies on how the risks are managed.

While short-term volatility of investment return and other actuarial gains or losses is expected, we will continue to monitor the actuarial assumptions used and recommend appropriate adjustment when necessary.

CONTENTS

Section 1. EXECUTIVE SUMMARY

The key results from the actuarial valuation of the RTA Employees' Defined Benefit Plan as of January 1, 2018, may be summarized as follows:

		2018	2017
1.	Participants		
	a. Actives	240	246
	b. Deferred Vested	177	169
	c. Retirees & Beneficiaries	166	154
	d. Total	583	569
2.	Covered Payroll	$10,677,430	$9,773,977
3.	Normal Cost (NC)	$1,066,449	$980,740
	Percent of covered payroll	10.0%	10.0%
4.	Present Value of Future Benefits	$43,655,676	$41,357,078
5.	Actuarial Accrued Liability	$37,069,237	$34,966,314
6.	Actuarial Asset Value	$36,440,324	$32,583,077
7.	Unfunded Actuarial Accrued Liability (UAAL)	$628,913	$2,383,237
8.	Actuarial Assets as percent of Accrued Liability	98.3%	93.2%
9.	Actuarial Gains/(Losses)		
	a. Due to actual experience	$1,510,403	$620,191
	b. Due to assumption/method change	N/A	N/A
	c. Due to plan amendment	N/A	N/A
	d. Total	$1,510,403	$620,191
10.	Annual Contribution Amount (assumed contribution on January 1):	$1,191,087	$1,399,307
	Percent of covered payroll	11.2%	14.3%
11.	Investment return assumption	7.5%	7.5%
12.	Salary increase assumption	3.5%	3.5%

Section 2. INTRODUCTION

This January 1, 2018 actuarial valuation of the RTA Employees' Defined Benefit Plan has been prepared by PensionBenefits, Inc. The primary purpose of the valuation is to value the liabilities of the plan as of January 1, 2018, determine the RTA's contribution, and to provide certain disclosure information.

Section 1 provides a summary of the valuation results. Section 3 shows the development of the annual contribution amount. Assets are discussed in Section 4. Section 5 contains an analysis of the actuarial gains and losses during the past year.

Government Accounting Standards Board Statement (GASB) Nos. 67 and 68 information in the report is discussed in Section 6. Section 7 summarizes our findings.

Section 8 summarizes the plan provisions and actuarial assumptions used in the valuation. Sections 9 and 10 list census data and benefits.

Section 3. ANNUAL CONTRIBUTION AMOUNT

The annual contribution amount is the normal cost plus the amortization of the unfunded actuarial liability as a level dollar amount over 15 years from January 1, 2009 (6 years remain). This is the same approach as used in the prior year.

The normal cost and actuarial accrued liability are developed based on the entry-age-normal (EAN) actuarial cost method.

Section 3.1 Development of Annual Contribution Amount

Section 3.1 DEVELOPMENT OF ANNUAL CONTRIBUTION AMOUNT

1.	Normal Cost (NC)		$ 1,066,449
2.	Amortization Amount		124,638
	a. Unfunded Accrued Liability (UAAL)	$ 628,913	
	b. Number of years remaining on 15-year amortization starting 1/1/2009	6	
	c. Amortization factor	5.0459	
	d. Amortization amount (a / c)	124,638	
3.	Annual Contribution Amount at 1/1/2018 (1 + 2)		$ 1,191,087*

* Contribution payable on January 1, 2018. All amounts outstanding shall accrue interest at a rate of 7.5% per annum until paid.

Section 4. PLAN ASSETS

An analysis of the change in the Plan assets since the prior valuation and an estimate of the yield on assets for the Plan are included in section 4.1.

Section 4.1 Change in Assets

Section 4.2 Description of Assets

Section 4.1: CHANGE IN ASSETS

		Market Value
1.	Plan assets as of January 1, 2017	$ 32,583,077
2.	Employer contributions	1,383,969
3.	Benefit payments made	1,833,510
4.	Expenses paid from trust	102,228
5.	Investment return	4,409,016
6.	Plan assets as of December 31, 2017 [1 + 2 – 3 – 4 + 5]	$ 36,440,324
7.	Dollar-weighted rate of return[1]	
	a. Average invested assets:	$ 32,818,299
	b. Actual rate of return: [(5 – 4) / 7a]	13.12%
8.	Actuarial asset gain (loss)	
	a. Expected rate of return	7.50%
	b. Expected net investment return: [7a × 8a]	$ 2,461,372
	c. Actual net investment return: [5 – 4]	$ 4,306,788
	d. Actuarial asset gain (loss): [8c – 8b]	$ 1,845,416

[1] This may differ from the time-weighted rate of return. Development of investment return follows Pension Review Board procedure.

Section 4.2: DESCRIPTION OF ASSETS

		Market Value
1.	Cash and Cash Equivalents	$ 1,106,130
2.	Equities	19,647,099
3.	Fixed Income	
	a. Corporate Obligations	13,478,768
	b. Government Obligations	0
2.	Real Estate	1,271,005
2.	Other Investments	936,131
4.	Trust Asset Balance at 12/31/2017	$ 36,439,133
5.	Accrued Income	1,191
6.	Contribution Receivable	0
7.	Total Assets at 12/31/2017	$ 36,440,324

Section 5: ACTUARIAL GAINS AND LOSSES

An important part of the changes in unfunded actuarial accrued liability from year to year is due to the impact of actuarial gains and losses of the Plan.

Section 5.1: UNFUNDED ACTUARIAL ACCRUED LIABILITY

		January 1, 2018	January 1, 2017
Actuarial Accrued Liability			
1.	Active participants	$ 15,340,356	$ 13,793,481
2.	Deferred vested participants	4,009,372	4,332,631
3.	Retirees & Beneficiaries	17,719,509	16,840,202
4.	Total	$ 37,069,237	$ 34,966,314
Actuarial Asset Value			
5.	AAV	$ 36,440,324	$ 32,583,077
Unfunded Actuarial Accrued Liability			
6.	UAAL (4 – 5)	$ 628,913	$ 2,383,237

Section 5.2: ACTUARIAL GAIN / (LOSS) AS OF DECEMBER 31, 2017

Calculation of Total Actuarial Gain / (Loss)

1.	Unfunded actuarial accrued liability (UAAL) as of 1/1/2017	$	2,383,237
2.	Normal cost as of January 1, 2017		980,740
3.	Actual contributions for 2017		(1,383,969)
4.	Interest at rate of 7.5% for year ending 12/31/2017		
	a. On UAAL		178,743
	b. On normal cost		73,556
	c. On contributions		(92,991)
	d. Total		159,308
5.	Expected UAAL (1 + 2 + 3 + 4d)		2,139,316
6.	Actual UAAL		628,913
7.	Actuarial gain/(loss) for the year (5 – 6)	$	1,510,403

Source of Gains / (Losses)

8.	Due to experience during the year		
	a. Asset experience		1,845,416
	b. Liability experience		(335,013)
9.	Due to actuarial assumption change		N/A
10.	Due to plan amendment		N/A
11.	Adjustment due to overfunding		N/A
12.	Total gain/(loss) for the year (8a + 8b + 9 + 10 + 11)	$	1,510,403

Section 5.3: SCHEDULE OF FUNDING PROGRESS

Plan Year Beginning January 1	Net Assets Available for Benefits	Actuarial Accrued Liability (AAL)	Unfunded Actuarial Accrued Liability (UAAL)	Percent Funded
2000	$10,886,734	$13,579,715	$2,692,981	80.2%
2001	10,665,029	12,095,483	1,430,454	88.2%
2002	10,176,468	10,448,503	272,035	97.4%
2003	9,495,065	11,978,973	2,483,908	79.3%
2004	11,453,426	12,488,748	1,035,322	91.7%
2005	12,996,121	14,027,843	1,031,722	92.6%
2006	15,047,251	15,076,504	29,253	99.8%
2007	17,064,846	16,686,030	0	102.3%
2008	18,514,359	18,587,028	72,669	99.6%
2009	13,297,998	20,416,886	7,118,888	65.1%
2010	17,913,932	22,390,777	4,476,845	80.0%
2011	21,547,889	23,682,639	2,134,740	91.0%
2012	21,791,159	25,576,425	3,785,266	85.2%
2013	25,566,845	27,944,142	2,377,297	91.5%
2014	29,617,120	29,016,953	0	102.1%
2015	31,162,434	31,895,409	732,975	97.7%
2016	30,210,461	33,530,870	3,320,409	90.1%
2017	32,583,077	34,966,314	2,383,237	93.2%
2018	36,440,324	37,069,237	628,913	98.3%

Section 5.4: PROJECTION OF ESTIMATED BENEFIT PAYMENTS

Year	Estimated Benefit Payments
2018	$2,062,000
2019	2,192,000
2020	2,276,000
2021	2,458,000
2022	2,552,000
2023	2,739,000
2024	2,924,000
2025	3,017,000
2026	3,261,000
2027	3,344,000
2028	3,444,000
2029	3,600,000
2030	3,646,000
2031	3,703,000
2032	3,708,000
2033	3,727,000
2034	3,872,000
2035	3,941,000
2036	4,197,000
2037	4,147,000
2038	4,130,000
2039	4,205,000
2040	4,257,000
2041	4,376,000
2042	4,469,000
2043	4,459,000
2044	4,389,000
2045	4,418,000
2046	4,492,000
2047	4,620,000

Section 6: GASB Nos. 67 AND 68 DISCLOSURE

The Governmental Accounting Standards Board (GASB) has issued statement No. 67 which provides the manner in which the actuarial condition of a public sector retirement plan is to be disclosed. GASB Statement No. 68 governs retirement plan reporting for public sector employers.

Assets used for GASB No. 67 disclosure are based on the actuarial value which is also equal to market value for the RTA Employees' Defined Benefit Trust. Plan liabilities are based on entry age normal cost funding method as required by GASB No. 67.

Section 6.1 Schedule changes in the net pension liability and related ratios

Section 6.2 Schedule of contributions

Section 6.3 Calculation of discount rate

Section 6.4 Sensitivity of net pension liability to changes in discount rate

Section 6.5 Changes in net pension liability

Section 6.6 Deferred outflows of resources and deferred inflows of resources

Section 6.7 Notes to required supplementary information

Section 6.1: SCHEDULE OF CHANGES IN THE NET PENSION LIABILITY AND RELATED RATIOS (as required by GASB No. 67)

	2017	2016
Total pension liability		
Service cost	$980,740	$941,470
Interest	2,620,680	2,521,413
Changes of benefit terms	-	-
Differences between expected and actual experience	335,013	(465,534)
Changes of assumptions	-	-
Benefit payments	(1,832,510)	(1,561,905)
Net change in total pension liability	$2,102,923	$1,435,444
Total pension liability – beginning	34,966,314	33,530,870
Total pension liability – ending (a)	$37,069,237	$34,966,314
Plan fiduciary net position		
Contributions – employer	$1,383,969	$1,503,736
Contributions – employee	-	-
Net investment income	4,409,016	2,523,595
Benefit payments	(1,833,510)	(1,561,905)
Administrative expense	(102,228)	(92,810)
Other	-	-
Net change in plan fiduciary net position	$3,857,247	$2,372,616
Plan fiduciary net position – beginning	32,583,077	30,210,461
Plan fiduciary net position – ending (b)	$36,440,324	$35,583,077
Net pension liability – ending (a) – (b)	$628,913	$2,383,237
Plan fiduciary net position as a percentage of the total pension liability	98.30%	93.18%
Covered-employee payroll	$10,677,430	$9,773,977
Net pension liability as a percentage of covered-employee payroll	5.89%	24.38%

Section 6.2: SCHEDULE OF CONTRIBUTIONS (as required by GASB No. 67)

	2017	2016	2015
Actuarially determined contribution	$1,399,307	$1,468,804	$983,696
Contributions in relation to the actuarially determined contribution	1,383,969	$1,503,736	$985,175
Contribution deficiency (excess)	$15,338	($34,932)	($1,479)
Covered-employee payroll	$9,773,977	$9,178,411	$8,818,232
Contributions as a percentage of covered-employee payroll	14.16%	16.38%	11.17%

Section 6.3: CALCULATION OF THE DISCOUNT RATE (as required by GASB No. 67)

Pursuant to Paragraph 43, an alternate analysis is performed to compare the plan's net fiduciary position to projected benefit payments.

1. The Normal Cost represents the annual cost of benefit payments arising from future service increases for active employees.

2. The Unfunded Actuarial Accrued Liability represents the accumulated deficiency of the total cost of benefit payments which have already been earned over the current assets held by the plan's trust.

3. RTA's contribution policy is to make an annual payment equal to the Normal Cost plus the amortization payment of the Unfunded Actuarial Accrued Liability. The amortization payment is calculated as a level dollar amount over a period of 15 years from January 1, 2009.

4. A review of actual contributions over the past five years shows that RTA has made sufficient contributions to meet its funding policy.

On the basis of the above, the projected cash flows will be sufficient to provide the benefit payments to the plan participants. Thus, the Discount Rate is equal to the long-term expected rate of return of 7.5%.

Section 6.4: SENSITIVITY OF NET PENSION LIABILITY TO CHANGES IN DISCOUNT RATE (as required by GASB No. 67)

The following presents the net pension liability, calculated using the discount rate of 7.5%, as well as what the net pension liability would be if it were calculated using a discount rate that is 1-percentage-point lower (6.5%) or 1-percentage-point higher (8.5%) than the current rate:

	1% Decrease (6.5%)	Current Discount Rate (7.5%)	1% Increase (8.5%)
Net pension liability	$4,915,965	$628,913	($2,985,694)

Section 6.5: CHANGES IN NET PENSION LIABILITY (as required by GASB No. 68)

	Total Pension Liability (a)	Plan Fiduciary Net Position (b)	Net Pension Liability (a) – (b)
Balances at 12/31/2016	$34,966,314	$32,583,077	$2,383,237
Changes for the year:			
Service cost	$980,740		$980,740
Interest	2,620,680		2,620,680
Differences between expected and actual experience	335,013		335,013
Changes in benefit terms	-		-
Contributions – employer		1,383,969	(1,383,969)
Contributions – employee		-	-
Net investment income		4,409,016	(4,409,016)
Benefit payments	(1,833,510)	(1,833,510)	-
Administrative expense		(102,228)	102,228
Other changes	-	-	-
Net changes	2,102,923	3,857,247	(1,754,324)
Balances as of 12/31/2017	$37,069,237	$36,440,324	$628,913

Section 6.6: DEFERRED OUTFLOWS OF RESOURCES AND DEFERRED INFLOWS OF RESOURCES (as required by GASB No. 68)

	Deferred Outflows of Resources	Deferred Inflows of Resources
Difference between expected and actual experience	$335,013	$479,172
Changes of assumptions	-	-
Changes in benefit terms	-	-
Net difference between projected and actual earnings on pension plan investments	1,955,290	2,145,618
Total	$2,290,303	$2,624,790

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

Year ended 12/31	Outflows	Inflows	Net
2018	$783,383	$620,418	$162,965
2019	783,384	620,416	162,968
2020	639,782	555,404	84,378
2021	83,754	439,024	(355,270)
2022	-	389,528	(389,528)
Thereafter	-	-	-

Section 6.7: NOTES TO REQUIRED SUPPLEMENTARY INFORMATION

The information presented in the required supplementary schedules was determined as part of the actuarial valuations at the dates indicated. Additional information as of the latest actuarial valuation follows:

Valuation date	January 1
Actuarial cost method	Entry Age Normal
Amortization method	Level dollar amount over 15 years from January 1, 2009
Asset valuation method	Market value
Actuarial assumptions:	
Investment rate of return	7.5%
Projected salary increases	3.5%
Average remaining service lifetime	4 years

Section 7. SUMMARY AND CLOSING COMMENTS

It is our opinion that the results of this valuation provide a reasonable reflection of the funding status of the Plan and that the RTA Employees' Defined Benefit Plan & Trust is actuarially sound provided RTA contribute the annual contribution amount to the trust.

Section 8. PLAN SPECIFICATIONS

Type of Entity:	Local Government
Plan Provisions	
Effective Date:	July 21, 1986
Employee:	Any person, excluding independent contractors, receiving remuneration for personal services rendered to the Employer.
Employer:	Corpus Christi Regional Transportation Authority
Plan Year:	January 1 to December 31.
Participation:	Commencement of full-time employment or reemployment.
Employee Contributions:	None required or permitted.
Compensation:	W-2 wages paid during a calendar year and any employee salary reduction under Code §125, §457 or §414(h).
Average Compensation:	Three year average of Compensation.
Accrued Benefit:	2% of average monthly compensation multiplied by total years of service. Service prior to 7/21/1986 is excluded.
Normal Form:	Joint and 50% survivor annuity for married participants. Single life annuity for single participants.
Actuarial Equivalence:	
Interest:	7.0%
Mortality:	1984 Unisex Mortality Table
Lump Sum Payments:	
Interest:	7.0%
Mortality:	1984 Unisex Mortality Table
Normal Retirement:	
Eligibility:	First of month after attaining age 62.
Benefit:	Accrued Benefit.

Early Retirement:

Eligibility:	First of the month after attaining age 55 and completion of 10 years of service.
Benefit:	Accrued Benefit reduced 5% per each year commencement precedes Normal Retirement Date.

Special Early Retirement:

Eligibility:	As of December 31, 2014, between ages 55 and 62, and completion of 10 years of service. Employee must elect Special Early Retirement by January 31, 2015.
Benefit:	Accrued Benefit payable beginning February 1, 2015.

Special Early Retirement:

Eligibility:	As of December 31, 2012, between ages 55 and 62, and completion of 10 years of service. Employee must elect Special Early Retirement by February 28, 2013.
Benefit:	Accrued Benefit payable beginning March 1, 2013.

Death Benefits:

Eligibility:	Death after completion of three years of service.
Benefit:	Qualified Pre-retirement Survivors Annuity.

Termination benefit:

Vesting percent: According to the following schedule:

Years of service	Vested percent
Under 3	0%
3	20%
4	40%
5	60%
6	80%
7+	100%

Benefit: Accrued benefit multiplied by the Vested Percent.

Cost-of-living adjustment:

Eligibility:	Participants receiving monthly retirement benefits at January 1, 2016
Benefit:	Five percent (5%) for those whose benefits began as of January 1, 2005, and Two percent (2%) for those whose benefits began

between January 1, 2010 and January 1, 2005.

Actuarial Funding Method

Valuation Date:	First day of the Plan Year.
Actuarial Cost Method:	The Individual Entry Age Normal Method based on a level percent of compensation.
Actuarial Value of Assets:	Market value.

Actuarial Assumptions

Morality:	RP 2000 Mortality Table
Expected Retirement Age:	All participants were assumed to retire at age 62.
Withdrawal Rate:	Turnover Table 5.
Disability Rate:	None assumed.
Investment Rate of Return:	7.5% annually.
Salary Increase Rate:	3.5% per year.