



July 1, 2020

CONFIDENTIAL

Terry Thomas
Capital Metropolitan Transportation Authority
2910 East 5th Street
Austin, Texas 78702

Re: January 1, 2020 Actuarial Valuation Report

Dear Terry:

Enclosed is the January 1, 2020 actuarial valuation report for the Capital Metropolitan Transportation Authority Retirement Plan for Administrative Employees. The report covers the calculation of the minimum required contribution for the 2020 plan year and the employer's GASB disclosure as of December 31, 2019.

If you have any questions, please call me at (216) 875-1921.

Sincerely,

FINDLEY

Paul J. Gibbons

Enclosures

Capital Metropolitan Transportation Authority

Retirement Plan for Administrative Employees

Report for the Plan Year Beginning
January 1, 2020

July 1, 2020



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Summary of Key Results

Plan Years Beginning	1/01/2019	1/01/2020
Cash Contributions		
Annual Funding Contribution (January 1) amount per active valued	\$ 2,854,029 9,774	\$ 3,055,016 10,016
Annual Funding Contribution (December 31) amount per active valued	\$ 3,046,676 10,434	\$ 3,261,230 10,693
Net Pension Liability		
December 31		
Total Pension Liability	\$ 49,263,627	\$ 60,803,835
Fiduciary Positions	(29,770,966)	(37,818,736)
Net Pension Liability	\$ 19,492,661	\$ 22,985,099
Actuarial Accrued Liability	\$ 41,198,793	\$ 46,154,579
Actuarial Value of Assets	\$ 31,697,978	\$ 35,895,259
Normal Cost	\$ 1,899,580	\$ 2,022,697
Effective Interest Rate	6.75%	6.75%
Compensation		
Total Compensation	\$ 24,354,819	\$ 26,440,895
Valuation Compensation	22,758,461	24,700,473
Present Value of Future Compensation	198,099,835	214,946,892

Plan Year Highlights

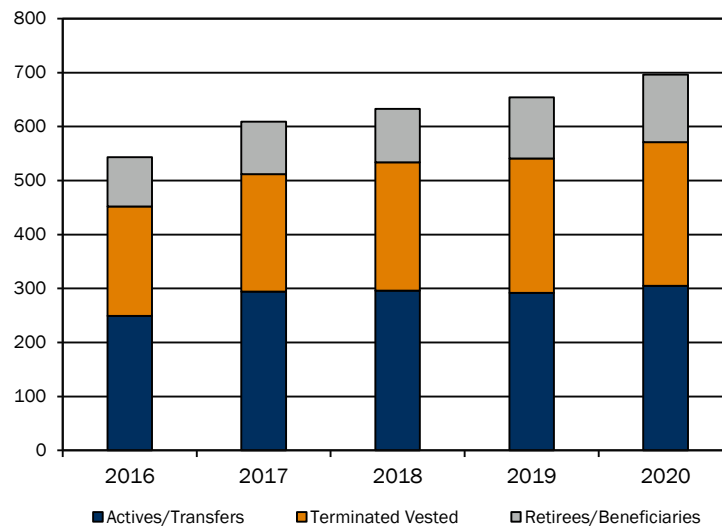
Plan Provisions

The Plan's liabilities have not changed due to plan amendment since the last valuation. The main provisions of the plan as of the valuation date are summarized in Appendix A.

Demographics

Data as of January 1, 2020 have been used for this valuation. Details regarding changes since the prior valuation can be found in Exhibit XV.

Participant Counts



Plan Liability Gains and Losses

The plan's liability was calculated using the Entry Age Normal method.

There was a loss of \$1,072,323 on the liability this year due to demographic changes. The actual valuation salary for continuing actives was 3.9% higher than expected, due to larger than expected salary increases. The difference in actual and expected valuation salary accounted for approximately \$754,000 of the demographic loss. The remaining loss was due to differences in actual and expected demographic experience.

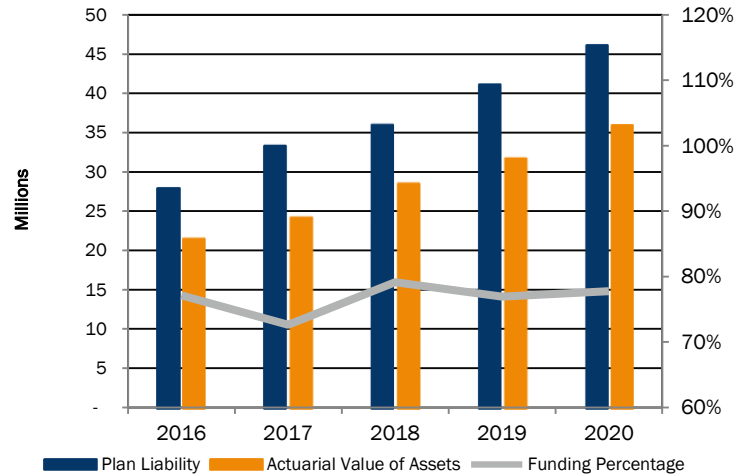
The mortality rates were updated this year to the most recent table. As a result of this change, there was a loss of \$13,892 on the liability.

Asset Performance

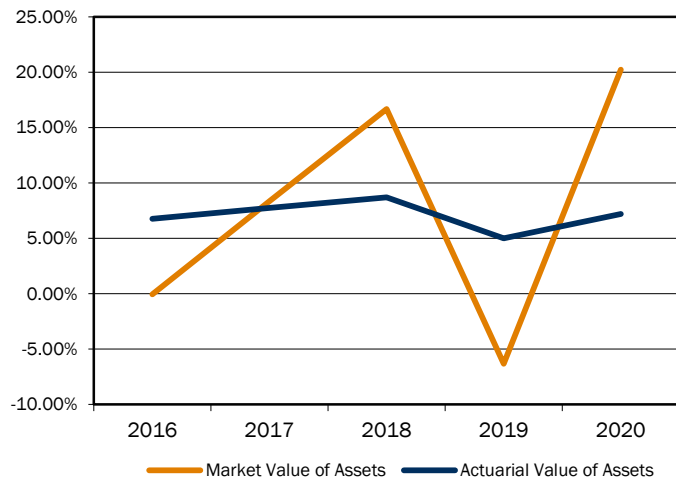
Due to the difference between the 6.75% expected rate of return in the prior year and the actual 20.23% return on the market value of assets, the assets increased by \$4,127,954. Since the plan uses a smoothing method, this return was not entirely reflected in the actuarial value of plan assets. The rate of return on the actuarial value of assets was 7.19%.

Plan Year Highlights (Continued)

Historical Plan Liability, Assets, and Funding Percentage



Historical Return on Assets



Accounting Assumptions and Methodologies

The discount rate was lowered to 5.10% in accordance with GASB Statements Nos. 67 and 68. The mortality table was updated to Pri-2012 White Collar Dataset with improvement scale MP-2019. As of January 1, 2020 this decrease in discount rate and change in mortality increased the total pension liability by \$5,792,670.

Risk Discussion

Actuarial Standard of Practice No. 51

Effective November 1, 2018, actuarial funding valuation reports are required to include a discussion of the risk associated with measuring pension obligations and determining pension plan contributions. The risks that may reasonably be anticipated to significantly affect the plan's future financial condition are discussed below.

Investment Risk

Due to the plan's significant equity exposure, there is risk that the funded status of the plan could be volatile. The historical market value of asset returns in the chart on page 4 of report shows this historical volatility. We recommend a more detailed assessment be performed to provide the plan sponsor with a better understanding of this risk.

Inflation Risk

Inflation-driven pay increases will result in larger benefit increases for longer service participants. The current salary increase assumption is summarized on page 34 of the report. We recommend a more detailed assessment be performed to provide the plan sponsor with a better understanding of this risk.

Funded Status Risk

Since this plan uses the expected return of assets as the valuation interest rate there is significant risk of increased funding deficit. We recommend a more detailed assessment be performed to provide the plan sponsor with a better understanding of this risk.

Actuarial Statement

Primary Purposes of Actuarial Valuation

This report has been prepared for Capital Metropolitan Transportation Authority.

The primary purposes of the valuation are

- to determine the annual contribution calculation for the plan year ending December 31, 2020, and
- to determine the net pension liability as of December 31, 2019 under GASB Statement Nos. 67 and 68.

The report also documents the funded status of the plan, the provisions on which the valuation is based, and the actuarial assumptions and methods used in the calculations. The results of this report may not be applicable for other purposes.

Sources of Data

A census of eligible employees was supplied by the Findley, Inc. Defined Benefit Administrative Practice. We did not audit the census.

Assumptions

Each significant assumption used in this report represents a combination of a best estimate of future expectations and observed past experience as well as estimates inherent in related market data. Information regarding the basis for, and any changes to, the assumptions is in Appendix B.

Sources of Financial Information

Benefit Trust Company provided asset information. We did not audit the asset information, but all data were checked for internal consistency and for consistency with last year's information.

Future Measurements

Future actuarial measurements may differ significantly from the current measurements presented in this report due to many factors: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic trends and assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost/contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

Actuarial Statement (Continued)

Certification of Compliance and Independence

The Funding Requirements and Financial Accounting Information set forth in this Report have been made in accordance with the interpretation of Plan provisions and the actuarial assumptions and funding method summarized, respectively, in Appendices A and B.

In our opinion, all calculations and procedures used in this report conform with generally accepted actuarial principles and practices and have been determined on the basis of actuarial assumptions and methods that are reasonable and that offer our best estimate of anticipated experience under the Plan. Therefore, we hereby certify that this valuation fairly represents the actuarial position of the Plan with respect to the primary purposes of this valuation.

There is no relationship between Capital Metropolitan Transportation Authority and Findley that impacts our objectivity.

Prescribed Statement of Actuarial Opinion

I, Paul J. Gibbons, am a member of the American Academy of Actuaries and meet the Qualifications Standards of the American Academy of Actuaries to render actuarial opinions in connection with this plan. I am also an enrolled actuary under ERISA.

We will be pleased to review this report with you at your convenience.

Respectfully,

Findley



Paul J. Gibbons, F.C.A., E.A., M.A.A.A.
Consulting Actuary



Adam N. Russo, A.S.A., E.A., M.A.A.A.
Consulting Actuary

July 1, 2020

Exhibit I

Market Value of Assets

Change in Market Value of Assets on an Accrual Basis

Market Value of Assets January 1, 2019 including accrued contributions	\$	29,770,966
Contributions during the plan year		3,046,377
Contributions after year end adjusted for interest		0
Benefit payments		(1,117,525)
Administrative Expenses		(76,658)
Investment return		6,195,576
Market Value of Assets on December 31, 2019 including accrued contributions	\$	<u>37,818,736</u>

Distribution of Market Value of Assets by Investment Class

Cash and Equivalents	\$	62,815
Debt Securities and Related Instruments		12,580,954
Equity Securities		23,993,859
Real Estate		1,179,368
Other		32,905
Accrued Income		0
Payables		(31,165)
Receivable Contributions discounted to year end		0
Market Value of Assets on December 31, 2019 including accrued contributions	\$	<u>37,818,736</u>

Rate of Return on Market Value of Assets

20.23%

Exhibit II

Development of Actuarial Value of Assets

Expected Value of Assets

Market Value of Assets January 1, 2019 including accrued contributions	\$	29,770,966
Interest on Market Value of Assets		2,009,540
Contributions during and for the plan year		3,046,377
Interest on contributions		96,898
Contributions made after year end, discounted to year end		0
Benefit payments		(1,117,525)
Interest on benefit payments		(37,101)
Administrative Expenses		(76,658)
Interest on Administrative Expenses		(1,715)
Expected Value of Assets at December 31, 2019	\$	33,690,782

Development of Unrecognized Gain/(Loss)

Gain/(Loss) for Plan Year ending December 31, 2019	\$	4,127,954
Unrecognized Gain/(Loss) as of January 1, 2020		

Plan Year Ending	Gain/ (Loss)	Unrecognized Portion	Unrecognized Amount
2019	\$ 4,127,954	80%	\$ 3,302,363
2018	(4,015,081)	60%	(2,409,049)
2017	2,429,723	40%	971,889
2016	291,371	20%	58,274
			\$ 1,923,477

Determination of Actuarial Value of Assets

Market Value of Assets including accrued contributions	\$	37,818,736
Unrecognized (Gain)/Loss		(1,923,477)
Actuarial Value of Assets before limits	\$	35,895,259
Limits on Actuarial Value of Assets		
a. 80% of Market Value including accruals	\$	30,254,989
b. 120% of Market Value including accruals		45,382,483
Actuarial Value of Assets after limits	\$	35,895,259

Change in Actuarial Value of Assets

Actuarial Value of Assets at January 1, 2019	\$	31,697,978
Contributions		3,046,377
Benefit payments		(1,117,525)
Administrative Expenses		(76,658)
Investment return		2,345,087
Actuarial Value of Assets at January 1, 2020	\$	35,895,259

Rate of Return on Actuarial Value of Assets

7.19%

Exhibit III

Reconciliation of Funded Status

Plan Year Beginning

1/01/2020

Reconciliation of Funded Status

Actuarial Accrued Liability as of January 1, 2019	\$ 41,198,793
Actuarial Value of Assets as of January 1, 2019	31,697,978
Unfunded Actuarial Liability as of January 1, 2019	\$ 9,500,815
Interest at 6.75%	641,305
Normal Cost With Interest	2,027,802
Contributions With Interest	(3,143,275)
Plan Amendment Change	0
Assumption Change	13,892
Expected Unfunded Actuarial Liability as of January 1, 2020	\$ 9,040,539
Actuarial Accrued Liability as of January 1, 2020	\$ 46,154,579
Actuarial Value of Assets as of January 1, 2020	35,895,259
Unfunded Actuarial Liability as of January 1, 2020	\$ 10,259,320
Total Gain/(Loss)	\$ (1,218,781)

Reconciliation of Gain/(Loss)

Actuarial Value of Assets January 1, 2019	\$ 31,697,978
Interest	2,139,614
Contributions during the Plan Year with interest	3,143,275
Benefits paid during the Plan Year with interest	(1,154,626)
Expenses paid during the Plan Year with interest	(78,373)
Expected Actuarial Value of Assets as of December 31, 2019	\$ 35,747,868
Gain/(Loss) for Plan Year ending December 31, 2019	\$ 147,391
Actuarial Accrued Liability as of January 1, 2019	\$ 41,198,793
Interest	2,780,919
Normal Cost with Interest	2,027,802
Benefits paid during the Plan Year with interest	(1,154,626)
Plan Amendment Change	0
Assumption Change	13,892
Expected Accrued Liability as of January 1, 2020	\$ 44,866,780
Gain/(Loss) for Plan Year ending December 31, 2019	\$ (1,287,799)
Administrative Expenses with Interest	\$ (78,373)

Exhibit IV

Schedule of Amortization Bases

Schedule Amortization

<u>Base</u>	<u>Date Established</u>	<u>Unfunded Balance</u>	<u>Years Remaining</u>	<u>Annual Payment</u>
Plan Amendment	1/01/2017	\$ 791,284	2	\$ 401,758
Assumption Change	1/01/2017	857,569	17	63,866
Assumption Change	1/01/2018	(805,437)	18	(57,454)
Assumption Change	1/01/2019	1,012,160	19	69,364
Assumption Change	1/01/2020	13,892	20	917
Total		\$ 1,869,468		\$ 478,451

New Shortfall Amortization

Actuarial Accrued Liability	\$ 46,154,579
Actuarial Value of Assets	35,895,259
Unfunded Amortization Balances	1,869,468
Scheduled Funded Percentage	81.82%
New Shortfall Base	0
Amortization Period	10
Interest Rate	6.75%
Salary Scale	3.50%
Amortization Factor	8.735489
Shortfall Amortization	0
100% Unfunded Actuarial Liability	\$ 10,259,320
Outstanding Amortization Balance	1,869,468
Remaining Unfunded Balance	8,389,852
Amortization Period	20
Amortization Factor	15.147760
Amortization Amount	\$ 553,868
Total Amortization	\$ 1,032,319

Exhibit V

Determination of Annual Contribution Requirement

Normal Cost

Present Value of Future Benefits	\$ 63,756,367
Actuarial Accrued Liability	46,154,579
Actuarial Value of Assets	35,895,259
Present Value of Future Normal Costs	17,601,788
Unfunded Actuarial Liability as of January 1, 2020	10,259,320
Present Value of Future Compensation	214,946,892
Normal Cost Accrual Rate	8.19%
Valuation Compensation	24,700,473
Normal Cost	\$ 2,022,697

Annual Contribution Requirement

Normal Cost	\$ 2,022,697
Amortization	1,032,319
Annual Contribution Requirement as of January 1	<u>3,055,016</u>
Interest	<u>206,214</u>
Annual Contribution Requirement as of December 31	\$ 3,261,230

Exhibit VI

Statement of Fiduciary Net Pension

Change in Market Value on an Accrual Basis

Market Value of Assets January 1, 2019 excluding accrued contributions	\$ 29,770,966
Contributions during the plan year	3,046,377
Benefit payments	(1,117,525)
Expenses	(76,658)
Investment return	6,195,576
Market Value of Assets December 31, 2019 including accrued contributions	\$ 37,818,736

Distribution of Assets by Investment Class

Cash and Equivalents	\$ 62,815
Debt Securities and Related Instruments	12,580,954
Equity Securities	23,993,859
Real Estate	1,179,368
Other	32,905
Accrued Income	0
Payables	(31,165)
Receivable contributions	0
Total Market Value of Assets December 31, 2019 including discounted accrued contributions	\$ 37,818,736

Exhibit VII

Discount Rate – Projection of Contributions

Contributions based on Entry Age Normal (level % currently 8.19%) method plus 5-year amortization of the plan amendment, plus 20-year amortizations of the Unfunded Accrued Liability and Assumption Changes.

Year	Payroll for Current Employees	Total Employee Payroll	Employer Contributions for		
			Current Employees	Amortization Amount	Total Contributions
2020	\$26,440,895	\$ 26,440,895	\$ 2,165,509	\$1,032,319	\$ 3,197,828
2021	24,893,333	24,893,333	2,038,764	1,032,319	3,071,083
2022	23,817,735	23,817,735	1,950,672	630,561	2,581,233
2023	22,891,347	22,891,347	1,874,801	630,561	2,505,362
2024	21,887,775	21,887,775	1,792,609	630,561	2,423,170
2025	20,988,230	20,988,230	1,718,936	630,561	2,349,497
2026	19,989,078	19,989,078	1,637,106	630,561	2,267,667
2027	19,145,695	19,145,695	1,568,032	630,561	2,198,593
2028	18,352,736	18,352,736	1,503,089	630,561	2,133,650
2029	17,317,590	17,317,590	1,418,311	630,561	2,048,872
2030	16,355,070	16,355,070	1,339,480	630,561	1,970,041
2031	15,381,566	15,381,566	1,259,750	630,561	1,890,311
2032	14,345,248	14,345,248	1,174,876	630,561	1,805,437
2033	13,683,989	13,683,989	1,120,719	630,561	1,751,280
2034	12,618,282	12,618,282	1,033,437	630,561	1,663,998
2035	11,747,570	11,747,570	962,126	630,561	1,592,687
2036	10,932,489	10,932,489	895,371	630,561	1,525,932
2037	10,039,824	10,039,824	822,262	566,695	1,388,957
2038	9,449,437	9,449,437	773,909	624,149	1,398,058
2039	8,685,581	8,685,581	711,349	554,785	1,266,134
2040	7,803,998	7,803,998	639,147	0	639,147
2041	7,125,182	7,125,182	583,552	0	583,552
2042	6,559,035	6,559,035	537,185	0	537,185
2043	5,862,981	5,862,981	480,178	0	480,178
2044	5,254,484	5,254,484	430,342	0	430,342
2045	4,506,786	4,506,786	369,106	0	369,106
2046	3,874,709	3,874,709	317,339	0	317,339
2047	3,391,600	3,391,600	277,772	0	277,772
2048	2,861,371	2,861,371	234,346	0	234,346
2049	2,382,359	2,382,359	195,115	0	195,115
2050	2,030,603	2,030,603	166,306	0	166,306
2051	1,586,513	1,586,513	129,935	0	129,935

Exhibit VII (Continued)

Year	Payroll for	Total	Employer		Total
	Current	Employee	Contributions for	Amortization	
<u>Year</u>	<u>Employees</u>	<u>Payroll</u>	<u>Employees</u>	<u>Amount</u>	<u>Contributions</u>
2052	\$ 1,228,752	\$ 1,228,752	\$ 100,635	\$ 0	\$ 100,635
2053	983,765	983,765	80,570	0	80,570
2054	772,299	772,299	63,251	0	63,251
2055	633,631	633,631	51,894	0	51,894
2056	473,734	473,734	38,799	0	38,799
2057	322,855	322,855	26,442	0	26,442
2058	250,164	250,164	20,488	0	20,488
2059	195,412	195,412	16,004	0	16,004
2060	135,594	135,594	11,105	0	11,105
2061	96,337	96,337	7,890	0	7,890
2062	71,535	71,535	5,859	0	5,859
2063	54,884	54,884	4,495	0	4,495
2064	30,939	30,939	2,534	0	2,534
2065	15,037	15,037	1,232	0	1,232
2066	13,195	13,195	1,081	0	1,081
2067	11,575	11,575	948	0	948
2068	7,030	7,030	576	0	576

Exhibit VIII

Discount Rate – Projection Fiduciary Net Position

Year	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings	Projected Ending Fiduciary Net Position
2020	\$37,818,736	\$3,197,828	\$1,550,688	\$76,658	\$2,604,903	\$41,994,121
2021	41,994,121	3,071,083	1,704,065	78,191	2,877,391	46,160,339
2022	46,160,339	2,581,233	1,855,115	79,755	3,137,281	49,943,983
2023	49,943,983	2,505,362	2,080,056	81,350	3,382,638	53,670,577
2024	53,670,577	2,423,170	2,343,241	82,977	3,622,663	57,290,192
2025	57,290,192	2,349,497	2,596,572	84,637	3,856,075	60,814,555
2026	60,814,555	2,267,667	2,916,677	86,330	4,080,570	64,159,785
2027	64,159,785	2,198,593	3,221,951	88,057	4,293,888	67,342,258
2028	67,342,258	2,133,650	3,520,020	89,818	4,496,595	70,362,665
2029	70,362,665	2,048,872	3,820,004	91,614	4,687,639	73,187,558
2030	73,187,558	1,970,041	4,204,014	93,446	4,862,892	75,723,031
2031	75,723,031	1,890,311	4,509,234	95,315	5,021,195	78,029,988
2032	78,029,988	1,805,437	4,837,576	97,221	5,163,133	80,063,761
2033	80,063,761	1,751,280	5,196,407	99,165	5,286,637	81,806,106
2034	81,806,106	1,663,998	5,539,150	101,148	5,389,903	83,219,709
2035	83,219,709	1,592,687	5,851,977	103,171	5,472,501	84,329,749
2036	84,329,749	1,525,932	6,215,664	105,234	5,533,070	85,067,853
2037	85,067,853	1,388,957	6,470,334	107,339	5,569,820	85,448,957
2038	85,448,957	1,398,058	6,748,055	109,486	5,586,556	85,576,030
2039	85,576,030	1,266,134	7,061,604	111,676	5,580,271	85,249,155
2040	85,249,155	639,147	7,386,564	113,910	5,526,529	83,914,357
2041	83,914,357	583,552	7,573,447	116,188	5,428,305	82,236,579
2042	82,236,579	537,185	7,770,661	118,512	5,306,891	80,191,482
2043	80,191,482	480,178	7,967,195	120,882	5,160,351	77,743,934
2044	77,743,934	430,342	8,252,535	123,300	4,983,934	74,782,375
2045	74,782,375	369,106	8,449,812	125,766	4,775,364	71,351,267
2046	71,351,267	317,339	8,607,835	128,281	4,536,716	67,469,206
2047	67,469,206	277,772	8,720,858	130,847	4,269,526	63,164,799
2048	63,164,799	234,346	8,801,043	133,464	3,974,788	58,439,426
2049	58,439,426	195,115	8,796,409	136,133	3,654,588	53,356,587
2050	53,356,587	166,306	8,806,181	138,856	3,310,125	47,887,981
2051	47,887,981	129,935	8,786,533	141,633	2,940,347	42,030,097

Exhibit VIII (Continued)

Year	Projected Beginning Fiduciary Net Position	Projected Total Contributions	Projected Benefit Payments	Projected Administrative Expenses	Projected Investment Earnings	Projected Ending Fiduciary Net Position
2052	\$42,030,097	\$ 100,635	\$8,678,757	\$ 144,466	\$ 2,547,451	\$ 35,854,960
2053	35,854,960	80,570	8,512,719	147,355	2,135,380	29,410,836
2054	29,410,836	63,251	8,284,509	150,302	1,707,305	22,746,581
2055	22,746,581	51,894	8,072,773	153,308	1,264,020	15,836,414
2056	15,836,414	38,799	7,846,592	156,374	804,556	8,676,803
2057	8,676,803	26,442	7,553,511	159,501	330,498	1,320,731
2058	1,320,731	20,488	7,244,635	162,691	(156,086)	0
2059	0	16,004	6,943,197	165,945	(235,485)	0
2060	0	11,105	6,618,368	169,264	(224,973)	0
2061	0	7,890	6,281,120	172,649	(213,996)	0
2062	0	5,859	5,943,932	176,102	(202,984)	0
2063	0	4,495	5,620,648	179,624	(192,414)	0
2064	0	2,534	5,288,467	183,216	(181,570)	0
2065	0	1,232	4,947,896	186,880	(170,428)	0
2066	0	1,081	4,612,868	190,618	(159,435)	0
2067	0	948	4,286,185	194,430	(148,720)	0
2068	0	576	3,969,043	198,319	(138,333)	0
2069	0	0	3,654,800	202,285	(128,051)	0

Exhibit IX

Discount Rate – Actuarial Present Values of Benefit Payments

Year	Projected Beginning Fiduciary Net Position	Projected Net Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments	Present Value of "Unfunded" Benefit Payments	Present Value of Benefit Payments Using the Single Discount Rate
2020	\$37,818,736	\$1,550,688	\$1,550,688	\$ 0	\$1,500,861	\$ 0	\$1,512,621
2021	41,994,121	1,704,065	1,704,065	0	1,545,021	0	1,581,623
2022	46,160,339	1,855,115	1,855,115	0	1,575,618	0	1,638,320
2023	49,943,983	2,080,056	2,080,056	0	1,654,960	0	1,747,890
2024	53,670,577	2,343,241	2,343,241	0	1,746,472	0	1,873,559
2025	57,290,192	2,596,572	2,596,572	0	1,812,913	0	1,975,431
2026	60,814,555	2,916,677	2,916,677	0	1,907,643	0	2,111,354
2027	64,159,785	3,221,951	3,221,951	0	1,974,058	0	2,219,233
2028	67,342,258	3,520,020	3,520,020	0	2,020,310	0	2,306,960
2029	70,362,665	3,820,004	3,820,004	0	2,053,851	0	2,382,155
2030	73,187,558	4,204,014	4,204,014	0	2,117,392	0	2,494,488
2031	75,723,031	4,509,234	4,509,234	0	2,127,513	0	2,545,841
2032	78,029,988	4,837,576	4,837,576	0	2,138,106	0	2,598,768
2033	80,063,761	5,196,407	5,196,407	0	2,151,477	0	2,656,159
2034	81,806,106	5,539,150	5,539,150	0	2,148,369	0	2,694,047
2035	83,219,709	5,851,977	5,851,977	0	2,126,182	0	2,708,170
2036	84,329,749	6,215,664	6,215,664	0	2,115,521	0	2,736,982
2037	85,067,853	6,470,334	6,470,334	0	2,062,950	0	2,710,955
2038	85,448,957	6,748,055	6,748,055	0	2,015,453	0	2,690,205
2039	85,576,030	7,061,604	7,061,604	0	1,975,739	0	2,678,683
2040	85,249,155	7,386,564	7,386,564	0	1,935,980	0	2,666,070
2041	83,914,357	7,573,447	7,573,447	0	1,859,448	0	2,600,961
2042	82,236,579	7,770,661	7,770,661	0	1,787,230	0	2,539,273
2043	80,191,482	7,967,195	7,967,195	0	1,716,565	0	2,477,240
2044	77,743,934	8,252,535	8,252,535	0	1,665,613	0	2,441,525
2045	74,782,375	8,449,812	8,449,812	0	1,597,592	0	2,378,658
2046	71,351,267	8,607,835	8,607,835	0	1,524,562	0	2,305,633
2047	67,469,206	8,720,858	8,720,858	0	1,446,913	0	2,222,627
2048	63,164,799	8,801,043	8,801,043	0	1,367,885	0	2,134,286
2049	58,439,426	8,796,409	8,796,409	0	1,280,716	0	2,029,715
2050	53,356,587	8,806,181	8,806,181	0	1,201,067	0	1,933,430
2051	47,887,981	8,786,533	8,786,533	0	1,122,611	0	1,835,564

Exhibit IX (Continued)

Year	Projected Beginning Fiduciary Net Position	Projected Net Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments	Present Value of "Unfunded" Benefit Payments	Present Value of Benefit Payments Using the Single Discount Rate
2052	\$42,030,097	\$8,678,757	\$8,678,757	\$ 0	\$1,038,727	\$ 0	\$1,725,126
2053	35,854,960	8,512,719	8,512,719	0	954,430	0	1,610,063
2054	29,410,836	8,284,509	8,284,509	0	870,111	0	1,490,913
2055	22,746,581	8,072,773	8,072,773	0	794,260	0	1,382,355
2056	15,836,414	7,846,592	7,846,592	0	723,192	0	1,278,466
2057	8,676,803	7,553,511	7,553,511	0	652,159	0	1,171,030
2058	1,320,731	7,244,635	1,320,731	5,923,904	106,820	2,298,108	1,068,678
2059	0	6,943,197	0	6,943,197	0	2,628,092	974,543
2060	0	6,618,368	0	6,618,368	0	2,444,277	883,901
2061	0	6,281,120	0	6,281,120	0	2,263,368	798,180
2062	0	5,943,932	0	5,943,932	0	2,089,827	718,702
2063	0	5,620,648	0	5,620,648	0	1,928,153	646,655
2064	0	5,288,467	0	5,288,467	0	1,770,123	578,932
2065	0	4,947,896	0	4,947,896	0	1,615,893	515,382
2066	0	4,612,868	0	4,612,868	0	1,469,879	457,184
2067	0	4,286,185	0	4,286,185	0	1,332,600	404,205
2068	0	3,969,043	0	3,969,043	0	1,204,019	356,146
2069	0	3,654,800	0	3,654,800	0	1,081,757	312,045
2070	0	3,350,090	0	3,350,090	0	967,478	272,158
2071	0	3,055,720	0	3,055,720	0	861,027	236,205
2072	0	2,772,665	0	2,772,665	0	762,288	203,931
2073	0	2,502,044	0	2,502,044	0	671,174	175,103
2074	0	2,244,911	0	2,244,911	0	587,567	149,489
2075	0	2,002,069	0	2,002,069	0	511,277	126,853
2076	0	1,774,157	0	1,774,157	0	442,067	106,961
2077	0	1,561,749	0	1,561,749	0	379,687	89,589
2078	0	1,365,283	0	1,365,283	0	323,859	74,521
2079	0	1,184,932	0	1,184,932	0	274,249	61,540
2080	0	1,020,804	0	1,020,804	0	230,522	50,445
2081	0	872,842	0	872,842	0	192,320	41,041
2082	0	740,600	0	740,600	0	159,217	33,135
2083	0	623,453	0	623,453	0	130,776	26,541
2084	0	520,677	0	520,677	0	106,564	21,091

Exhibit IX (Continued)

Year	Projected Beginning Fiduciary Net Position	Projected Net Benefit Payments	"Funded" Portion of Benefit Payments	"Unfunded" Portion of Benefit Payments	Present Value of "Funded" Benefit Payments	Present Value of "Unfunded" Benefit Payments	Present Value of Benefit Payments Using the Single Discount Rate
2085	\$ 0	\$431,416	\$ 0	\$431,416	\$ 0	\$ 86,151	\$ 16,628
2086	0	354,690	0	354,690	0	69,108	13,007
2087	0	289,406	0	289,406	0	55,018	10,099
2088	0	234,404	0	234,404	0	43,479	7,783
2089	0	188,520	0	188,520	0	34,119	5,956
2090	0	150,609	0	150,609	0	26,595	4,527
2091	0	119,562	0	119,562	0	20,600	3,420
2092	0	94,339	0	94,339	0	15,859	2,567
2093	0	74,000	0	74,000	0	12,138	1,916
2094	0	57,703	0	57,703	0	9,235	1,422
2095	0	44,703	0	44,703	0	6,980	1,048
2096	0	34,371	0	34,371	0	5,237	767
2097	0	26,199	0	26,199	0	3,895	556
2098	0	19,780	0	19,780	0	2,869	399
2099	0	14,766	0	14,766	0	2,090	284
2100	0	10,871	0	10,871	0	1,501	199
2101	0	7,876	0	7,876	0	1,061	137
2102	0	5,609	0	5,609	0	737	93
2103	0	3,915	0	3,915	0	502	62
2104	0	2,670	0	2,670	0	334	40
2105	0	1,773	0	1,773	0	216	25
2106	0	1,144	0	1,144	0	136	16
2107	0	717	0	717	0	83	9
2108	0	435	0	435	0	49	5
2109	0	254	0	254	0	28	3
2110	0	143	0	143	0	15	2
2111	0	77	0	77	0	8	1
2112	0	40	0	40	0	4	0
2113	0	20	0	20	0	2	0
2114	0	10	0	10	0	1	0
2115	0	5	0	5	0	0	0
2116	0	2	0	2	0	0	0
2117	0	1	0	1	0	0	0

Exhibit X

Changes in Net Pension Liability

	<u>Plan Year Ending</u>	
	12/31/2018	12/31/2019
Total Pension Liability		
Service Cost	\$ 2,793,032	\$ 2,938,855
Interest	2,445,407	2,694,810
Changes of Benefit Terms	0	0
Differences Expected and Actual Experience	720,052	1,231,398
Changes of Assumptions	(920,415)	5,792,670
Benefit Payments	<u>(932,072)</u>	<u>(1,117,525)</u>
Net Change in Pension Liability	\$ 4,106,004	\$ 11,540,208
Total Pension Liability – Beginning	<u>45,157,623</u>	<u>49,263,627</u>
Total Pension Liability – Ending	\$ 49,263,627	\$ 60,803,835
Plan Net Fiduciary Position		
Employer Contributions	\$ 2,692,422	\$ 3,046,377
Employee Contributions	0	0
Net Investment Income	(1,941,101)	6,195,576
Benefit Payments	(932,072)	(1,117,525)
Administrative Expense	(58,478)	(76,658)
Other	<u>0</u>	<u>0</u>
Net Change in Net Fiduciary Position	\$ (239,229)	\$ 8,047,770
Plan Fiduciary Net Position – Beginning	<u>30,010,195</u>	<u>29,770,966</u>
Plan Fiduciary Net Position – Ending	\$ 29,770,966	\$ 37,818,736
Plan Fiduciary Net Position as a Percentage of Total Pension Liability	60.43%	62.20%
Net Pension Liability	\$ 19,492,661	\$ 22,985,099
Covered Employee Payroll	\$ 22,758,461	\$ 24,700,473
Net Pension Liability as a Percentage of Covered Employee Payroll	85.65%	93.06%
Net Pension Liability		
Net Pension Liability at 4.54%/4.10%	\$ 27,175,973	\$ 32,743,785
Net Pension Liability at 6.54%/6.10%	13,176,540	14,995,470

Exhibit X (Continued)
 Changes in Net Pension Liability

	Total Pension Liability	Plan Net Position	Net Pension Liability
December 31, 2018	\$49,263,627	\$ 29,770,966	\$ 19,492,661
Service Cost	2,938,855		2,938,855
Interest	2,694,810		2,694,810
Changes of Benefit Terms	0		0
Differences Expected and Actual Experience	1,231,398		1,231,398
Changes of Assumptions	5,792,670		5,792,670
Benefit Payments	(1,117,525)		(1,117,525)
Employer Contributions		3,046,377	(3,046,377)
Employee Contributions		0	0
Net Investment Income		6,195,576	(6,195,576)
Benefit Payments		(1,117,525)	1,117,525
Administrative Expenses		(76,658)	76,658
Other		<u>0</u>	<u>0</u>
December 31, 2019	<u>\$60,803,835</u>	<u>\$ 37,818,736</u>	<u>\$ 22,985,099</u>

Exhibit XI

Schedule of Employer's Net Pension Liability

<u>Year Ending December 31</u>	<u>Total Pension Liability</u>	<u>Plan Net Position</u>	<u>Net Pension Liability</u>	<u>Plan Net Position as a % of Total Pension Liability</u>	<u>Covered Payroll</u>	<u>Net Pension Liability as a % of Covered Payroll</u>	<u>Money Weighted Rate of Return</u>
2014	\$ 29,357,324	\$ 20,019,209	\$ 9,338,025	68.2%	\$ 16,183,596	57.7%	5.49%
2015	32,891,828	20,993,038	11,898,790	63.8%	18,663,437	63.8%	(0.05%)
2016	38,127,802	23,811,865	14,315,937	62.5%	23,116,717	61.9%	8.36%
2017	45,157,623	30,010,195	15,147,428	66.5%	20,966,199	72.2%	16.7%
2018	49,263,627	29,770,966	19,492,661	60.4%	22,758,461	85.7%	(6.3%)
2019	60,803,835	37,818,736	22,985,099	62.2%	24,700,473	93.0%	20.2%

Exhibit XII Contribution History

<u>Plan Year Ending December 31</u>	<u>Actuarially Determined Contribution</u>	<u>Actual Contribution</u>	<u>Contribution Deficiency (Excess)</u>	<u>Covered Payroll</u>	<u>Actual Contribution as a % Covered Payroll</u>
2008	\$ 1,616,637	\$ 2,161,177	\$ (544,540)	\$ 17,437,027	12.39%
2009	1,836,212	1,380,002	456,210	18,995,763	7.26%
2010	2,029,276	2,545,542	(516,266)	17,330,101	14.69%
2011	1,453,308	1,448,542	4,766	16,565,032	8.74%
2012	1,659,488	1,704,070	(44,582)	18,347,486	9.29%
2013	1,393,056	1,393,490	(434)	15,021,918	9.28%
2014	1,588,278	1,600,159	(11,881)	16,183,596	9.89%
2015	1,894,044	1,882,377	11,667	18,663,437	10.09%
2016	1,974,970	1,974,973	(3)	23,116,717	8.54%
2017	3,106,831	3,106,829	2	20,966,199	14.82%
2018	2,692,422	2,692,422	0	22,758,461	11.83%
2019	3,046,676	3,046,377	299	24,700,473	12.33%

Exhibit XIII

Pension Expense

1/1/2019-12/31/2019

Service Cost	\$ 2,938,855
Interest	2,694,810
Changes of Benefit Terms	0
Administrative Expenses	(76,658)
Employee Contributions	0
Expected Investment Return	(2,065,016)
Recognition of Deferred (Inflows)/Outflows	
Experience	462,676
Changes of Assumptions	1,895,616
Investment (Gains)/Losses	(273,525)
Other	<u>0</u>
Pension Expense	\$ 5,576,758

Exhibit XIV

Deferred (Inflow)/Outflow Schedule

Year Established	Initial Amount	Remaining Amount	Remaining Period	Amortization Amount
Experience				
2016	\$ (86,781)	\$ (32,457)	2.39	\$ (13,581)
2017	(288,769)	(143,902)	2.98	(48,289)
2018	720,052	421,276	2.82	149,388
2019	1,231,398	968,840	3.69	<u>262,558</u>
Total				\$ 350,076
Assumption				
2016	\$ 209,630	\$ 78,406	2.39	\$ 32,806
2017	3,035,050	1,512,451	2.98	507,533
2018	(920,415)	(538,501)	2.82	(190,957)
2019	5,792,670	4,557,559	3.69	<u>1,235,111</u>
Total				\$ 1,584,493
Investment				
2016	\$ (293,442)	\$ (58,690)	1.00	\$ (58,690)
2017	(2,407,449)	(962,979)	2.00	(481,490)
2018	4,016,296	2,409,778	3.00	803,259
2019	(4,130,560)	(3,304,448)	4.00	<u>(826,112)</u>
Total				\$ (563,033)

Future Amortization

2020	\$1,371,536
2021	1,430,227
2022	1,898,290
2023	207,280
2024+	0

Exhibit XV Census Reconciliation and Statistics

	Active Plan Members	Inactive Plan Members Entitled to But Not Yet Receiving Benefits	Inactive Plan Members Currently Receiving Benefits		Total
			Retired	Beneficiary	
Census Count January 1, 2019	292	249	106	7	654
Changes by category:					
a. Terminated Non-Vested	(2)	0	0	0	(2)
b. Death without Beneficiary	0	0	0	0	0
c. Death with Beneficiary	(1)	1	0	0	0
d. Terminated Vested	(25)	25	0	0	0
e. Paid Lump Sum	0	0	0	0	0
f. Suspended	0	0	0	0	0
g. Expired	0	0	0	(1)	(1)
h. Retired	(8)	(5)	13	0	0
i. New Entrants	46	0	0	0	46
j. Corrections	0	(1)	0	0	(1)
k. Returned to Work	<u>3</u>	<u>(3)</u>	<u>0</u>	<u>0</u>	<u>0</u>
Census Count January 1, 2020	305	266	119	6	696
Average age	49	52	69	66	
Average service	8				
Percent Male	52%	53%	59%	50%	

Exhibit XVI Age and Service Distribution

Age Near Year	Years of Service										Total
	<1	1-4	5-9	10-14	15-19	20-24	25-29	30-34	35-39	40+	
<25		2									2
25-29	4	7									11
30-34	8	7	6								21
35-39	6	13	6	4	2						31
40-44	5	13	11	6	2						37
45-49	5	15	17	6	7	1					51
50-54	8	15	12	5	7	2	1	1			51
55-59	4	9	11	12	5	3	2	1			47
60-64	2	3	17	5	6	4		3			40
65-69		6	2	1		1	1				11
70+		1	1	1							3
Total	42	91	83	40	29	11	4	5	0	0	305

Exhibit XVII

Distribution of Inactive Participants with Total Monthly Benefits

Age	Terminated Vested	Retired	Disabled	Beneficiary
<35	17 \$1,621			
35-39	31 \$5,099			
40-44	27 \$7,390			
45-49	34 \$12,248			1 \$301
50-54	41 \$17,944	1 \$277		
55-59	48 \$20,103	4 \$2,444		
60-64	47 \$17,299	27 \$28,830		1 \$191
65-69	18 \$11,072	41 \$31,809	1 \$1,168	2 \$1,313
70-74	2 \$2,056	30 \$22,829		1 \$1,673
75-79	1 \$1,013	13 \$14,628		1 \$80
80+		2 \$1,681		
Total	266 \$95,846	118 \$102,498	1 \$1,168	6 \$3,558

Appendix A

Summary of Principal Plan Provisions

Plan Sponsor	Capital Metropolitan Transportation Authority
Effective Date	January 1, 2005 as amended and restated effective January 1, 2010, last amended effective January 1, 2017.
Plan Year	The 12-month period beginning each January 1.
Participation	Full-time administrative employees of Capital Metropolitan Transportation Authority are eligible to become a participant on the first day of the month coincident with or next following their date of hire.
Earnings	The total amount of compensation paid to a Participant for services as a Covered Employee that is reported to the Internal Revenue Service for purposes of Federal income taxation, plus (1) any other compensation specified as being included under the Plan in an employment agreement with an Employer and (2) any discretionary employer contribution, as defined in the Capital Metropolitan Transportation Authority 401(k) Plan, made after January 1, 2007.
Average Annual Earnings	The highest average annual Earnings received for any 5 consecutive full Earnings Computation Periods during the 10 consecutive Earnings Computation Periods immediately preceding the date the Participant's employment terminates.
Covered Compensation	The average, without indexing, of the taxable wage bases under Section 230 of the Social Security Act in effect for each calendar year during the 35-year period ending on the last day of the calendar year in which the Employee attains (or will attain) Social Security Retirement Age.
Vesting Service	Vesting Service is the continuous service during which a participant is an employee of the employer.
Credited Service	Each person who is a Covered Employee on or after January 1, 2010, shall be credited with Service and Credited Service with respect to periods of employment on or after such date, for purposes of the Plan as follows. Covered Employees are also credited with credited service earned from January 1, 2005 through January 1, 2010. Certain eligible employees receive credit for service prior to January 1, 2005.

Appendix A (Continued)

Accrued Benefit

An eligible Participant's monthly normal retirement benefit shall be equal to 1/12th of the sum of the following:

- (a) 1.5 percent of the Participant's Average Annual Earnings multiplied by his number of years of Credited Service completed at retirement; plus
- (b) .5 percent of the Participant's Average Annual Earnings in excess of Covered Compensation multiplied by his number of years of Credited Service completed at retirement.

Employees credited with service prior to January 1, 2005 have a benefit offset as stated in the plan document.

In no event will the normal retirement benefit payable to a Participant be less than the amount that would have been payable to him under the same form of payment had he retired prior to his Normal Retirement Date when eligible for an early retirement benefit.

Normal Retirement Benefit

Eligibility:

The later of (i) the date on which he attains age 65 or (ii) the earlier of (A) the date he completes 5 year of Service or (B) the fifth anniversary of the date he commenced participation in the Plan. For all other purposes, Normal Retirement Date means the first day of the month coinciding with or immediately following the date determined above.

Monthly Benefit:

The Accrued Benefit.

Termination Benefit

Eligibility:

Each Participant who terminates employment with his Employer and all Affiliated Entities, who has a vested interest in his Accrued Benefit, and who is not eligible for a normal, early, or disability retirement benefit under the Plan shall be eligible for a deferred vested retirement benefit.

Monthly Benefit:

An eligible Participant's monthly deferred vested retirement benefit shall be equal to his vested Accrued Benefit on the date of his termination of employment; provided, however, that if the Participant is eligible to elect to begin benefit payments before his Normal Retirement Date as provided in Section 7.4 the amount of such benefit shall be reduced for early commencement in the same way as provided in Section 6.2 with respect to an early retirement benefit.

Appendix A (Continued)

Early Retirement Benefit

Eligibility:

Age 55 with 5 years of service.

Monthly Benefit:

An eligible Participant's monthly early retirement benefit shall be equal to his vested Accrued Benefit on the date of his early retirement; provided, however, that the amount of such benefit shall be adjusted for early commencement as follows:

- (a) If on the Participant's Annuity Starting Date his age plus his years of Service total at least 80, the amount of such benefit shall be reduced by 3 percent for each full year and $1/12^{\text{th}}$ of that amount for each full month by which his Annuity Starting Date precedes the first day of the month coinciding with or immediately following his attainment of age 62.
- (b) If the Participant does not satisfy the requirements in paragraph (a) above, the amount of such benefit shall be reduced by $1/15$ for each of the first 5 full years by which his Annuity Starting Date precedes his Normal Retirement Date and by $1/30$ for each additional full year by which his Annuity Starting Date precedes his Normal Retirement Date.

Disability Retirement Benefit

Eligibility:

Each Participant who terminates active employment with his Employer prior to his Normal Retirement Date due to permanent and total disability shall be eligible for a disability retirement benefit if all of the following requirements are met:

- (a) Such permanent and total disability arises after the Participant satisfied the requirements of Article IV to participate in the Plan;
- (b) The Participant is credited with at least 10 years of Service on the date his active employment terminates;
- (c) The Participant does not elect to receive an early retirement or a deferred vested retirement benefit prior to his Normal Retirement Date; and
- (d) The Participant's permanent and total disability continues to his Normal Retirement Date.

Monthly Benefit:

An eligible Participant's monthly disability retirement benefit shall be equal to his vested Accrued Benefit as of his Normal Retirement Date, determined

based on his Average Annual Earnings on the date his active employment terminated and his Credited Service as of his Normal Retirement Date.

Appendix A (Continued)

Death Benefit

Eligibility:

If a Participant dies before his Annuity Starting Date, his surviving Spouse shall be eligible for a Qualified Preretirement Survivor Annuity if all of the following requirements are met on the Participant's date of death:

- (a) The Participant has a Spouse as defined in Section 1.1.
- (b) The Participant has not waived the Qualified Preretirement Survivor Annuity and elected an optional form of payment that is given effect as provided in Section 9.8.
- (c) The Participant has a vested Accrued Benefit.

Monthly Benefit:

The monthly amount of the Qualified Preretirement Survivor Annuity payable to a surviving Spouse shall be equal to the survivor benefit that would have been payable to the Spouse if the Participant had:

- (a) separated from service on the earlier of his actual separation from service date or his date of death;
- (b) survived to the date as of which payment of the Qualified Preretirement Survivor Annuity to his surviving Spouse commences;
- (c) elected to commence retirement benefits as of the date described in paragraph (b) above in the form of a 50 percent Qualified Joint and Survivor Annuity; and
- (d) died on his Annuity Starting Date.

Optional Forms of Payments

Life Annuity
Joint & Survivor with 50%, 66 2/3%, 75% or 100% continuation
5 or 10 Year Certain and Continuous

The Actuarial Equivalent of a value means its equivalent value determined using the actuarial factors specified in the Plan. For purposes other than converting to a single sum payment, Actuarial Equivalence is determined using the 1983 Group Annuity Mortality Table blended 50 percent male and 50 percent female and an interest rate of 7 percent.

Benefits Available as Lump Sums

The conversion factors are based on the Applicable Mortality Table and Applicable Interest Rate as required under IRC Section 417(e)(3) for each November preceding the plan year of distribution.

Maximum Benefit Limit

The Internal Revenue Code Section 415 Maximum Benefit payable as a life annuity at Social Security Normal Retirement Age.

Plan Compensation Limit

The Section 401(a)(17) Maximum Compensation that can be recognized for benefit calculation purposes.

Changes in Plan Provisions

None.

Appendix B Statement of Actuarial Assumptions and Methods

Interest Rates

Funding: 6.75%

GASB Statement No's 67 and 68:

a.	Discount Rate (liabilities)	5.10%
b.	20-year municipal bond rate	2.49%
b.	Long-Term Rate (trust income)	6.75%

Rationale: Discount rate is developed using plan's expected benefit payments, expenses, contributions, investment return and 20-year annualized bond rate to determine the present value of the one rate that equals the sum of funded and unfunded benefit payments to equal the present value of expected benefit payments.

Annual Expected Return on Assets

Interest Rate for developing Actuarial Value of Assets: 6.75%

Rationale: As prescribed by the Plan Sponsor.

Salary Scale

3.50%

Rationale: As prescribed by the Plan Sponsor based on anticipated salary increases.

Mortality

Funding: Mortality as provided in Notice 2018-2, male and female, with separate rates for annuitants and nonannuitants (as prescribed by IRC 430).

Rationale: Selected by Plan Sponsor to match the updated IRS 430 mortality.

Accounting: Pri-2012 White Collar Dataset Amount-Weighted Mortality Projected with Scale MP-2019 with separate rates for employees, retirees and contingent survivors.

Rationale: Selected by the Plan Sponsor on the most current base mortality table published by the Society of Actuaries and the most recent projection scale.

Rates of Retirement

<u>Age</u>	<u>Rate</u>
60-61	5%
62-64	10%
65	50%
66-69	15%
70	100%

Rationale: As selected by the Plan Sponsor based on advice from plan actuary as a result of an experience study conducted in 2017.

Appendix B (Continued)

Rates of Disability None assumed.

Rates of Turnover Based on age and service, sample rates follow:

Age	Service					
	<u><1</u>	<u>1</u>	<u>2</u>	<u>3</u>	<u>4</u>	<u>5+</u>
25	17%	14%	12%	9%	6%	6%
30	17%	14%	12%	9%	6%	6%
35	17%	14%	12%	9%	6%	6%
40	17%	14%	12%	9%	6%	5%
45	17%	14%	12%	9%	6%	5%
50+	17%	14%	12%	9%	6%	4%

Rationale: As selected by the Plan Sponsor based on advice from plan actuary as a result of an experience study conducted in 2018.

Assumptions Made In Valuing Spouse's Benefit 60% of male participants and 40% of female participants to be married. The wife is assumed to be three years younger than the husband.

Annual Increases to Maximum Benefits and Plan Compensation Limits 1.00%

Annual Increases to Social Security 1.00%

Provision for Expenses The expected administrative (i.e. non-investment) expenses that will be paid from plan assets. For discount rate determination, expenses are assumed to increase by 2% per annum.

GASB Measurement Date December 31

Fiscal Year The 12-month period ending each December 31.

Selection of Assumptions Information used in the analysis of selecting assumptions include: discount rate – as prescribed by GASB 67 and 68; expected return on assets – review of historical and expected returns on various asset categories held by the plan as well as information provided by the plan's investment advisor.

Appendix B (Continued)

Asset Method	<p>Funding: Market Value of Assets plus an adjustment to defer full recognition of investment losses and gains over a five-year period. The investment (gain)/loss for every year equals the market value at the beginning of the year projected to the end of the year using the interest rate above, minus the end of the year actual market value. The actuarial value of assets will be no less than 80% and no more than 120% of the market value.</p> <p>GASB: Market Value of Assets as Supplied by Trustee.</p>
Employees Valued	<p>Only participants as of the valuation date were valued.</p>
Actuarial Method	<p>Entry Age Normal Cost (Level Percent of Pay)</p>
Changes in Assumptions and Methods since the Last Actuarial Valuation	<p>The discount rate for year-end disclosure was 5.54%.</p> <p>The assumed 20-year municipal bond rate was 3.56%.</p> <p>The mortality in the previous valuation was:</p> <p>Funding: RP-2006 static, non-generational Mortality Table as described in Regulation 1.430(h)(3) and Notice 2017-60, projected by Scale MP-2017, male and female, with combined rates for annuitants and nonannuitants.</p> <p>Accounting: SOA RP-2014 Total Dataset Mortality adjusted backward to 2006 using MP-2014 and projected with Scale MP-2018.</p>
Justification for Changes in Actuarial Assumptions	<p>The year-end disclosure discount rate was determined consistent with the provisions of GASB nos. 67 and 68. The mortality tables were revised to more current tables.</p>