

SEIU Local 1 and Participating Employers Pension Trust

Actuarial Valuation and Review

As of October 1, 2020



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August 26, 2021

Board of Trustees
SEIU Local 1 and Participating Employers Pension Trust
111 East Wacker Drive, 17th Floor
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Dear Trustees:

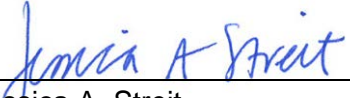
We are pleased to submit the Actuarial Valuation and Review as of October 1, 2020. It establishes the funding requirements for the current year and analyzes the preceding year's experience. It also summarizes the actuarial data and includes the actuarial information that is required to be filed with Form 5500 to federal government agencies.

The census information upon which our calculations were based was prepared by the Fund Office, under the direction of Ms. Maria Pizarro. That assistance is gratefully acknowledged. The actuarial calculations were completed under the supervision of James A. Nolan, FSA, MAAA, Enrolled Actuary.


We look forward to reviewing this report with you at your next meeting and to answering any questions you may have.

Sincerely,

Segal

By: 

Jessica A. Streit
Senior Vice President and Benefits Consultant



John Redmond, ASA, MAAA, EA
Vice President and Consulting Actuary

cc: Ms. Maria Pizarro
Mr. Alexander Rosenthal
Ms. Dani Tyler



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Introduction

There are several ways of evaluating funding adequacy for a pension plan. In monitoring the Plan's financial position, the Trustees should keep in mind all of these concepts.



Funding Standard Account

The ERISA Funding Standard Account (FSA) measures the cumulative difference between actual contributions and the minimum required contributions. If actual contributions exceed the minimum required contributions, the excess is called the credit balance. If actual contributions fall short of the minimum required contributions, a funding deficiency occurs.



Zone Information

The Pension Protection Act of 2006 (PPA'06) called on plan sponsors to actively monitor the projected FSA credit balance, the funded percentage (the ratio of the actuarial value of assets to the present value of benefits earned to date) and cash flow sufficiency. Based on these measures, plans are then categorized as critical (*Red Zone*), endangered (*Yellow Zone*), or neither (*Green Zone*). The Multiemployer Pension Reform Act of 2014 (MPRA), among other things, made the zone provisions permanent.



Solvency Projections

Pension plan funding anticipates that, over the long term, both contributions and investment earnings will be needed to cover benefit payments and expenses. To the extent that contributions are less than benefit payments, investment earnings and fund assets will be needed to cover the shortfall. In some situations, a plan may be faced with insufficient assets to cover its current obligations and may need assistance from the Pension Benefit Guaranty Corporation (PBGC). MPRA provides options for some plans facing insolvency.







Scheduled Cost

The Scheduled Cost is an annual amount based on benefit levels and assets that allows a comparison to current contribution levels, given the expectation of a continuing Plan.

Important information about actuarial valuations

An actuarial valuation is a budgeting tool with respect to the financing of future uncertain obligations of a pension plan. As such, it will never forecast the precise future contribution requirements or the precise future stream of benefit payments. In any event, the actual cost of the plan will be determined by the benefits and expenses paid, not by the actuarial valuation.

In order to prepare a valuation, Segal relies on a number of input items. These include:

	Plan Provisions	Plan provisions define the rules that will be used to determine benefit payments, and those rules, or the interpretation of them, may change over time. Even where they appear precise, outside factors may change how they operate. It is important for the Trustees to keep Segal informed with respect to plan provisions and administrative procedures, and to review the plan summary included in our report to confirm that Segal has correctly interpreted the plan of benefits.
	Participant Information	An actuarial valuation for a plan is based on data provided to the actuary by the plan. Segal does not audit such data for completeness or accuracy, other than reviewing it for obvious inconsistencies compared to prior data and other information that appears unreasonable. For most plans, it is not possible nor desirable to take a snapshot of the actual workforce on the valuation date. It is not necessary to have perfect data for an actuarial valuation. The uncertainties in other factors are such that even perfect data does not produce a “perfect” result. Notwithstanding the above, it is important for Segal to receive the best possible data and to be informed about any known incomplete or inaccurate data.
	Financial Information	Part of the cost of a plan will be paid from existing assets – the balance will need to come from future contributions and investment income. The valuation is based on the asset values as of the valuation date, typically reported by the auditor. A snapshot as of a single date may not be an appropriate value for determining a single year’s contribution requirement, especially in volatile markets. Plan sponsors often use an “actuarial value of assets” that differs from market value to gradually reflect year-to-year changes in the market value of assets in determining the contribution requirements.
	Actuarial Assumptions	In preparing an actuarial valuation, Segal starts by developing a forecast of the benefits to be paid to existing plan participants for the rest of their lives and the lives of their beneficiaries. This requires actuarial assumptions as to the probability of death, disability, withdrawal, and retirement of participants in each year, as well as forecasts of the plan’s benefits for each of those events. The forecasted benefits are then discounted to a present value, typically based on an estimate of the rate of return that will be achieved on the plan’s assets. All of these factors are uncertain and unknowable. Thus, there will be a range of reasonable assumptions, and the results may vary materially based on which assumptions the actuary selects within that range. That is, there is no right answer (except with hindsight). It is important for any user of an actuarial valuation to understand and accept this constraint. The actuarial model may use approximations and estimates that will have an immaterial impact on our results. In addition, the actuarial assumptions may change over time, and while this can have a significant impact on the reported results, it does not mean that the previous assumptions or results were unreasonable or wrong.

Given the above, the user of Segal's actuarial valuation (or other actuarial calculations) needs to keep the following in mind:

The actuarial valuation is prepared for use by the Trustees. It includes information for compliance with federal filing requirements and for the plan's auditor. Segal is not responsible for the use or misuse of its report, particularly by any other party.

An actuarial valuation is a measurement at a specific date — it is not a prediction of a plan's future financial condition. Accordingly, Segal did not perform an analysis of the potential range of financial measurements, except where otherwise noted.

Critical events for a plan include, but are not limited to, decisions about changes in benefits and contributions. The basis for such decisions needs to consider many factors such as the risk of changes in employment levels and investment losses, not just the current valuation results.

ERISA requires a plan's enrolled actuary to provide a statement in the plan's annual report disclosing any event or trend that the actuary has not taken into account, if, to the best of the actuary's knowledge, such an event or trend may require a material increase in plan costs or required contribution rates. If the Trustees are aware of any event that was not considered in this valuation and that may materially increase the cost of the Plan, they must advise Segal, so that an appropriate statement can be included.

Segal does not provide investment, legal, accounting, or tax advice. This valuation is based on Segal's understanding of applicable guidance in these areas and of the plan's provisions, but they may be subject to alternative interpretations. The Trustees should look to their other advisors for expertise in these areas.

While Segal maintains extensive quality assurance procedures, an actuarial valuation involves complex computer models and numerous inputs. In the event that an inaccuracy is discovered after presentation of Segal's valuation, Segal may revise that valuation or make an appropriate adjustment in the next valuation.

Segal's report shall be deemed to be final and accepted by the Trustees upon delivery and review. Trustees should notify Segal immediately of any questions or concerns about the final content.

As Segal has no discretionary authority with respect to the management of assets of the Plan, it is not a fiduciary in its capacity as actuaries and consultants with respect to the Plan

Section 1: Trustee Summary

Summary of key valuation results

Plan Year Beginning		October 1, 2019	October 1, 2020
Certified Zone Status		"Green"	"Green"
Demographic Data:	<ul style="list-style-type: none"> • Number of active participants • Number of inactive participants with vested rights¹ • Number of retired participants and beneficiaries² • Total number of participants • Participant ratio: non-active to actives 	9,137 6,742 6,520 22,399 1.45	9,139 6,817 6,641 22,597 1.47
Assets:	<ul style="list-style-type: none"> • Market value of assets (MVA) • Actuarial value of assets (AVA) • Market value net investment return, prior year • Actuarial value net investment return, prior year 	\$519,856,109 521,240,596 4.53% 6.60%	\$564,193,190 556,311,392 10.17% 8.35%
Cash Flow:		Actual 2019	Projected 2020
	<ul style="list-style-type: none"> • Contributions • Withdrawal liability payments • Benefit payments • Administrative expenses • Net cash flow • Cash flow as a percentage of MVA 	\$24,205,102 0 -30,149,136 -2,223,007 - <u>\$8,167,041</u> -1.6%	\$24,699,975 0 -35,528,546 -2,250,000 - <u>\$13,078,571</u> -2.3%

¹ Includes 32 beneficiaries with rights to deferred pensions for 2019 and 2020.

² Excludes 13 and 12 qualified domestic relations orders for 2019 and 2020, respectively.

Section 1: Trustee Summary

Summary of key valuation results

Plan Year Beginning		October 1, 2019		October 1, 2020	
Actuarial Liabilities based on Unit Credit:	• Valuation interest rate	7.25%		7.25%	
	• Normal cost, including administrative expenses	\$13,263,789		\$13,364,757	
	• Actuarial accrued liability	520,039,252		536,919,149	
	• Unfunded actuarial accrued liability	-1,201,344		-19,392,243	
Funded Percentages:	• Actuarial accrued liabilities under unit credit method	\$520,039,252		\$536,919,149	
	• MVA funded percentage	100.0%		105.1%	
	• AVA funded percentage (PPA basis)	100.2%		103.6%	
Statutory Funding Information:	• Credit balance at the end of prior plan year	\$97,287,360		\$98,170,738	
	• Minimum required contribution	0		0	
	• Maximum deductible contribution	825,826,269		922,314,814	
Scheduled Cost:	• Interest rate	7.25%		7.25%	
		Amount	Per Hour	Amount	Per Hour
	• Projected contributions ¹	\$23,984,625	\$1.25	\$24,699,975	\$1.29
	• Scheduled Cost based on Entry Age	16,375,832	0.85	13,867,300	0.72
	• Margin	7,608,793	0.40	10,832,675	0.57

¹ Based on 2,100 hours per active for 2019 and 2020.

Section 1: Trustee Summary

This October 1, 2020 actuarial valuation report is based on financial and demographic information as of that date. Due to the COVID-19 pandemic, conditions have changed significantly since the valuation date. The Plan's actuarial status does not reflect short-term fluctuations of the financial markets or employment levels, but rather is based on the market values on the last day of the Plan Year. While it is impossible to determine how economic conditions will change in the future, Segal is available to prepare projections of potential outcomes upon request. Also, this report does not reflect the enactment of the American Rescue Plan Act of 2021 (ARPA) on March 11. Decisions that the Trustees may make to elect options available to them that might affect the Plan's minimum funding requirements for the current year will be reflected in a revised report or future actuarial valuation. The current year's actuarial valuation results follow.

A. Developments since last valuation

1. The rate of return on the market value of plan assets was 10.17% for the 2020 plan year. The rate of return on the actuarial value of assets was 8.35%. Given the current interest rate environment, target asset allocation and expectations of future investment returns for various asset classes, we will continue to evaluate the Plan's anticipated investment returns relative to the assumed long-term rate of return on investments of 7.25%.
2. The 2020 certification, issued on December 18, 2020, based on the liabilities calculated in the 2019 actuarial valuation, projected to September 30, 2020, and estimated asset information as of September 30, 2020, classified the Plan as neither endangered nor critical (that is, in the Green Zone) based on a projected funded percentage of 103.4% and no projected funding deficiency. In addition, the Plan was not projected to be in critical status for any of the succeeding five years.
3. The contribution rate increased from \$1.25 per hour to \$1.30 per hour, effective April 6, 2020 for the janitorial sector only. The security sector remained at \$1.25 per hour. The average contribution rate for all actives is \$1.287.
4. The following assumptions were updated effective October 1, 2020:
 - The administrative expense assumption increased from \$2.2 million to \$2.25 million.
 - This assumption change did not affect accrued liability, funded percentage, or normal cost.



Section 1: Trustee Summary

B. Funded Percentage and Funding Standard Account

The following commentary applies to various funding measures for the current plan year.

1. Based on this October 1, 2020 actuarial valuation, the funded percentage that will be reported on the 2020 Annual Funding Notice is 103.6%.
2. The credit balance in the FSA as of September 30, 2020 was \$98.2 million, an increase of \$0.9 million from the prior year. A projection of the FSA indicates that the credit balance is expected to remain positive, assuming future market value rates of return of 7.25%, administrative expenses increase by 3% per year, all other experience emerges as projected and there are no changes in the Plan, actuarial assumptions, law or regulations.



C. Scheduled Cost Margin

1. The projected annual contributions of \$24.7 million exceed the Scheduled Cost of \$13.9 million, resulting in a margin of \$10.8 million (\$0.57 per hour), or 43.9% of contributions as compared to a margin of \$7.6 million (\$0.40 per hour), or 31.7% of contributions in the prior valuation. This improvement in the margin is primarily due to the increase in projected contributions and the greater than expected return on investments on an actuarial basis, slightly offset by the change in assumptions effective for this valuation.
2. The amortization period to compute the Scheduled Cost is fixed at 10 years. We will continue to monitor this approach and advise the Trustees as to whether it continues to provide an adequate basis for assessing the funding needs of the Plan.



D. Risk

1. The actuarial valuation results are dependent on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different from the current assumptions. We have included a discussion of various risks that may affect the Plan in Section 2.
2. We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition, but have included a brief discussion of some risks that may affect the Plan.
3. A more detailed risk assessment would provide the Trustees with a better understanding of the risks inherent in the Plan. This assessment may include scenario testing, sensitivity testing, stress testing and stochastic modeling.

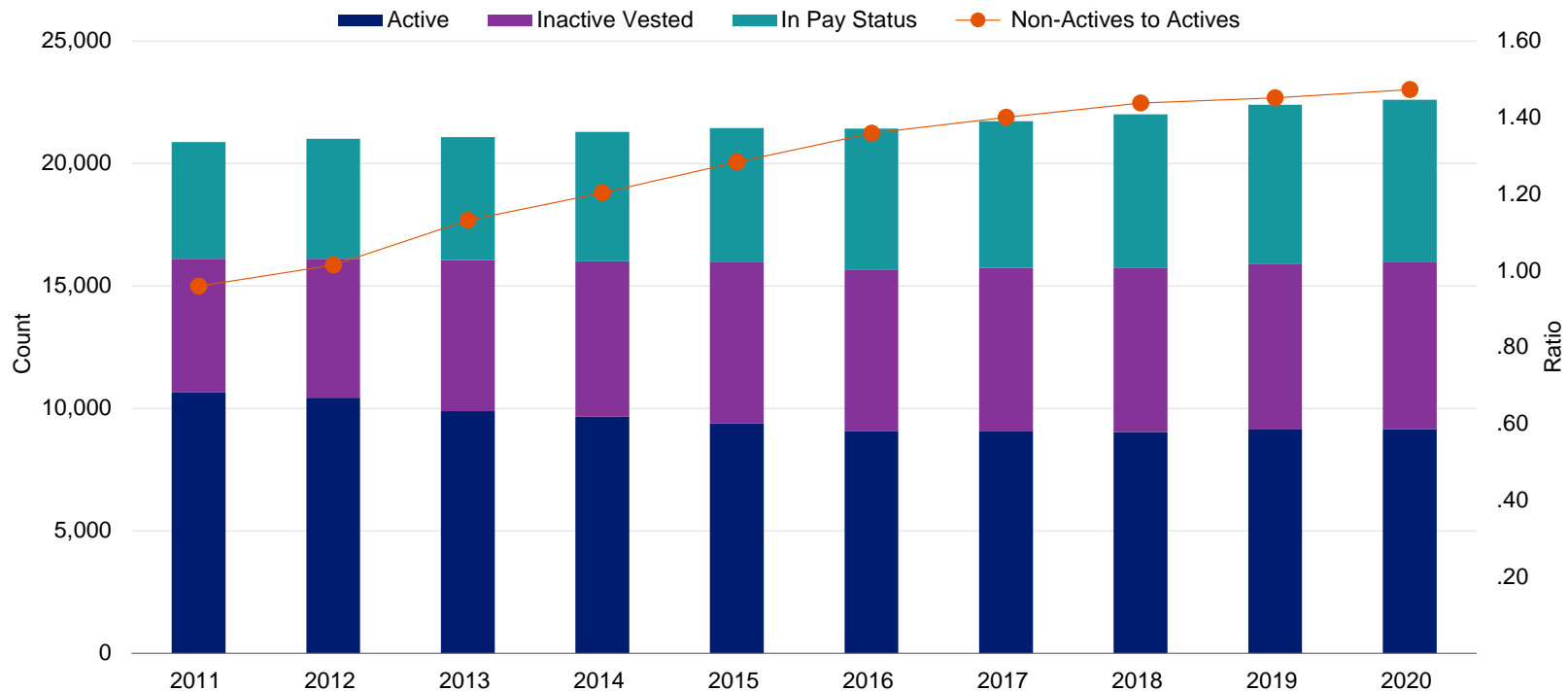


Section 2: Actuarial Valuation Results

Participant information

- The Actuarial Valuation is based on demographic data as of September 30, 2020.
- There are 22,597 total participants in the current valuation, compared to 22,399 in the prior valuation.
- The ratio of non-actives to actives has increased to 1.47 from 1.45 in the prior year.
- Pensioners and beneficiaries in pay status are reported as of September 30. Active and inactive participants are reported as of the following December 31.
- More details on the historical information are included in Section 3, Exhibits A and B.

Population as of September 30



Section 2: Actuarial Valuation Results

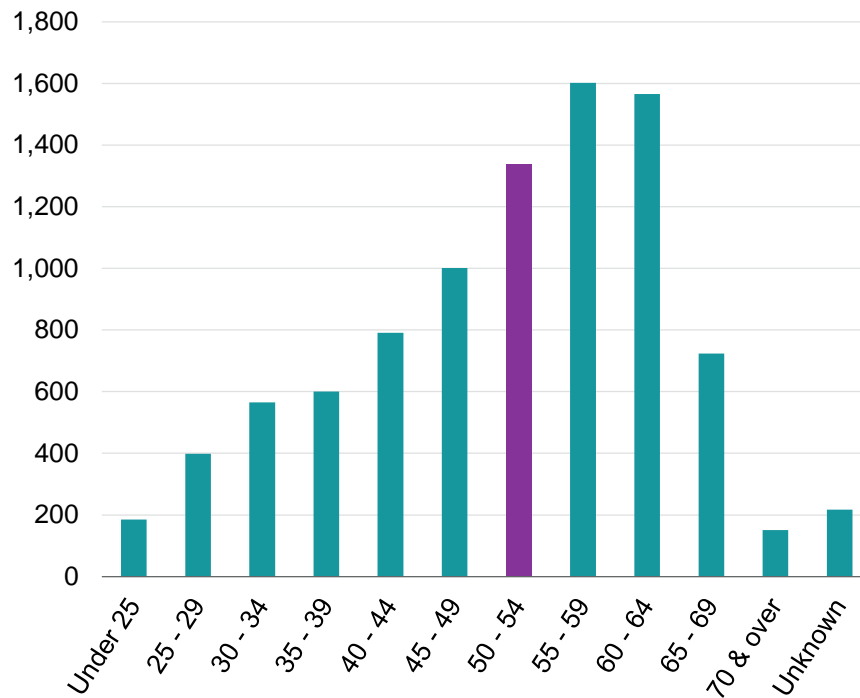
Active participants

As of September 30,	2019	2020	Change
Active participants	9,137	9,139	0.0%
Average age	51.4	51.2	-0.2
Average years of credited service	12.4	12.3	-0.1

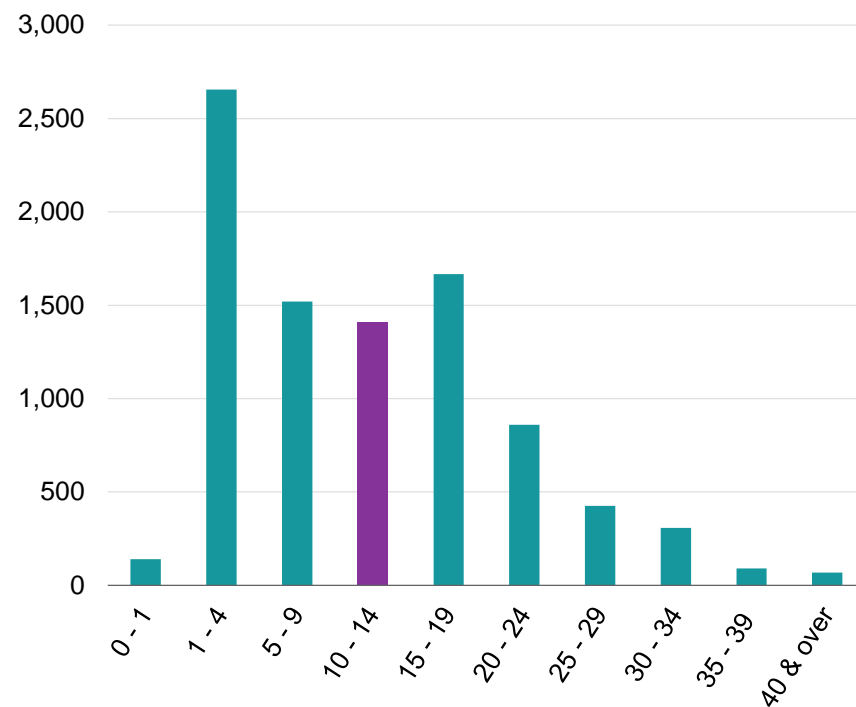
- The age and service distribution is included in Section 4, Exhibit 6.

Distribution of Active Participants as of December 31, 2020

by Age



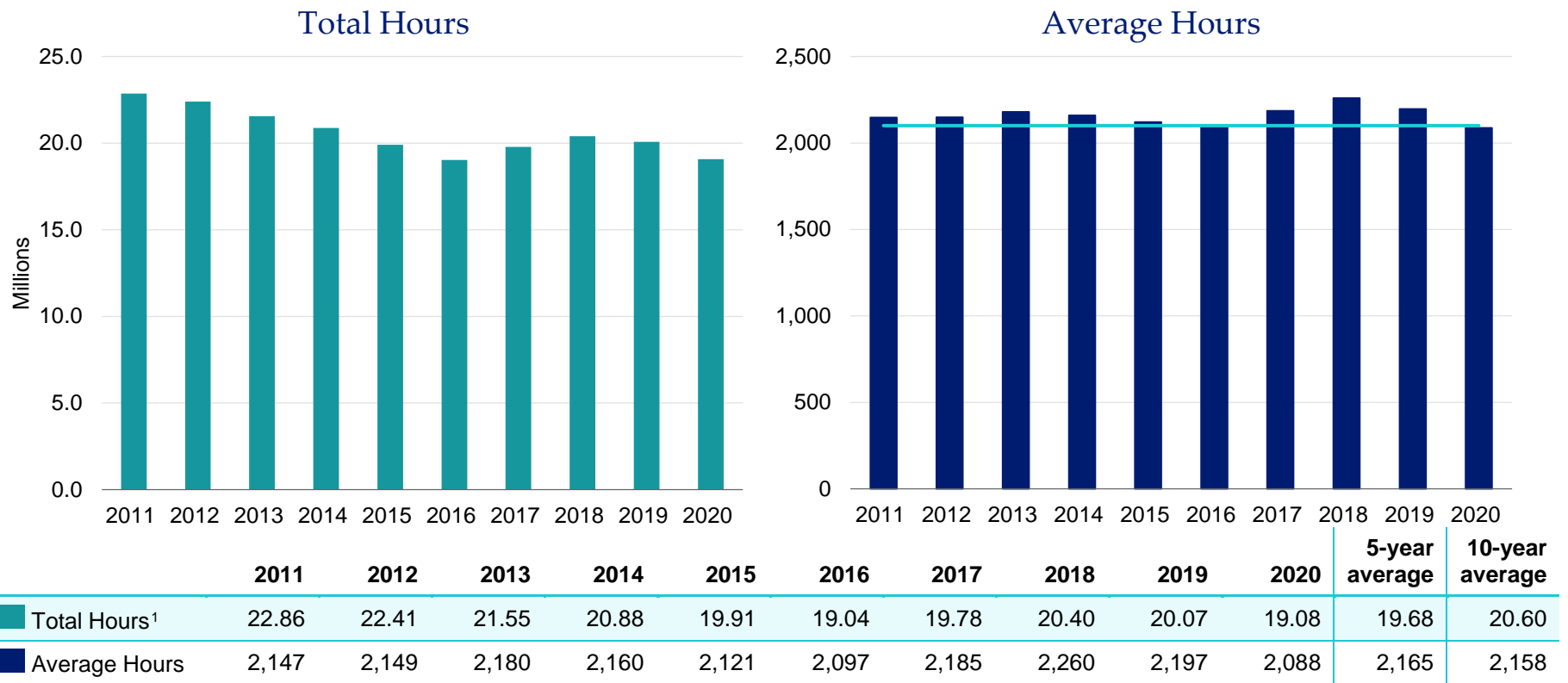
by Years of Credited Service



Section 2: Actuarial Valuation Results

Historical employment

- The charts below show a history of hours worked over the last ten years. Additional detail is in Section 3, Exhibit C.
- The 2020 zone certification was based on an industry activity assumption that assumed the active participant count would decrease 15% from 9,137 as of September 30, 2020 and remain level each year thereafter. Also, on average, contributions will be made for each active participant for 2,100 hours each year.
- The valuation is based on 9,139 actives and a long-term employment projection of 2,100 hours.
- Average hours decreased last year, and was the lowest total hours and average hours reported over the past ten years.



¹ In millions

Note: The total hours of contributions are based on total contributions divided by the average contribution rate for the year, which may differ from the hours reported to the Fund Office

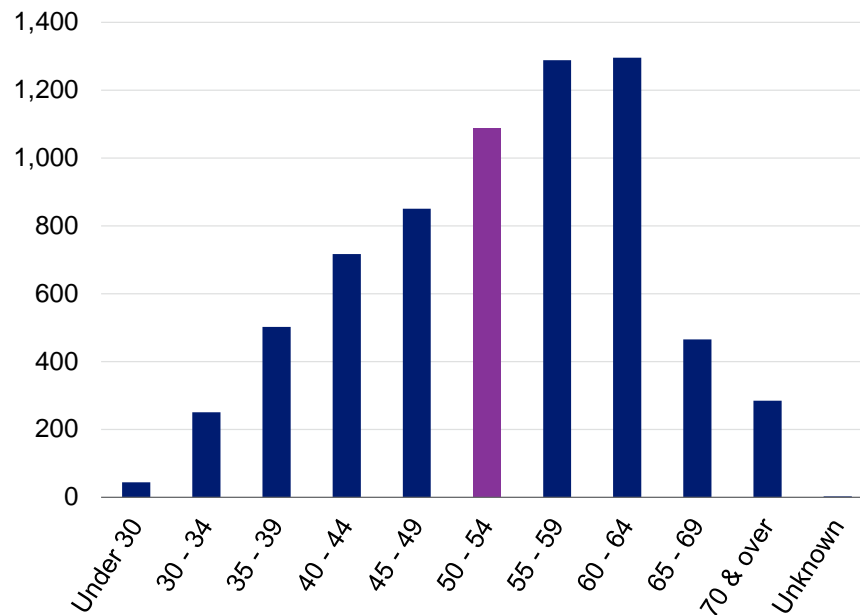
Section 2: Actuarial Valuation Results

Inactive vested participants

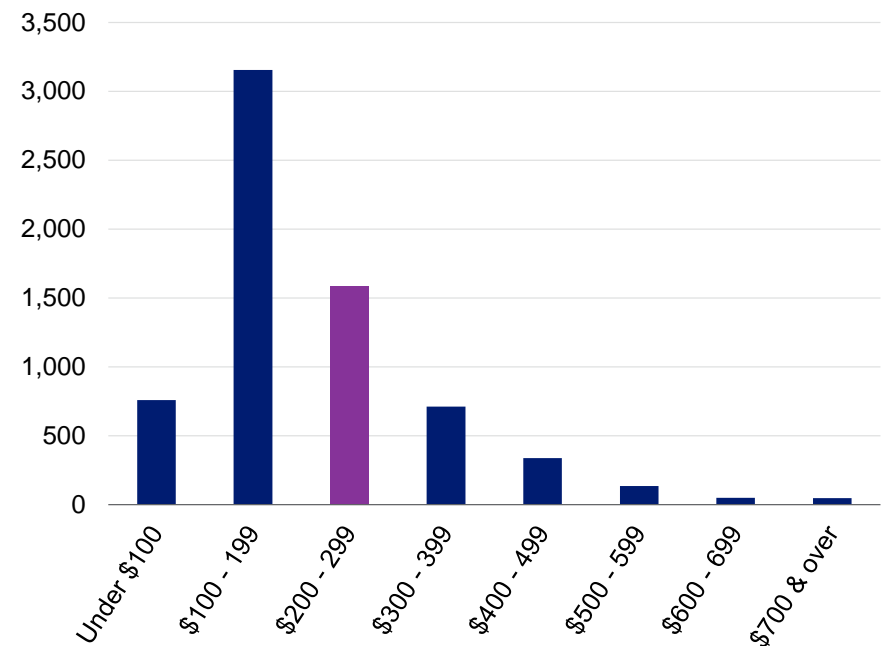
As of September 30,	2019	2020	Change
Inactive vested participants ¹	6,710	6,785	1.1%
Average age	53.6	53.8	0.2
Average amount	\$209	\$212	1.0%
Beneficiaries eligible for deferred benefits	32	32	0.0%

Distribution of Inactive Vested Participants as of December 31, 2020

by Age



by Monthly Amount



¹ A participant who is not currently active and has satisfied the requirements for, but has not yet commenced, a pension is considered an "inactive vested" participant.

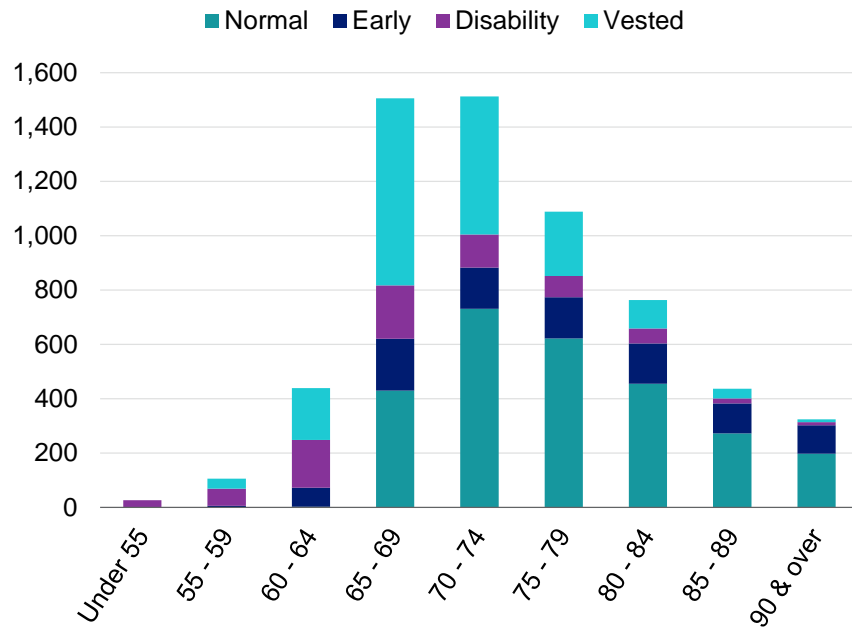
Section 2: Actuarial Valuation Results

Pay status information

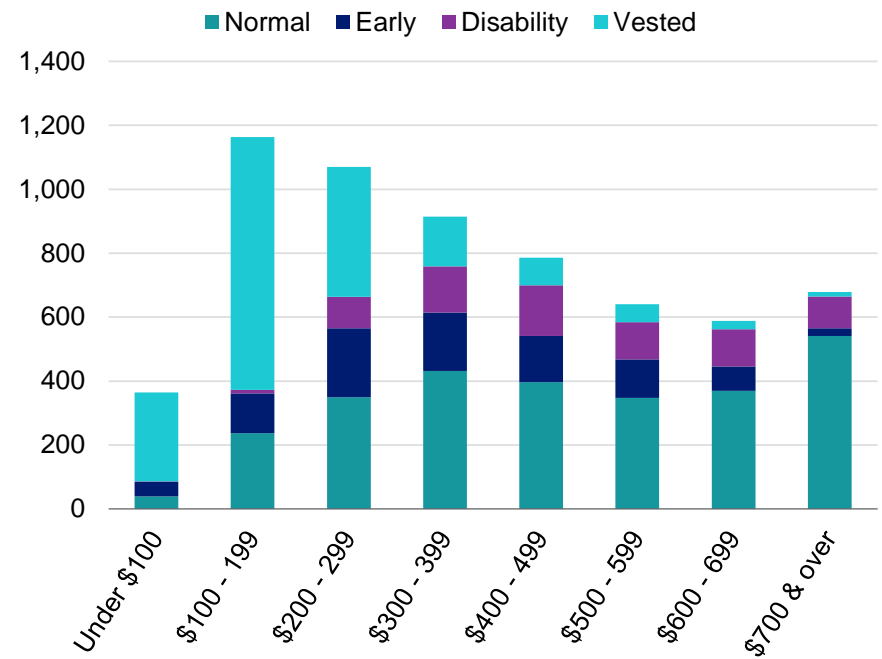
As of September 30,	2019	2020	Change
Pensioners	5,898	5,981	1.4%
Average age	74.4	74.3	-0.1
Average amount	\$381	\$392	2.9%
Beneficiaries	565	591	4.6%
Total monthly amount	\$2,344,941	\$2,501,202	6.7%

Distribution of Pensioners as of September 30, 2020

by Type and Age



by Type and Monthly Amount



Section 2: Actuarial Valuation Results

Progress of pension rolls

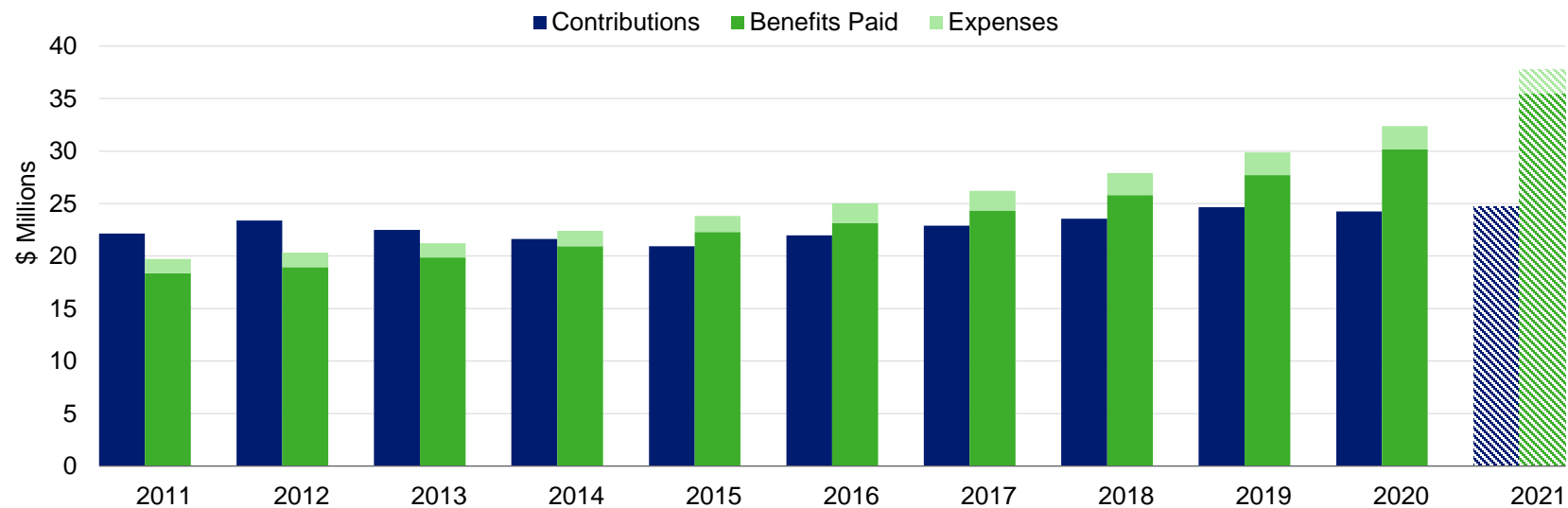
Year	Total In Pay Status			New Awards		
	Number	Average Age	Average Amount	Number	Average Age	Average Amount
2011	4,308	74.8	\$336	276	–	\$390
2012	4,417	74.6	344	333	–	387
2013	4,522	74.5	354	332	–	382
2014	4,717	74.3	355	403	–	396
2015	4,866	74.1	360	401	65.4	370
2016	5,073	74.1	365	389	66.9	405
2017	5,275	74.2	369	420	66.2	386
2018	5,528	74.3	372	419	66.0	438
2019	5,911	74.4	382	468	65.8	453
2020	5,981	74.3	392	452	67.6	469

Section 2: Actuarial Valuation Results

Financial information

- Benefits and expenses are funded solely from contributions and investment earnings.
- For the most recent year, benefit payments and expenses were 1.3 times contributions.
- The net contributions were less than benefits payments. An Investment Return of 1.2% would make up this shortfall of benefits and expenses over contributions.
- Additional detail is in Section 3, Exhibit F.

Cash Flow



	2011	2012	2013	2014	2015	2016	2017	2018	2019	2020	2021 ¹
■ Contributions ²	\$22.13	\$23.38	\$22.50	\$21.63	\$20.93	\$21.96	\$22.89	\$23.56	\$24.66	\$24.26	\$24.70
■ Benefits Paid ²	18.38	18.95	19.87	20.92	22.28	23.16	24.34	25.81	27.70	30.15	35.53
■ Expenses ²	1.35	1.37	1.37	1.49	1.55	1.87	1.86	2.11	2.18	2.22	2.25

¹ Projected

² In millions

Section 2: Actuarial Valuation Results

Determination of Actuarial Value of Assets

- The asset valuation method gradually recognizes annual market value fluctuations to help mitigate volatility in the actuarial cost calculations.
- Less volatility in the actuarial cost better aligns with a negotiated contribution rate.
- The return on the market value of assets for the year ending September 30, 2020 was 10.17%, which produced a gain of \$15,056,880 when compared to the assumed return of 7.25%.

1	Market value of assets, September 30, 2020			\$564,193,190
2	Calculation of unrecognized return	Original Amount¹	Unrecognized Return²	
	(a) Year ended September 30, 2020	\$15,056,880	\$12,045,504	
	(b) Year ended September 30, 2019	-13,603,506	-8,162,104	
	(c) Year ended September 30, 2018	1,100,361	440,144	
	(d) Year ended September 30, 2017	17,791,265	3,558,254	
	(e) Year ended September 30, 2016	8,607,976	<u>0</u>	
	(f) Total unrecognized return			7,881,798
3	Preliminary actuarial value: 1 - 2f			\$556,311,392
4	Adjustment to be within 20% corridor			0
5	Final actuarial value of assets as of September 30, 2020: 3 + 4			\$556,311,392
6	Actuarial value as a percentage of market value: 5 ÷ 1			98.6%
7	Amount deferred for future recognition: 1 - 5			\$7,881,798

¹ Total return minus expected return on a market value basis

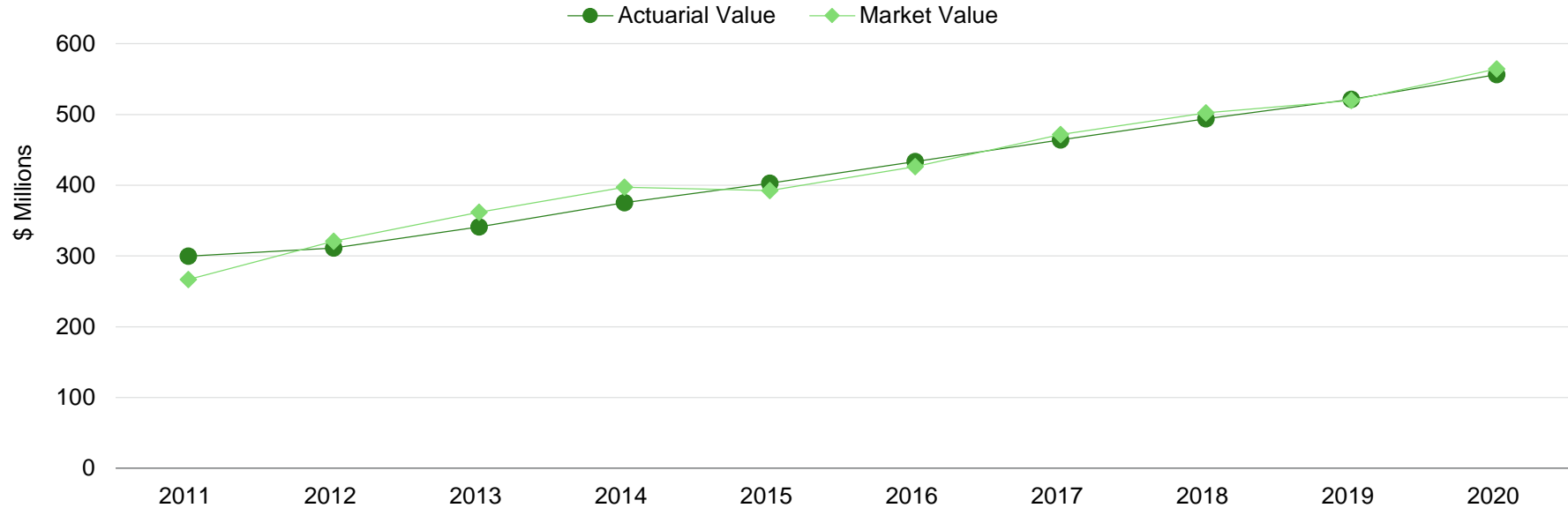
² Recognition at 20% per year over five years

Section 2: Actuarial Valuation Results

Asset history for years ended September 30

- Both the actuarial value and the market value of assets are representations of the Plan's financial status.
- The actuarial value is significant because it is subtracted from the Plan's total actuarial accrued liability to determine the portion that is not funded and is used to determine the PPA'06 funded percentage.
- Amortization of the unfunded accrued liability is an important element in the contribution requirements of the Plan.

Actuarial Value of Assets vs. Market Value of Assets

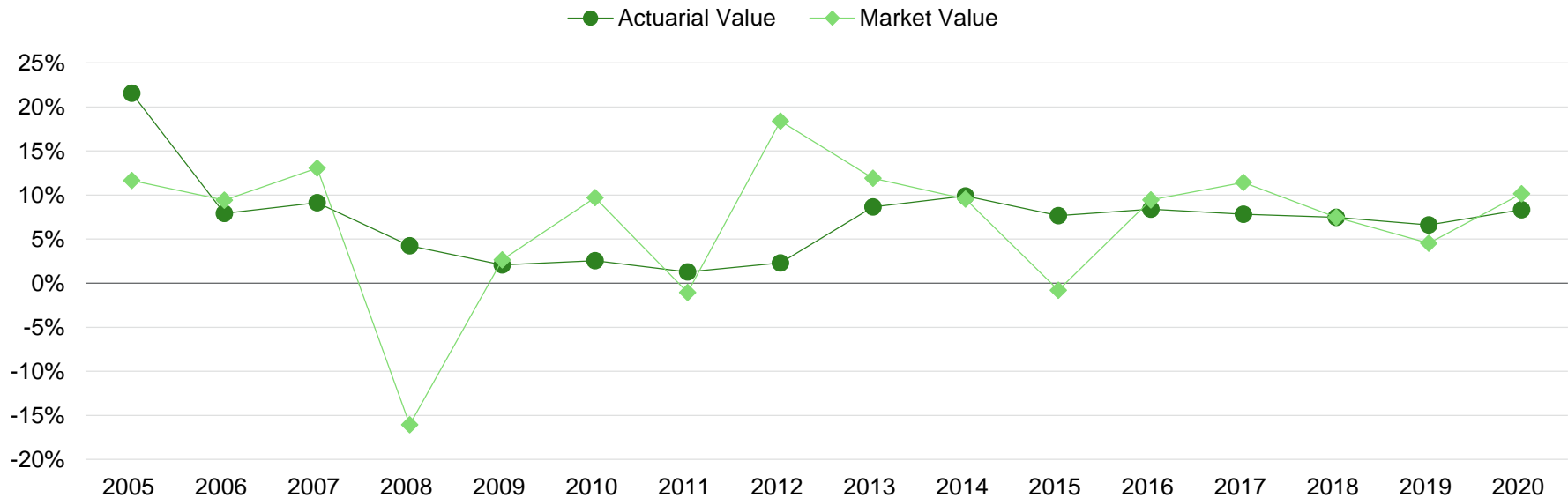


Section 2: Actuarial Valuation Results

Historical investment returns

- Actuarial planning is long term. The obligations of a pension plan are expected to continue for the lifetime of all its participants.
- The assumed long-term rate of return of 7.25% considers past experience, the Trustees' asset allocation policy and future expectations. We are evaluating the investment return assumption, and are likely to change it to 7.00% in the next valuation.

Market Value and Actuarial Rates of Return for Years Ended September 30



Average Rates of Return	Actuarial Value	Market Value
Most recent year return:	8.35%	10.17%
Most recent five-year average return:	7.71%	8.51%
Most recent ten-year average return:	7.07%	7.97%
16-year average return:	7.09%	6.99%

Section 2: Actuarial Valuation Results

Actuarial experience

- Assumptions should consider experience and should be based on reasonable expectations for the future.
- Each year actual experience is compared to that projected by the assumptions. Differences are reflected in the actuarial valuation.
- Assumptions are not changed if experience is believed to be a short-term development that will not continue over the long term.
- The net experience variation for the year, other than investment experience, was 0.3% of the projected actuarial accrued liability from the prior valuation, and was not significant when compared to that liability.

Experience for the Year Ended September 30, 2020

1	Gain from investments	\$5,690,219
2	Loss from administrative expenses	-23,762
3	Net gain from other experience (0.3% of projected accrued liability)	<u>1,580,221</u>
4	Net experience gain: 1 + 2 + 3	<u>\$7,246,678</u>

- Net investment income consists of expected investment income at the actuarially assumed rate of return, net of investment expenses, and an adjustment for market value changes.
- The actuarial value of assets does not yet fully recognize past investment gains and losses, which will affect future actuarial investment returns

Section 2: Actuarial Valuation Results

Investment experience

- Actuarial planning is long term. The obligations of a pension plan are expected to continue for the lifetime of all its participants.
- The assumed long-term rate of return of 7.25% considers past experience, the Trustees' asset allocation policy and future expectations. We are evaluating the investment return assumption, and are likely to change it to 7.00% in the next valuation.

Gain from Investments

1	Average actuarial value of assets	\$517,183,001
2	Assumed rate of return	7.25%
3	Expected net investment income: 1 x 2	\$37,495,768
4	Net investment income (8.35% actual rate of return)	<u>43,185,987</u>
5	Actuarial gain from investments: 4 – 3	<u>\$5,690,219</u>

Section 2: Actuarial Valuation Results

Non-investment experience

Administrative expenses

- Administrative expenses for the year ended September 30, 2020 totaled \$2,223,007, as compared to the assumption of \$2,200,000.

Mortality experience

- Mortality experience (more or fewer than expected deaths) yields actuarial gains or losses.
- The average number of deaths for nondisabled pensioners over the past three years was 222 compared to 206 expected deaths. The average number of deaths for disabled pensioners over the past three years was 20 compared to 25 expected deaths.
- We will continue to monitor the Plan's experience compared to the assumptions.

Other experience

- Other differences between projected and actual experience include the extent of turnover among the participants, retirement experience (earlier or later than projected), and the number of disability retirements.

Section 2: Actuarial Valuation Results

Actuarial assumptions

- The administrative expense assumption increased from \$2.2 million payable monthly to \$2.25 million payable monthly.
- Details on actuarial assumptions and methods are in Section 4, Exhibit 8.

Plan provisions

- A summary of plan provisions is in Section 4, Exhibit 9.

Contribution rate changes

- The contribution rate increased from \$1.25 per hour to \$1.30 per hour, effective April 6, 2020 for the janitorial sector only. The security sector remained at \$1.25 per hour. The average hourly contribution rate for all actives is \$1.287.

Section 2: Actuarial Valuation Results

Plan funding

Comparison of Funded Percentages

Plan Year Beginning	October 1, 2019		October 1, 2020	
Market Value of Assets	\$519,856,109		\$564,193,190	
	Amount	Funded %	Amount	Funded %
• Funding interest rate		7.25%		7.25%
• Present value (PV) of future benefits	\$606,230,635	85.8%	\$621,764,788	90.7%
• Actuarial accrued liability ¹	566,102,416	91.8%	582,307,521	96.9%
• PV of accumulated plan benefits (PVAB)	520,039,252	100.0%	536,919,149	105.1%
• Current liability interest rate		3.02%		2.55%
• Current liability ²	\$940,908,049	55.3%	\$1,036,111,257	54.5%
Actuarial Value of Assets	\$521,240,596		\$556,311,392	
	Amount	Funded %	Amount	Funded %
• Funding interest rate		7.25%		7.25%
• PV of future benefits	\$606,230,635	86.0%	\$621,764,788	89.5%
• Actuarial accrued liability ¹	566,102,416	92.1%	582,307,521	95.5%
• PPA'06 liability and annual funding notice	520,039,252	100.2%	536,919,149	103.6%

These measurements are not necessarily appropriate for assessing the sufficiency of Plan assets to cover the estimated cost of settling the Plan's benefit obligations or the need for or the amount of future contributions. The funded percentages based on the actuarial value of assets would be different if they were based on the market value of assets.

¹ Based on Entry Age actuarial cost method and on Scheduled Cost basis

² Assets for funded percentage include withdrawal liability receivables

Section 2: Actuarial Valuation Results

Pension Protection Act of 2006

2020 Actuarial status certification

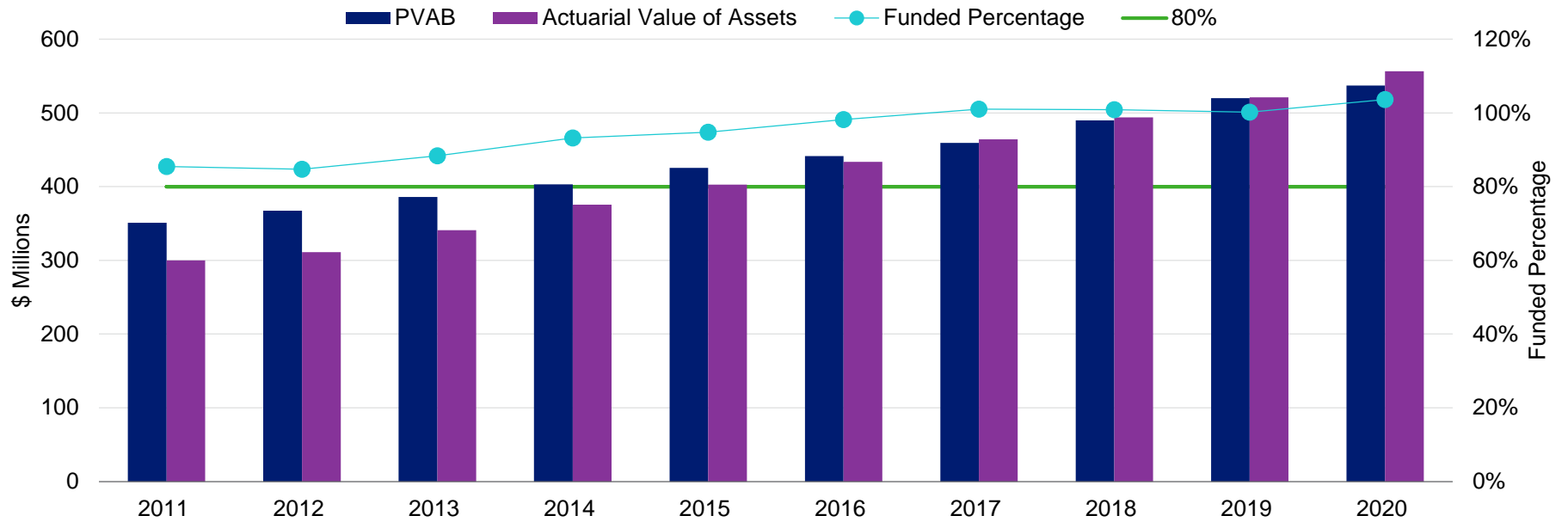
- PPA'06 requires trustees to actively monitor their plans' financial prospects to identify emerging funding challenges so they can be addressed effectively. Details are shown in Section 3, Exhibit K.
- The 2020 certification, completed on December 18, 2020, was based on the liabilities calculated in the October 1, 2019 actuarial valuation and estimated asset information as of September 30, 2020. The Trustees provided an industry activity projection that the 9,137 active participants as of October 1, 2019 would decrease 15% during the year ended September 30, 2020 and remain level thereafter. Also, on average, contributions will be made for each active participant for 2,100 hours each year.
- This Plan was classified as neither endangered nor critical (that is, in the Green Zone) because the projected funded percentage was 103.4% and there was no projected deficiency in the FSA. In addition, the Plan was not projected to be in critical status for any of the succeeding five years

Year	Zone Status
2009	GREEN
2010	GREEN
2011	GREEN
2012	GREEN
2013	GREEN
2014	GREEN
2015	GREEN
2016	GREEN
2017	GREEN
2018	GREEN
2019	GREEN
2020	GREEN

Section 2: Actuarial Valuation Results

Pension Protection Act of 2006 historical information

Funded Percentage and Zone

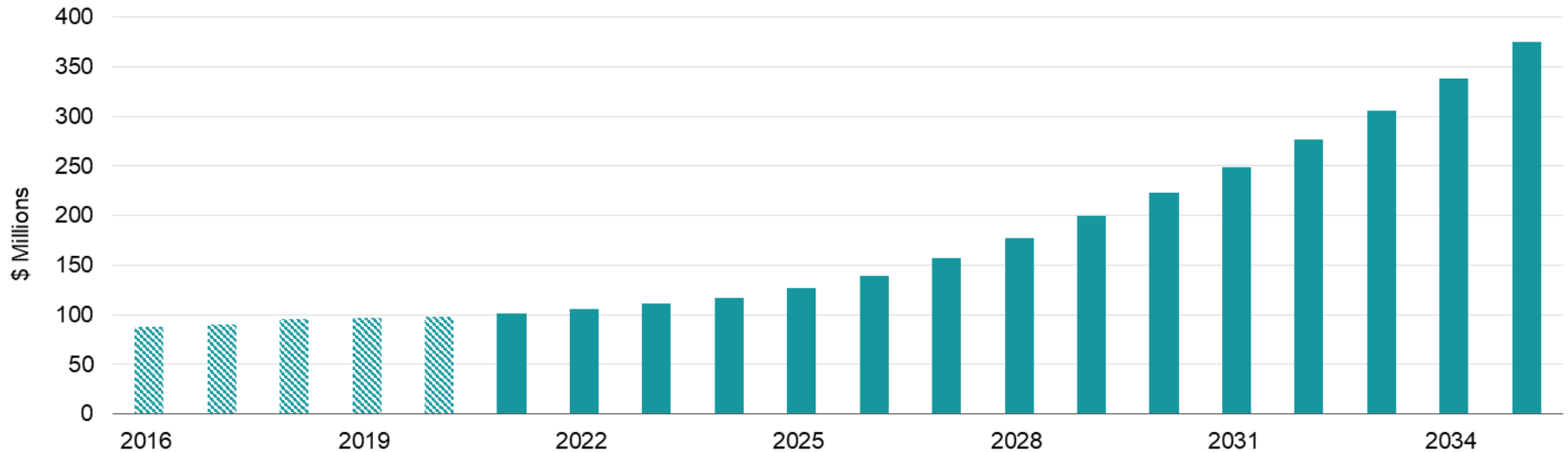


Section 2: Actuarial Valuation Results

Funding Standard Account (FSA)

- A 15-year projection indicates the credit balance will remain positive, assuming that:
 - The Plan will earn a market rate of return equal to 7.25% each year,
 - Administrative expenses increase by 3% per year,
 - All other experience emerges as assumed, no assumption changes are made, and
 - There are no plan amendments or changes in law/regulation.
- The projection is based on a level number of active employees (9,139) and 2,100 hours per capita.

Credit Balance as of September 30



Additional scenarios would demonstrate sensitivity to risk from investment return, employment and other factors.

Section 2: Actuarial Valuation Results

Scheduled Cost

- The Scheduled Cost is an annual contribution objective, reflecting benefit levels and current assets that is compared to projected contributions to assess the Plan's long-term financial position. Simply avoiding an FSA funding deficiency is not a stable basis for funding the Plan. The Scheduled Cost uses a single amortization schedule for the total unfunded actuarial accrued liability, rather than the ERISA minimum funding approach.

Scheduled Cost

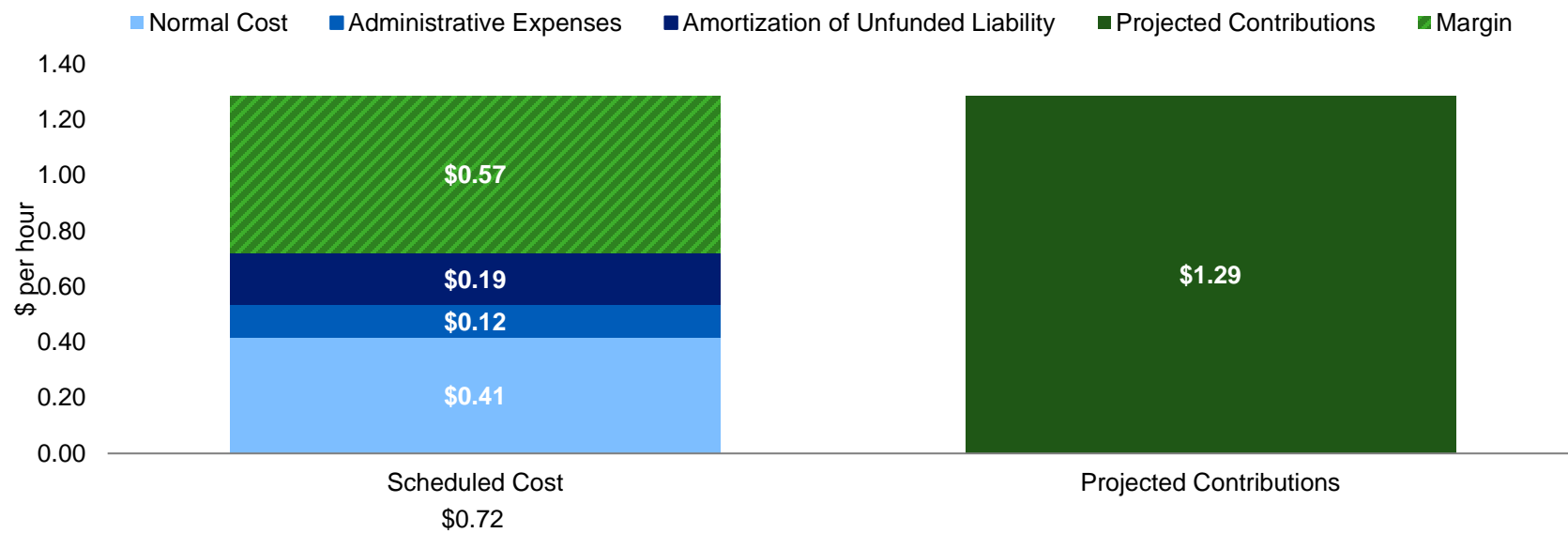
Cost Element	Year Beginning October 1	
	2019	2020
Normal cost ¹	\$7,919,762	\$7,992,088
Administrative expenses ¹	2,200,000	2,250,000
Amortization of the unfunded actuarial accrued liability ¹	6,256,070	3,625,212
• Actuarial accrued liability	566,102,416	582,307,521
• Actuarial value of assets	521,240,596	556,311,392
• Unfunded actuarial accrued liability	44,861,820	25,996,129
• Amortization period	10	10
Annual Scheduled Cost, payable monthly	\$16,375,832	\$13,867,300
Projected contributions	23,984,625	24,699,975
• Number of active participants	9,137	9,139
• Hours assumption	2,100	2,100
• Ultimate negotiated contribution rate	\$1.25	\$1.29
Margin	\$7,608,793	\$10,832,675
Margin as a % of projected contributions	31.7%	43.9%

¹ Includes adjustment for monthly payments

Section 2: Actuarial Valuation Results

Scheduled Cost margin

- Projected annual employer contributions of \$24,699,975 are based on the assumption that 9,139 active participants will work 2,100 hours at the \$1.29 ultimate contribution rate.
- This exceeds the Scheduled Cost of \$113,867,300 by \$10,832,675, or 43.9% of projected contributions.



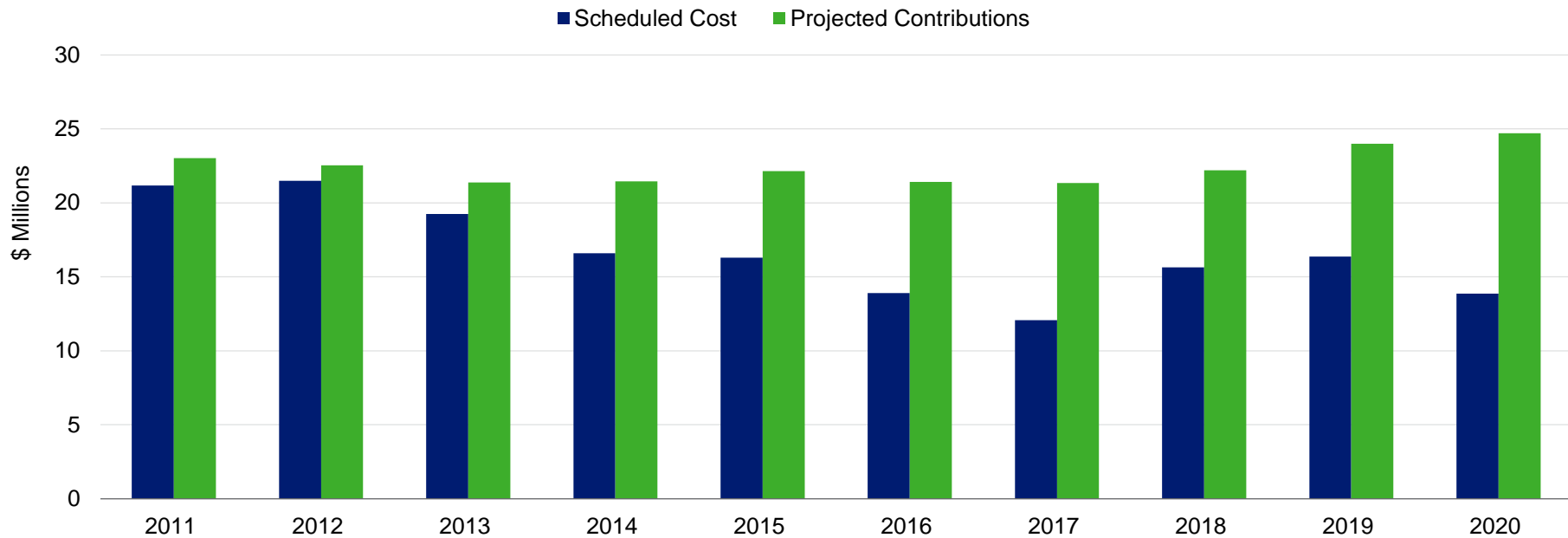
Section 2: Actuarial Valuation Results

Scheduled Cost reconciliation

Scheduled Cost as of October 1, 2019		\$16,375,832
• Effect of amortization period remaining unchanged	-279,278	
• Effect of change in administrative expense assumption	50,000	
• Effect of contributions more than Scheduled Cost	-1,227,007	
• Effect of investment gain	-854,643	
• Effect of other gains and losses on accrued liability	-269,930	
• Effect of net other changes, including composition and number of participants	<u>72,326</u>	
Total change		<u>-\$2,508,532</u>
Scheduled Cost as of October 1, 2020		<u>\$13,867,300</u>

Section 2: Actuarial Valuation Results

Scheduled Cost vs. projected contributions — Historical information



Section 2: Actuarial Valuation Results

Risk

- The actuarial valuation results are dependent on a single set of assumptions; however, there is a risk that emerging results may differ significantly as actual experience proves to be different from the current assumptions.
- We have not been engaged to perform a detailed analysis of the potential range of the impact of risk relative to the Plan's future financial condition, but have included a brief discussion of some risks that may affect the Plan.
- A more detailed risk assessment would provide the Trustees with a better understanding of the risks inherent in the Plan. This assessment may include scenario testing, sensitivity testing, stress testing and stochastic modeling. An assessment could be important for your Plan because:
 - Relatively small changes in investment performance can produce large swings in the unfunded liabilities since the assets and liabilities are of similar size.
 - Potential changes in the plan benefits may result in participant choices that vary from those assumed.
 - The Trustees have not had a detailed risk assessment.
- Investment Risk (the risk that returns will be different than expected)
- As can be seen in Section 3, Exhibit G, the market value rate of return over the last 16 years has ranged from a low of -16.1% to a high of 18.4%.
- Employment Risk (the risk that actual contributions will be different from projected contributions)
- If the number of active participants declines by 10%, the contributions would decrease by 10%, but this would be offset by an 11.2% decrease in the Scheduled Cost.
- Longevity Risk (the risk that mortality experience will be different than expected)
- A 10% reduction in the assumed incidence of mortality results in a change in the actuarial cost factors of roughly 3% for most plans. For your Plan, a 3% change in the actuarial cost factors would result in approximately a 19.3% increase in Scheduled Cost.
- Other Demographic Risk (the risk that participant experience will be different than assumed)
- Examples of this risk include:
 - Actual retirements occurring earlier or later than assumed. The value of retirement plan benefits is sensitive to the rate of benefit accruals and any early retirement subsidies that apply.
 - More or less active participant turnover than assumed.
 - Return to covered employment of previously inactive participants.

Section 2: Actuarial Valuation Results

- Maturity Measures

The risk associated with a pension plan increases as it becomes more mature, meaning that the actives represent a smaller portion of the liabilities of the plan. When this happens, there is a greater risk that fluctuations in the experience of the non-active participants or of the assets of the plan can result in large swings in the contribution requirements.

- Over the past ten years ended September 30, 2020, the ratio of non-active participants to active participants has increased from a low of 0.96 in 2011 to a high of 1.47 in 2020.
- As of September 30, 2020, the retired life actuarial accrued liability represents 45% of the total actuarial accrued liability. In addition, the actuarial accrued liability for inactive vested participants represents 18% of the total. The higher the non-active actuarial accrued liability is as a percent of the total liability, the greater the danger of volatility in results.
- Benefits and administrative expenses less contributions totaled \$8,115,191 as of September 30, 2020, which is 1.6% of the market value of assets as of the beginning of the year (October 1, 2019). The Plan is dependent upon investment returns in order to pay benefits.

Section 3: Supplementary Information

Exhibit A: Table of Plan Coverage

The valuation was made with respect to the following data supplied to us by the Plan Administrator.

Category	Year Ended September 30		Change from Prior Year
	2019	2020	
Participants in Fund Office tabulation	10,423	10,162	-2.5%
Less: Participants with less than one year of credited service	1,286	1,023	-20.5%
Active participants in valuation:			
• Number (as of December 31)	9,137	9,139	0.0%
• Average age	51.4	51.2	-0.2
• Average years of credited service	12.4	12.3	-0.1
• Number with unknown age and/or service information	412	217	-47.3%
• Total active vested participants	6,916	6,822	-1.4%
Inactive participants with rights to a pension:			
• Number (as of December 31)	6,710	6,785	1.1%
• Average age	53.6	53.8	0.2
• Average estimated monthly benefit	\$209	\$212	1.4%
• Beneficiaries with rights to deferred payments	32	32	0.0%
Pensioners:			
• Number in pay status	5,898	5,981	1.4%
• Average age	74.4	74.3	-0.1
• Average monthly benefit	\$381	\$392	2.9%
• Number of alternate payees in pay status	13	12	-7.7%
• Number in suspended status	49	58	18.4%
Beneficiaries:			
• Number in pay status	565	591	4.6%
• Average age	72.6	72.8	0.2
• Average monthly benefit	\$158	\$159	0.3%
• Number in suspended status	8	11	37.5%

Section 3: Supplementary Information

Exhibit B: Participant Population

Year Ended September 30	Active Participants	Inactive Vested Participants	Pensioners and Beneficiaries *	Ratio of Non-Actives to Actives
2011	10,651	5,453	4,765	0.96
2012	10,428	5,683	4,892	1.01
2013	9,887	6,168	5,018	1.13
2014	9,664	6,342	5,283	1.20
2015	9,391	6,572	5,483	1.28
2016	9,080	6,591	5,744	1.36
2017	9,051	6,683	5,999	1.40
2018	9,027	6,719	6,271	1.44
2019	9,137	6,742	6,533	1.45
2020	9,139	6,817	6,653	1.47

* Includes alternate payees in pay status

Note: Qualified Domestic Relations Orders (QDROs) have been identified starting in 2017.

Section 3: Supplementary Information

Exhibit C: Employment History

Year Ended September 30	Total Hours of Contributions ¹		Active Participants		Average Hours of Contributions	
	Number	Percent Change	Number	Percent Change	Number	Percent Change
2011	22,864,793	-0.17%	10,651	-1.85%	2,147	1.71%
2012	22,411,164	-1.98%	10,428	-2.09%	2,149	0.09%
2013	21,550,633	-3.84%	9,887	-5.19%	2,180	1.44%
2014	20,875,518	-3.13%	9,664	-2.26%	2,160	-0.92%
2015	19,914,393	-4.60%	9,391	-2.82%	2,121	-1.81%
2016	19,039,057	-4.40%	9,080	-3.31%	2,097	-1.13%
2017	19,778,886	3.89%	9,051	-0.32%	2,185	4.20%
2018	20,404,836	3.16%	9,027	-0.27%	2,260	3.43%
2019	20,073,542	-1.62%	9,137	1.22%	2,197	-2.79%
2020	19,081,673	-4.94%	9,139	0.02%	2,088	-4.96%
Five-year average hours:					2,165	
Ten-year average hours:					2,158	

¹ The total hours of contributions are based on total contributions divided by the average contribution rate for the year, which may differ from the hours reported to the Fund Office.

Section 3: Supplementary Information

Exhibit D: New Pension Awards

Year Ended Sep 30	Total		Normal		Early		Disability		Vested	
	Number	Average Monthly Amount	Number	Average Monthly Amount	Number	Average Monthly Amount	Number	Average Monthly Amount	Number	Average Monthly Amount
2011	276	\$390	136	\$490	31	\$389	31	\$452	78	\$193
2012	333	387	150	476	31	409	39	468	113	236
2013	332	382	134	451	37	448	39	469	122	259
2014	403	396	195	468	43	412	50	518	115	215
2015	401	370	159	494	31	398	43	485	168	217
2016	389	405	164	497	50	430	35	533	140	249
2017	420	386	178	494	50	422	41	495	151	218
2018	419	438	199	561	40	421	38	571	142	234
2019	468	453	202	621	39	518	40	617	187	224
2020	452	469	204	670	19	476	31	577	198	245

Section 3: Supplementary Information

Exhibit E: Progress of Pension Rolls over the Past Ten Years

In Pay Status at Year End

Year	Number	Average Age	Average Amount	Terminations ¹	Additions ²
2011	4,308	74.8	\$336	194	276
2012	4,417	74.6	344	224	333
2013	4,522	74.5	354	227	332
2014	4,717	74.3	355	210	405
2015	4,866	74.1	360	268	417
2016	5,073	74.1	365	209	416
2017	5,275	74.2	369	263	465
2018	5,528	74.3	372	217	470
2019	5,911	74.4	382	105	488
2020	5,993	74.3	392	386	423

¹ Terminations include pensioners who died or were suspended during the prior plan year.

² Additions to the pension rolls include new pensions awarded and suspended pensioners who have been reinstated.

Section 3: Supplementary Information

Exhibit F: Summary Statement of Income and Expenses on an Actuarial Basis

	Year Ended September 30, 2019	Year Ended September 30, 2020
Contribution income:		
• Employer contributions	\$24,570,573	\$24,205,102
<i>Contribution income</i>	\$24,570,573	\$24,205,102
Investment income:		
• Expected investment income	\$35,627,544	\$37,495,768
• Adjustment toward market value	-3,194,051	5,690,219
<i>Investment income</i>	32,433,493	43,185,987
<i>Other income</i>	92,016	51,850
Total income available for benefits	\$57,096,082	\$67,442,939
Less benefit payments and expenses:		
• Pension benefits	-\$27,699,880	-\$30,149,136
• Administrative expenses	-2,177,316	-2,223,007
<i>Total benefit payments and expenses</i>	<i>-\$29,877,196</i>	<i>-\$32,372,143</i>
Change in actuarial value of assets	\$27,218,886	\$35,070,796

Section 3: Supplementary Information

Exhibit G: Investment Return – Actuarial Value vs. Market Value

Year Ended September 30	Actuarial Value Investment Return		Market Value Investment Return	
	Amount	Percent	Amount	Percent
2005	41,628,267	21.54%	24,502,920	11.65%
2006	18,342,582	7.91%	21,850,004	9.42%
2007	22,639,971	9.13%	32,830,684	13.05%
2008	11,396,612	4.25%	-45,322,779	-16.07%
2009	5,747,508	2.06%	6,230,939	2.65%
2010	7,303,305	2.57%	23,475,523	9.70%
2011	3,785,773	1.29%	-2,800,685	-1.05%
2012	6,983,258	2.31%	49,518,890	18.40%
2013	27,063,010	8.66%	38,321,551	11.90%
2014	33,827,110	9.91%	34,556,802	9.54%
2015	28,745,980	7.67%	-3,189,272	-0.80%
2016	33,662,452	8.39%	36,953,207	9.45%
2017	33,801,428	7.83%	48,584,612	11.44%
2018	34,433,439	7.46%	35,137,841	7.48%
2019	32,433,493	6.60%	22,634,118	4.53%
2020	43,185,987	8.35%	52,452,272	10.17%
Total	\$384,980,175		\$375,736,627	
Most recent five-year average return:		7.71%		8.51%
Ten-year average return:		7.07%		7.97%
Sixteen-year average return:		7.09%		6.99%

Note: Each year's yield is weighted by the average asset value in that year.

Section 3: Supplementary Information

Exhibit H: Annual Funding Notice for Plan Year Beginning October 1, 2020 and Ending September 30, 2021

Annual Funding Notice for Plan Year Beginning October 1, 2020 and Ending September 30, 2021

	2020 Plan Year	2019 Plan Year	2018 Plan Year
Actuarial valuation date	October 1, 2020	October 1, 2019	October 1, 2018
Funded percentage	103.6%	100.2%	100.8%
Value of assets	\$556,311,392	\$521,240,596	\$494,021,710
Value of liabilities	536,919,149	520,039,252	489,942,206
Market value of assets as of plan year end	Not available	564,193,190	519,856,109

Critical or Endangered Status

The Plan was not in endangered or critical status in the plan year.

Section 3: Supplementary Information

Exhibit I: Funding Standard Account

- ERISA imposes a minimum funding standard that requires the Plan to maintain an FSA. The accumulation of contributions in excess of the minimum required contributions is called the FSA credit balance. If actual contributions fall short on a cumulative basis, a funding deficiency has occurred. For a plan that is in critical status under PPA'06, employers will generally not be penalized if a funding deficiency develops, provided the parties fulfill their obligations in accordance with the Rehabilitation Plan developed by the Trustees and the negotiated bargaining agreements reflect that Rehabilitation Plan.
- The FSA is charged with the normal cost and the amortization of increases or decreases in the unfunded actuarial accrued liability due to plan amendments, experience gains or losses, and changes in actuarial assumptions and funding methods. The FSA is credited with employer contributions. All items, including the prior credit balance or deficiency, are adjusted with interest at the actuarially assumed rate.
- Increases or decreases in the unfunded actuarial accrued liability are amortized over 15 years except that short-term benefits, such as 13th checks, are amortized over the scheduled payout period. Changes in the actuarial cost method are amortized over 10 years.

	September 30, 2020	September 30, 2021
1 Prior year funding deficiency	\$0	\$0
2 Normal cost, including administrative expenses	13,263,789	13,364,757
3 Amortization charges	19,413,170	18,311,925
4 Interest on 1, 2 and 3	<u>2,369,080</u>	<u>2,296,559</u>
5 Total charges	\$35,046,039	\$33,973,241
6 Prior year credit balance	\$97,287,360	\$98,170,738
7 Employer contributions	24,205,102	TBD
8 Amortization credits	3,537,106	4,290,723
9 Interest on 6, 7 and 8	8,187,209	7,428,456
10 Full funding limitation credits	<u>0</u>	<u>0</u>
11 Total credits	\$133,216,777	\$109,889,917
12 Credit balance/(Funding deficiency): 11 - 5	\$98,170,738	TBD
13 Minimum contribution with interest required to avoid a funding deficiency: 5 -11 not less than zero	N/A	\$0

Section 3: Supplementary Information

Full Funding Limitation (FFL) and Credits for Plan Year October 1, 2020

ERISA FFL (accrued liability FFL)	\$98,823,638
RPA'94 override (90% current liability FFL)	393,811,074
FFL credit	0

Section 3: Supplementary Information

Exhibit J: Maximum Deductible Contribution

- Employers that contribute to defined benefit pension plans are allowed a current deduction for payments to such plans. There are various measures of a plan's funded level that are considered in the development of the maximum deductible contribution amount.
- One of the limits is the excess of 140% of "current liability" over assets. "Current liability" is one measure of the actuarial present value of all benefits earned by the participants as of the valuation date. This limit is significantly higher than the current contribution level.
- Contributions in excess of the maximum deductible amount are not prohibited; only the deductibility of these contributions is subject to challenge and may have to be deferred to a later year. In addition, if contributions are not fully deductible, an excise tax in an amount equal to 10% of the non-deductible contributions may be imposed. However, the plan sponsor may elect to exempt the non-deductible amount up to the ERISA full-funding limitation from the excise tax.
- The Trustees should review the interpretation and applicability of all laws and regulations concerning any issues as to the deductibility of contribution amounts with Fund Counsel.

1	Current liability for maximum deductible contribution, projected to the end of the plan year	\$1,057,007,480
2	140% of current liability	1,479,810,472
3	Actuarial value of assets, projected to the end of the plan year	557,495,658
4	Maximum deductible contribution: 2 - 3	\$922,314,814

Section 3: Supplementary Information

Exhibit K: Pension Protection Act of 2006

- Based on projections of the credit balance in the FSA, the funded percentage, and cash flow sufficiency tests, plans are categorized in one of the “zones” described below.
- The funded percentage is determined using the actuarial value of assets and the present value of benefits earned to date, based on the actuary’s best estimate assumptions.

Critical Status (Red Zone)

A plan is classified as being in critical status (the Red Zone) if:

- The funded percentage is less than 65%, and either there is a projected FSA deficiency within five years or the plan is projected to be unable to pay benefits within seven years, or
- There is a projected FSA deficiency within four years, or
- There is a projected inability to pay benefits within five years, or
- The present value of vested benefits for inactive participants exceeds that for actives, contributions are less than the value of the current year’s benefit accruals plus interest on existing unfunded accrued benefit liabilities, and there is a projected FSA deficiency within five years, or
- As permitted by the Multiemployer Pension Reform Act of 2014, the plan is projected to be in the *Red Zone* within the next five years and the plan sponsor elects to be in critical status.

A critical status plan is further classified as being in critical and declining status if:

- The ratio of inactive participants to active participants is at least 2 to 1, and there is an inability to pay benefits projected within 20 years, or
- The funded percentage is less than 80%, and there is an inability to pay benefits projected within 20 years, or
- There is an inability to pay benefits projected within 15 years.

Any amortization extensions are ignored for testing initial entry into the *Red Zone*.

The Trustees are required to adopt a formal Rehabilitation Plan, designed to allow the plan to emerge from critical status by the end of the rehabilitation period. If they determine that such emergence is not reasonable, the Rehabilitation Plan must be designed to emerge as of a later time or to forestall possible insolvency.

Trustees of *Red Zone* plans have tools, such as the ability to reduce or eliminate early retirement subsidies, to remedy the situation. Accelerated forms of benefit payment (such as lump sums) are prohibited. However, unless the plan is critical and declining, Trustees may not reduce benefits of participants who retired before being notified of the plan’s critical status (other than rolling back recent benefit increases) or alter core retirement benefits payable at normal retirement age.

Section 3: Supplementary Information

Endangered Status (Yellow Zone)

A plan not in critical status (*Red Zone*) is classified as being in endangered status (the *Yellow Zone*) if:

- The funded percentage is less than 80%, or
- There is a projected FSA deficiency within seven years.

A plan that has both of the endangered conditions present is classified as seriously endangered.

Trustees of a plan that was in the *Green Zone* in the prior year can elect not to enter the *Yellow Zone* in the current year (although otherwise required to do so) if the plan's current provisions would be sufficient (with no further action) to allow the plan to emerge from the *Yellow Zone* within ten years.

The Trustees are required to adopt a formal Funding Improvement Plan, designed to improve the current funded percentage, and avoid a funding deficiency as of the emergence date.

Green Zone

A plan not in critical status (the *Red Zone*) nor in endangered status (the *Yellow Zone*) is classified as being in the *Green Zone*.

Early Election of Critical Status

Trustees of a *Green* or *Yellow Zone* plan that is projected to enter the *Red Zone* within the next five years may elect whether or not to enter the *Red Zone* for the current year.

Section 4: Certificate of Actuarial Valuation

August 26, 2021

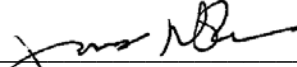
Certificate of Actuarial Valuation

This is to certify that Segal has prepared an actuarial valuation of the SEIU Local 1 and Participating Employers Pension Trust as of October 1, 2020 in accordance with generally accepted actuarial principles and practices. It has been prepared at the request of the Board of Trustees to assist in administering the Fund and meeting filing requirements of federal government agencies. This valuation report may not otherwise be copied or reproduced in any form without the consent of the Board of Trustees and may only be provided to other parties in its entirety.

The measurements shown in this actuarial valuation may not be applicable for other purposes. Future actuarial measurements may differ significantly from the current measurements presented in this report due to such factors as the following: plan experience differing from that anticipated by the economic or demographic assumptions; changes in economic or demographic assumptions; increases or decreases expected as part of the natural operation of the methodology used for these measurements (such as the end of an amortization period or additional cost or contribution requirements based on the plan's funded status); and changes in plan provisions or applicable law.

The valuation is based on the assumption that the Plan is qualified as a multiemployer plan for the year and on information supplied by the auditor with respect to contributions and assets and reliance on the Plan Administrator with respect to the participant data. Segal does not audit the data provided. The accuracy and comprehensiveness of the data is the responsibility of those supplying the data. To the extent we can, however, Segal does review the data for reasonableness and consistency. Based on our review of the data, we have no reason to doubt the substantial accuracy of the information on which we have based this report and we have no reason to believe there are facts or circumstances that would affect the validity of these results. Adjustments for incomplete or apparently inconsistent data were made as described in the attached Exhibit K.

I am a member of the American Academy of Actuaries and I meet the Qualification Standards of the American Academy of Actuaries to render the actuarial opinion herein. To the best of my knowledge, the information supplied in this actuarial valuation is complete and accurate, except as noted in Exhibit A. Each prescribed assumption for the determination of Current Liability was applied in accordance with applicable law and regulations. In my opinion, each other assumption is reasonable (taking into account the experience of the plan and reasonable expectations) and such other assumptions, in combination, offer my best estimate of anticipated experience under the plan.


James A. Nolan, FSA, MAAA
Vice President and Consulting Actuary
Enrolled Actuary No. 20-07228

Section 4: Certificate of Actuarial Valuation

Exhibit 1: Summary of Actuarial Valuation Results

The valuation was made with respect to the following data supplied to us by the Plan Administrator:

Pensioners as of the valuation date (including 591 beneficiaries in pay status, 11 beneficiaries in suspended status, and 58 pensioners in suspended status)	6,641
Participants inactive during year ended September 30, 2020 with vested rights (including 32 beneficiaries with rights to deferred pensions and 9 participants with unknown age)	6,817
Participants active during the year ended September 30, 2020 (including 217 participants with unknown age)	9,139
<ul style="list-style-type: none"> Fully vested 	6,822
<ul style="list-style-type: none"> Not vested 	2,317
Total participants	22,597

The actuarial factors as of the valuation date are as follows:

Normal cost, including administrative expenses	13,364,757
Actuarial accrued liability	536,919,149
<ul style="list-style-type: none"> Pensioners and beneficiaries 	243,657,848
<ul style="list-style-type: none"> Inactive participants with vested rights 	96,471,809
<ul style="list-style-type: none"> Active participants 	196,789,492
Actuarial value of assets (\$564,193,190, at market value as reported by Bansley & Kiener, LLP)	556,311,392
Overfunded actuarial accrued liability	-19,392,243

Section 4: Certificate of Actuarial Valuation

Exhibit 2: Actuarial Present Value of Accumulated Plan Benefits

The actuarial present value of accumulated plan benefits calculated in accordance with FASB ASC 960 is shown below as of October 1, 2019 and as of October 1, 2020. In addition, a reconciliation between the two dates follows.

	Benefit Information Date	
	October 1, 2019	October 1, 2020
Actuarial present value of vested accumulated plan benefits:		
• Participants currently receiving payments	\$232,266,238	\$243,657,848
• Other vested benefits	<u>279,273,250</u>	<u>284,754,035</u>
• Total vested benefits	\$511,539,488	\$528,411,883
Actuarial present value of non-vested accumulated plan benefits	<u>8,499,764</u>	<u>8,507,266</u>
Total actuarial present value of accumulated plan benefits	\$520,039,252	\$536,919,149

Factors	Change in Actuarial Present Value of Accumulated Plan Benefits
Plan amendments	\$0
Benefits accumulated, net experience gain or loss, changes in data	10,419,093
Benefits paid	-30,149,136
Interest	36,609,940
Total	\$16,879,897

Section 4: Certificate of Actuarial Valuation

Exhibit 3: Current Liability

The table below presents the current liability for the Plan Year beginning October 1, 2020.

Item ¹	Number of Participants	Current Liability
Interest rate assumption		2.55%
Retired participants and beneficiaries receiving payments	6,641	\$365,875,729
Inactive vested participants	6,817	221,237,455
Active participants		
• Non-vested benefits		18,597,561
• Vested benefits		430,400,512
• Total active	<u>9,139</u>	<u>\$448,998,073</u>
Total	22,597	\$1,036,111,257
Expected increase in current liability due to benefits accruing during the plan year		\$29,707,237
Expected release from current liability for the plan year		35,536,298
Expected plan disbursements for the plan year, including administrative expenses of \$2,250,000		37,786,298
Current value of assets		\$564,193,190
Percentage funded for Schedule MB		54.45%

¹ The actuarial assumptions used to calculate these values are shown in Exhibit K.

Section 4: Certificate of Actuarial Valuation

Exhibit 4: Information on Plan Status as of October 1, 2020

Plan status (as certified on December 18, 2020, for the 2020 zone certification)	Green
Actuarial value of assets for FSA	\$556,311,392
Accrued liability under unit credit cost method	536,919,149
Funded percentage for monitoring plan's status	103.6%

Section 4: Certificate of Actuarial Valuation

Exhibit 5: Schedule of Projection of Expected Benefit Payments

(Schedule MB, Line 8b(1))

Plan Year	Expected Annual Benefit Payments
2020	\$35,528,545
2021	36,798,635
2022	38,128,690
2023	39,609,449
2024	41,305,245
2025	42,910,738
2026	44,446,661
2027	45,981,345
2028	47,382,452
2029	48,749,313

This assumes the following:

- No additional benefits will be accrued.
- Experience is in line with valuation assumptions.
- No new entrants are covered by the plan.

Section 4: Certificate of Actuarial Valuation

Exhibit 6: Schedule of Active Participant Data

(Schedule MB, Line 8b(2))

The participant data is for the year ended September 30, 2020.

Age	Total	Under 1	1-4	5-9	10-14	15 - 19	20 - 24	25 - 29	30 - 34	35 - 39	40 & over
Under 25	185	21	162	2	–	–	–	–	–	–	–
25 - 29	398	19	307	71	1	–	–	–	–	–	–
30 - 34	565	30	341	136	54	4	–	–	–	–	–
35 - 39	600	3	240	159	135	62	1	–	–	–	–
40 - 44	791	8	274	161	145	149	53	1	–	–	–
45 - 49	1,001	10	260	182	182	228	96	43	–	–	–
50 - 54	1,339	9	301	220	226	315	157	79	30	2	–
55 - 59	1,602	9	298	248	249	385	206	101	85	18	3
60 - 64	1,566	11	213	230	264	321	216	123	123	40	25
65 - 69	724	3	61	80	121	168	102	68	61	26	34
70 & over	151	–	17	13	31	34	28	10	8	4	6
Unknown	217	17	181	17	2	–	–	–	–	–	–
Total	9,139	140	2,655	1,519	1,410	1,666	859	425	307	90	68

Section 4: Certificate of Actuarial Valuation

Exhibit 7: Funding Standard Account

The table below presents the FSA for the Plan Year ending September 30, 2021.

Charges		Credits	
1 Prior year funding deficiency	\$0	6 Prior year credit balance	98,170,738
2 Normal cost, including administrative expenses	13,364,757	7 Amortization credits	4,290,723
3 Amortization charges	18,311,925	8 Interest on 6 and 7	7,428,456
4 Interest on 1, 2 and 3	2,296,559	9 Full-funding limitation credit	0
5 Total charges	33,973,241	10 Total credits	109,889,917
Minimum contribution with interest required to avoid a funding deficiency: 5 - 10 , not less than zero			\$0

Full Funding Limitation (FFL) and Credits for Plan Year October 1, 2020

ERISA FFL (accrued liability FFL)	\$98,823,638
RPA'94 override (90% current liability FFL)	393,811,074
FFL credit	0

Section 4: Certificate of Actuarial Valuation

Schedule of FSA Bases (Charges) (Schedule MB, Line 9c)

Type of Base	Date Established	Outstanding Balance	Years Remaining	Amortization Amount
Plan Amendment	10/01/1992	\$888,616	2	\$459,851
Plan Amendment	10/01/1993	1,896,042	3	676,729
Plan Amendment	09/01/1994	763,030	3.92	214,963
Plan Amendment	10/01/1995	1,153,656	5	264,104
Change in Assumptions	10/01/1995	3,907,143	5	894,455
Plan Amendment	10/01/1997	1,093,204	7	190,787
Plan Amendment	10/01/1998	3,423,122	8	539,700
Plan Amendment	10/01/1999	5,246,577	9	758,847
Plan Amendment	10/01/2000	2,435,733	10	327,097
Plan Amendment	10/01/2001	2,708,824	11	341,027
Change in Assumptions	10/01/2005	2,953,424	15	307,141
Plan Amendment	10/01/2006	3,607,177	16	361,955
Plan Amendment	10/01/2007	3,944,827	17	383,285
Plan Amendment	10/01/2008	163,126	3	58,222
Actuarial Loss	10/01/2008	2,880,061	3	1,027,943
Change in Assumptions	10/01/2009	885,427	4	245,109
Actuarial Loss	10/01/2009	6,022,449	4	1,667,171
Actuarial Loss	10/01/2010	6,011,756	5	1,376,260
Change in Assumptions	10/01/2011	5,994,733	6	1,181,718
Actuarial Loss	10/01/2011	10,642,849	6	2,097,982
Actuarial Loss	10/01/2012	8,533,063	7	1,489,198
Change in Assumptions	10/01/2015	4,045,635	10	543,293
Actuarial Loss	10/01/2018	595,360	13	67,364
Plan Amendment	10/01/2018	11,530,747	13	1,304,689

Section 4: Certificate of Actuarial Valuation

Type of Base	Date Established	Outstanding Balance	Years Remaining	Amortization Amount
Actuarial Loss	10/01/2019	4,228,425	14	457,597
Change in Assumptions	10/01/2019	9,937,583	14	1,075,438
Total		\$105,492,589		\$18,311,925

Section 4: Certificate of Actuarial Valuation

Schedule of FSA Bases (Credits) (Schedule MB, Line 9h)

Type of Base	Date Established	Outstanding Balance	Years Remaining	Amortization Amount
Method Change	10/01/1993	\$3,489,514	3	\$1,245,467
Actuarial Gain	10/01/2006	5,030	1	5,030
Actuarial Gain	10/01/2007	117,742	2	60,930
Change in Assumptions	10/01/2010	428,723	5	98,147
Actuarial Gain	10/01/2013	2,075,331	8	327,203
Actuarial Gain	10/01/2014	6,576,235	9	951,165
Actuarial Gain	10/01/2015	795,782	10	106,867
Actuarial Gain	10/01/2016	4,474,098	11	563,266
Actuarial Gain	10/01/2017	1,504,961	12	179,030
Actuarial Gain	10/01/2020	7,246,678	15	753,618
Total		\$26,714,094		\$4,290,723

Section 4: Certification of Actuarial Valuation

Exhibit 8: Statement of Actuarial Assumptions, Methods and Models

(Schedule MB, Line 6)

Mortality Rates

Healthy Retirees: RP-2014 Healthy Annuitant Blue Collar Mortality tables (sex distinct), with rates increased by 8%, and generationally projected using 60% of Scale MP-2014.

Pre-retirement: RP-2014 Blue Collar Employee Mortality tables (sex distinct), with rates increased by 8%, and generationally projected using 60% of Scale MP-2014.

Disabled: RP-2014 Disabled Retiree tables (sex distinct), with rates increased by 8%, and generationally projected using 60% of Scale MP-2014.

The underlying tables with the generational projection to the ages of participants as of the measurement date reasonably reflect the mortality experience of the Plan as of the measurement date.

These mortality tables were then adjusted to future years using the generational projection to reflect future mortality improvement between the measurement date and those years.

The mortality rates were based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual number of deaths and the projected number based on the prior year's assumption over the most recent three years.

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Termination Rates	Age	Rate (%)							
		Mortality ¹		Disability	Withdrawal (By Years of Service) ²				
		Male	Female		1	2	3	4	5 or more
20	0.06	0.02	0.04	33.4	29.4	23.4	19.4	13.4	
25	0.07	0.02	0.05	31.9	27.9	21.9	17.9	11.9	
30	0.06	0.03	0.06	30.4	26.4	20.4	16.4	10.4	
35	0.07	0.03	0.06	28.9	24.9	18.9	14.9	8.9	
40	0.09	0.05	0.07	17.3	15.3	12.3	10.3	7.3	
45	0.14	0.08	0.11	15.3	13.3	10.3	8.3	5.3	
50	0.24	0.13	0.16	13.9	11.9	8.9	6.9	3.9	
55	0.39	0.20	0.30	22.0	20.0	17.0	15.0	12.0	
60	0.66	0.30	0.60	22.0	20.0	17.0	15.0	12.0	

¹ The rates above are sample rates in 2014. The rates above are projected on a generational basis after 2014 using 60% of Scale MP-2014.

² Withdrawal rates do not apply at or beyond early retirement age.

The termination rates and disability rates were based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual number of terminations and disability retirements by age and the projected number based on the prior year's assumption over the most recent three years for withdrawal (since the withdrawal rate assumption was changed in 2015), and over the most recent five years for disability retirements.

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Retirement Rates

Age	Annual Retirement Rates
55 – 60	1%
61	2%
62-63	6%
64	10%
65-69	20%
70	100%

**if eligible*

The retirement rates were based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment. As part of the analysis, a comparison was made between the actual number of retirements and the projected number based on the prior year's assumption over the most recent three years.

Description of Weighted Average Retirement Age	Age 67, determined as follows: The weighted average retirement age for each participant is calculated as the sum of the product of each potential current or future retirement age times the probability of surviving from current age to that age and then retiring at that age, assuming no other decrements. The overall weighted retirement age is the average of the individual retirement ages based on all the active participants included in the October 1, 2020 actuarial valuation.
Retirement Age for Inactive Vested Participants	65 The retirement age for inactive vested participants was based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment.
Future Benefit Accruals	One year of credited service per year. The future benefit accruals were based on historical and current demographic data, adjusted to reflect estimated future experience and professional judgment.
Unknown Data for Participants	Same as those exhibited by participants with similar known characteristics. If not specified, participants are assumed to be male.
Definition of Active Participants	Active participants are defined as those who have completed the Plan's eligibility requirement for participation in the Plan, excluding those who have retired as of the valuation date. For each active participant, service is reported in the data through December 31, and is adjusted by a quarter year to the valuation date.
Percent Married	80% of males 65% of females
Age of Spouse	Spouses are assumed to be three years younger than male participants and three years older than female participants. If not specified, spouses are assumed to be the opposite sex of the participant.

Section 4: Certification of Actuarial Valuation

Benefit Election	<p>45% of male participants and 20% of female participants are assumed to elect a 50% Joint and Survivor annuity, and the remaining participants are assumed to elect a Single Life Annuity.</p> <p>The benefit elections were based on historical and current demographic data, adjusted to reflect the plan design, and estimated future experience and professional judgment. As part of the analysis, a comparison was made between the assumed and the actual option election patterns over the most recent two years (since the benefit election assumption was updated in 2016).</p>
Net Investment Return	<p>7.25%</p> <p>The net investment return assumption is a long-term estimate derived from historical data, current and recent market expectations, and professional judgment. As part of the analysis, a building block approach was used that reflects inflation expectations and anticipated risk premiums for each of the portfolio's asset classes as provided by Segal Marco Advisors, as well as the Plan's target asset allocation.</p>
Annual Administrative Expenses	<p>\$2,250,000 for the year beginning October 1, 2020 (equivalent to \$2,166,733 payable at the beginning of the year) or 19.3% of Normal Cost.</p> <p>The annual administrative expenses were based on historical and current data, adjusted to reflect estimated future experience and professional judgment.</p>
Actuarial Value of Assets	<p>The market value of assets less unrecognized returns in each of the last five years. Unrecognized return is equal to the difference between the actual market return and the expected return on the market value, and is recognized, 20% per year, over a five-year period. The actuarial value is further adjusted, if necessary, to be within 20% of the market value.</p>
Actuarial Cost Method	<p>Unit Credit Actuarial Cost Method. Normal Cost and Actuarial Accrued Liability are calculated on an individual basis.</p>
Benefits Valued	<p>Unless otherwise indicated, includes all benefits summarized in Exhibit 9.</p>
Current Liability Assumptions	<p><i>Interest:</i> 2.55%, within the permissible range prescribed under IRC Section 431(c)(6)(E)</p> <p><i>Mortality:</i> Mortality prescribed under IRS Regulations 1.431(c)(6)-1 and 1.430(h)(3)-1(a)(2): RP-2014 employee and annuitant mortality tables, adjusted backward to the base year (2006) using scale MP-2014, projected forward generationally using scale MP-2017 (previously, the MP-2016 scale was used).</p>
Estimated Rate of Investment Return	<p><i>On actuarial value of assets (Schedule MB, line 6g):</i> 8.4%, for the Plan Year ending September 30, 2020</p> <p><i>On current (market) value of assets (Schedule MB, line 6h):</i> 10.2%, for the Plan Year ending September 30, 2020</p>
FSA Contribution Timing (Schedule MB, line 3a)	<p>Unless otherwise noted, contributions are paid periodically throughout the year pursuant to collective bargaining agreements. The interest credited in the FSA is therefore assumed to be equivalent to a March 31 contribution date.</p>

Section 4: Certification of Actuarial Valuation

Actuarial Models	Segal valuation results are based on proprietary actuarial modeling software. The actuarial valuation models generate a comprehensive set of liability and cost calculations that are prepared to meet regulatory, legislative and client requirements. Deterministic cost projections are based on a proprietary forecasting model. Our Actuarial Technology and Systems unit, comprised of both actuaries and programmers, is responsible for the initial development and maintenance of these models. The models have a modular structure that allows for a high degree of accuracy, flexibility and user control. The client team programs the assumptions and the plan provisions, validates the models, and reviews test lives and results, under the supervision of the responsible Enrolled Actuary.
Justification for Change in Actuarial Assumptions (Schedule MB, line 11)	Based on past experience and future expectations, the following actuarial assumptions were changed as of October 1, 2020: <ul style="list-style-type: none">• Administrative expenses, previously \$2,200,000 per year.

Section 4: Certification of Actuarial Valuation

Exhibit 9: Summary of Plan Provisions

(Schedule MB, Line 6)

This exhibit summarizes the major provisions of the Plan included in the valuation. It is not intended to be, nor should it be interpreted as, a complete statement of all plan provisions.

Plan Year	October 1 through September 30
Pension Credit Year	October 1 through September 30
Plan Status	Ongoing plan
Regular Pension	<ul style="list-style-type: none">• <i>Age Requirement:</i> 65• <i>Service Requirement:</i> None• <i>Amount:</i> \$29.00 for each year of future credited service, plus \$10.00 for each year of past credit service. For retirements prior to January 1, 2018, service for benefit accruals was limited to 25 years.
Early Retirement	<ul style="list-style-type: none">• <i>Age Requirement:</i> 55• <i>Service Requirement:</i> 10 years of Pension Credit• <i>Amount:</i> Regular pension accrued, reduced by 6% for each year of age less than 65
Disability	<ul style="list-style-type: none">• <i>Age Requirement:</i> None• <i>Service Requirement:</i> 10 years of eligibility service.• <i>Amount:</i> Normal pension accrued payable immediately as a Single Life Annuity. Upon eligibility for Normal Retirement, the participant is able to select an optional form of payment.
Deferred Vested Pension	<ul style="list-style-type: none">• <i>Age Requirement:</i> None• <i>Service Requirement:</i> Five years of eligibility service.• <i>Amount:</i> Normal or early pension accrued based on plan in effect when last active• <i>Normal Retirement Age:</i> 65
Spouse's Pre-Retirement Death Benefit	<ul style="list-style-type: none">• <i>Age Requirement:</i> None• <i>Service Requirement:</i> Five years of Vesting Service or 6 years of Pension Credit.• <i>Amount:</i> 50% of the benefit participant would have received had he or she retired the day before death and elected the joint and survivor option.• <i>Charge for Coverage:</i> None

Section 4: Certification of Actuarial Valuation

Pre-Retirement Lump-sum Death Benefit	<ul style="list-style-type: none">• <i>Age Requirement:</i> None• <i>Service Requirement:</i> Eight-tenths of a year of credited service earned during the contribution period and active at time of death• <i>Amount:</i> \$10,000
Post-Retirement Death Benefit	<ul style="list-style-type: none">• <i>Joint and Survivor:</i> If married, pension benefits are paid in the form of a joint and survivor annuity unless this form is rejected by the participant and spouse. If not rejected, the benefit amount otherwise payable is reduced to reflect the joint and survivor coverage.
Optional Forms of Benefits	<p>The normal forms of payment for this Plan are:</p> <ul style="list-style-type: none">• <i>Single Life Annuity</i>• <i>50% Joint and Survivor Pension for married participants</i> <p>The optional forms of payment for this Plan are:</p> <ul style="list-style-type: none">• <i>Single Life Annuity for married participants</i>• <i>Single Life Annuity with 60 months guaranteed</i>• <i>Single Life Annuity with 120 months guaranteed</i>• <i>Single Life Annuity with 180 months guaranteed</i>• <i>75% Joint and Survivor Pension for married participants</i>• <i>100% Joint and Survivor Pension for married participants.</i>
Participation	<p>The later of:</p> <ol style="list-style-type: none">a) the first anniversary of covered employment, provided that 1,000 hours of employment were worked during the preceding 12 months, orb) the date as of which one year of eligibility service is earned.

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Credited Service

Credited Service is determined in accordance with the following table:

Number of Hours Worked in Calendar Year	Years of Credited Service
1,350 or more	1.0
1,200 - 1,349	0.9
1,050 - 1,199	0.8
900 - 1,049	0.7
750 - 899	0.6
600 - 749	0.5
450 - 599	0.4
300 - 449	0.3
Less than 300	0.0

Contribution Rate

The contribution rate increased from \$1.25 per hour to \$1.30 per hour, effective April 6, 2020 for the janitorial sector only. The security sector remained at \$1.25 per hour. The average contribution rate for all actives is \$1.287.

Changes in Plan Provisions

There were no changes in plan provisions reflected in this actuarial valuation

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