

# Toronto Transit Commission

# CEO's Report

## January 2021



Performance scorecard	2
CEO's commentary	9
COVID-19 dashboard	13
<b>Performance updates:</b>	
Safety and security	20
Ridership	27
Customer experience	33



# Performance scorecard

## TTC performance scorecard – January 2021

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
<b>Safety and security</b>							
Lost-time injuries	Injuries per 100 employees	Q3 2020	5.4	4.6*	✘	✘	20
Customer injury incidents	Injury incidents per 1M boardings	Q3 2020	2.4	2.0*	✘	✘	22
Offences against customers	Offences per 1M boardings	Q3 2020	1.75	1.00	✘	–	23
Offences against staff	Offences per 100 employees	Q3 2020	5.83	4.18	✘	✘	26
<b>Ridership</b>							
Ridership	Monthly ridership	Nov 2020	14.6M	44.5M	✘	✘	27
Ridership	Year-to-date ridership	2020 YTD (to Nov)	211.3	488.7M	✘	✘	27

Ongoing trend indicators:  Favourable  Mixed  Unfavourable  Not applicable

\*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
PRESTO ridership	Monthly ridership	Nov 2020	13.1M	41.6M	✘	✘	29
PRESTO ridership	Year-to-date ridership	2020 YTD (to Nov)	191.4M	445.0M	✘	✘	29
Wheel-Trans ridership	Monthly ridership	Nov 2020	109,239	357,373	●	●	31
Wheel-Trans ridership	Year-to-date ridership	2020 YTD (to Nov)	1.6M	3.9M	●	●	31

### Customer experience

Customer satisfaction	Customer satisfaction score	Q3 2020	78%	80%	✘	✔	33
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### Subway services

1	On-time performance Line 1	Scheduled headway performance at end terminals	Nov 2020	94.2%	90.0%	✔	✔	35
2	On-time performance Line 2	Scheduled headway performance at end terminals	Nov 2020	94.2%	90.0%	✔	✔	36
3	On-time performance Line 3	Scheduled headway performance at end terminals	Nov 2020	90.4%	90.0%	✔	✔	37


Ongoing trend indicators: ✔ Favourable    - Mixed    ✘ Unfavourable    ● Not applicable

\*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
<b>4</b> On-time performance Line 4	Scheduled headway performance at end terminals	Nov 2020	99.2%	90.0%			38
<b>1</b> Capacity Line 1	Trains-per-hour during peak	Nov 2020	99.8%	96.0%			39
<b>1</b> Capacity Bloor-Yonge Station	Trains-per-hour (8 a.m. to 9 a.m.)	Nov 2020	100.0%	96.0%			39
<b>1</b> Capacity St George Station	Trains-per-hour (8 a.m. to 9 a.m.)	Nov 2020	100.0%	96.0%			39
<b>2</b> Capacity Line 2	Trains-per-hour during peak	Nov 2020	100.0%	96.0%			41
<b>3</b> Capacity Line 3	Trains-per-hour during peak	Nov 2020	78.0%	98.0%			42
<b>4</b> Capacity Line 4	Trains-per-hour during peak	Nov 2020	100%	98.0%			43
Amount of service	Average weekly service hours delivered	Nov 2020	9,101 h	9,578 h			44
Vehicle reliability T1 trains	Mean distance between failures	Nov 2020	400,000 km	300,000 km			45
Vehicle reliability TR trains	Mean distance between failures	Nov 2020	700,000 km	600,000 km			47

Ongoing trend indicators: Favourable Mixed Unfavourable Not applicable

\*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
Service availability	Daily average service delivered	Nov 2020	100%	100%	✓	✓	49
Subway cleanliness	Audit score	Q3 2020	90.1%	90.0%	✓	✓	50
 <b>Streetcar services</b>							
On-time performance	On-time departures from end terminals	Nov 2020	82.2%	90.0%	✗	✓	52
Amount of service	Average weekly service hours	Nov 2020	16,724 h	15,646 h	✓	–	54
Vehicle reliability: <i>Contractual</i>	Mean distance between failures	Nov 2020	50,000 km	35,000 km	✓	–	55
Vehicle reliability: <i>Operational</i>	Mean distance between failures	Nov 2020	45,354 km	35,000 km	✓	–	55
Road calls and change offs	Average daily road calls or vehicle change offs	Nov 2020	2	2.4	✓	✓	58
Service availability	Daily number of vehicles available for service	Nov 2020	100%	100%	✓	✓	60
Streetcar cleanliness: Pre-service	Audit score	Q3 2020	85.2%	90.0%	✗	–	61

Ongoing trend indicators: ✓ Favourable    – Mixed    ✗ Unfavourable    ● Not applicable

\*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
Streetcar cleanliness: In-service & post-service	Audit score	Q3 2020	79.0%	90.0%			63
<b>Bus services</b>							
On-time performance	On-time departures from end terminals	Nov 2020	85.2%	90.0%			64
Amount of service	Average weekly service hours	Nov 2020	149,903 h	146,763 h			66
Vehicle reliability: eBus	Mean distance between failures	Nov 2020	24,700 km	24,000 km			67
Vehicle reliability: Hybrid	Mean distance between failures	Nov 2020	30,000 km	24,000 km			69
Vehicle reliability: Clean Diesel	Mean distance between failures	Nov 2020	20,000 km	12,000 km			71
Road calls and change offs	Average daily road calls or vehicle change offs	Nov 2020	16	24			73
Service availability	Daily average service delivered	Nov 2019	119%	100%			74
Bus cleanliness: Pre-service	Audit score	Q3 2020	99.2%	90.0%			75

Ongoing trend indicators: Favourable Mixed Unfavourable Not applicable











\*Represents four-quarter average of actual results

Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
Bus cleanliness: In-service & post-service	Audit score	Q3 2020	99.3%	90.0%			76
<b>Wheel-Trans services</b>							
On-time performance	% within 20 minutes of schedule	Nov 2020	97.3%	90.0%			77
Vehicle reliability	Mean distance between failures	Nov 2020	20,000 km	12,000 km			78
Accommodation rate	Percentage of requested trips completed	Nov 2020	99.9%	99.0%			80
Average wait time	Average amount of time a customer waits before call is answered	Nov 2020	7.4 min	15 min			81
<b>Station services</b>							
Station cleanliness	Audit score	Q3 2020	76.1%	75.0%			83
Elevator availability	Per cent available	Nov 2020	96.4%	98.0%			85
Escalator availability	Per cent available	Nov 2020	96.5%	97.0%			86

Ongoing trend indicators: Favourable Mixed Unfavourable Not applicable

\*Represents four-quarter average of actual results



Key performance indicator	Description	Latest measure	Current	Target	Current status	Ongoing trend	Page
Fare gates	Per cent available	Nov 2020	99.59%	99.50%			88
PRESTO fare card readers	Per cent available	Nov 2020	98.89%	99.99%			90
PRESTO Fare Vending Machines	Per cent available	Nov 2020	99.53%	95.00%			91
PRESTO Self-Serve Reload Machines	Per cent available	Nov 2020	99.98%	95.00%			92
PRESTO Fares and Transfer Machines	Per cent available	Nov 2020	99.59%	95.00%			93

Ongoing trend indicators:  Favourable  Mixed  Unfavourable  Not applicable

\*Represents four-quarter average of actual results

# CEO's commentary

Last year will go down in history as one of the TTC's toughest and most challenging. Despite the sorrow and hardship that COVID-19 has caused us all, TTC employees continue to work hard at building a world-class transit system for the citizens of Toronto, not just for today or the next five years — but for the future.

While it may take some time yet to return to any sense of normality, the TTC is looking ahead to the day we'll see the pandemic in our rear-view mirror.

To date, more than 400 employees had tested positive for COVID-19 and over 300 have returned to work. We wish everyone currently self-isolating a full and speedy recovery. It was with deep sadness, however, we began the new year mourning the loss of Joe Sottile, a

valued member of our Subway Infrastructure team who passed away on December 31, 2020. Joe was with the TTC for five years and worked in the Wiring and Services Section. He was a wonderful, kind-hearted man who will be remembered and missed by all who knew him.

As you are aware the health and safety of our employees and customers remains our top priority. We continue to follow the advice of Toronto Public Health and take necessary precautions.

The TTC thanks our transit-minded Board as well as Council for their support during these unprecedented times. We also extend our appreciation to provincial and federal partners for providing essential emergency relief funding.

## Easier Access

The Advisory Committee on Accessible Transit (ACAT) began 2021 by voting in a new Chair at its meeting in January. Congratulations to Chair Igor Samardzic, and also to Debbie Gillespie and Chris Stigas, who were selected as Vice-Chairs.

ACAT advises the TTC on the difficulties faced by persons with disabilities and seniors, and makes recommendations on the elimination of barriers to accessible public transit.

The Board will be pleased to know that on December 30, 2020, Bay Station became the TTC's 52nd accessible station. Last year we made significant accessibility gains by adding Wilson, Runnymede, Dupont,

Chester and Wellesley stations to the list of accessible stations.

## Subway infrastructure

Last month, the TTC subway system saw its first 10-day closure. The Line 1 closure stretched from Finch to Sheppard-Yonge. Vital state-of-good-repair work was undertaken, such as tunnel liner repairs, asbestos removal and ATC signal upgrades.

All the work was performed safely and in accordance with all environmental regulations. The extended closure proved successful in propelling our infrastructure crews ahead by several years in their work to modernize the system and provide the best possible service to customers.

This was a huge undertaking and a prime example of seamless teamwork involving numerous departments across the TTC.

Another critical piece of work that took place late last year was the relocation of infrastructure at Eglinton Station to make way for the future Eglinton Crosstown connection to Line 1.

To do this successfully, the TTC developed and implemented an extensive design and construction program for various portions of Eglinton Station. The program also ensured no interruption to vitally



important in-service systems, such as radio, fibre and telephone communications.

The Eglinton Crosstown LRT (Line 5) project required the relocation of a complex set of TTC equipment associated with signalling, traction power and communication systems to allow for the future extension of the Eglinton Station platform.

Along with Fort Monaco, our Chief Infrastructure and Engineering Officer, I'm pleased to report that his team planned, managed and completed the work in December, with support from the Eglinton Crosstown Light Rail Transit construction team and our Engineering, Construction and Expansion team. An official project handover notice was delivered to Metrolinx earlier this month.

The initial agreement with Crosslinx and Metrolinx allotted 12 months to perform this relocation program. But faced with the challenge, and taking

advantage of various subway closures, TTC crews did the task in five short months.

Fort's team worked collaboratively and strategically with their internal as well as external partners to execute an accelerated plan, safely and efficiently. It was a huge accomplishment and something that the whole organization is very proud of.

## **eBus fleet**

After more than 18 months of in-service experience, TTC staff is gaining valuable insight into what it takes to operate the largest fleet of long-range, battery-electric buses in North America.

The three models of eBuses are racking up service time and kilometres travelled in a head-to-head performance evaluation. While eBuses are deployed primarily on "swing runs" that are under 200 kilometres, we have had

eBuses in service on runs as long as 260 kilometres.

Results of the head-to-head performance testing will be presented to the Board in a staff report in the spring. Based on data compiled to date, there are two distinct categories with respect to fleet performance: 1) failures specific to eBus technologies; and 2) failures common to all bus fleets.

Failures to electric propulsion systems to date have been relatively low.

With respect to failures related to equipment and systems common to all bus fleets (i.e. HVAC, doors and suspension systems) eBus availability and reliability on average has been challenging in comparison to the Nova hybrid bus fleet.

The target for eBus availability in service is 80 per cent. In Q4 2020, eBus availability for service ranged

from 63 per cent to 84 per cent. New Flyer Industries, to date, has been the only manufacturer to meet and/or exceed the 80-per-cent target.

Despite these challenges, TTC staff are working closely with each vendor to address both technical issues as well as issues with the supply chain. Overall, availability and reliability of the various eBus fleets are starting to improve.

While interim results of our head-to-head testing and evaluation will be reported in Q2 of this year, we continue throughout 2021 and beyond to assess customer and employee satisfaction, charging system performance, and continue evaluation of vehicle and vendor performance.

Electrification of the TTC bus fleet is a key component of the City's TransformTO climate action strategy, which targets an 80-per-cent reduction in local greenhouse

gas emissions by 2050. The TTC's goal is to have a 100-per-cent zero-emissions bus fleet by 2040.

## **TTC 1921-2021**

And finally, this is an important year for the TTC. On September 1, 2021, we mark our 100th year in service. In 1921, the Toronto Transportation Commission took over a mix of private and municipal street railways in the city. In 100 years, Toronto's transit system has carried more than 32 billion customers, and has grown into the third largest carrier in North America. Thanks to the ubiquity and reliability of our network, nearly 30% of all trips taken by Torontonians are on the TTC. The TTC has become one of the most visible and vital public service organizations in the Greater Toronto and Hamilton Area.

Plans to recognize our centennial are in the works. Unfortunately, the global pandemic has caused us to

revisit our original vision. But I look forward to sharing our updated plans with the TTC Board soon. The first scheduled TTC Board meeting in 2021 is set for Wednesday, February 10. The schedule of Wednesday meetings approved by Commissioners is as follows: April 14, May 12, June 16, July 7, September 15, November 17 and December 8.

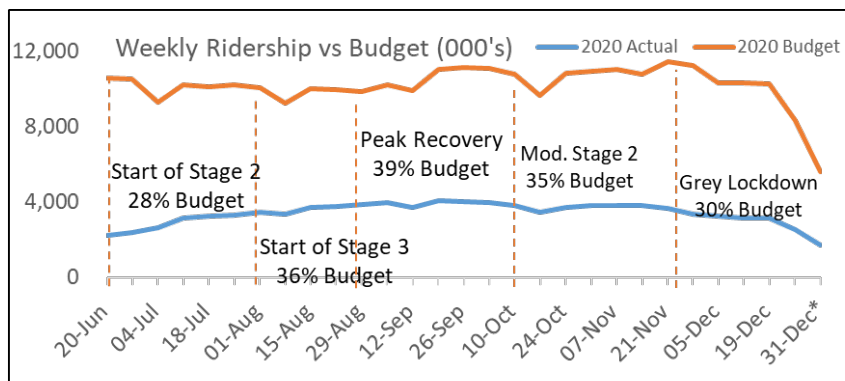
I hope everyone had a wonderful holiday season and I look forward to seeing you all on February 10.



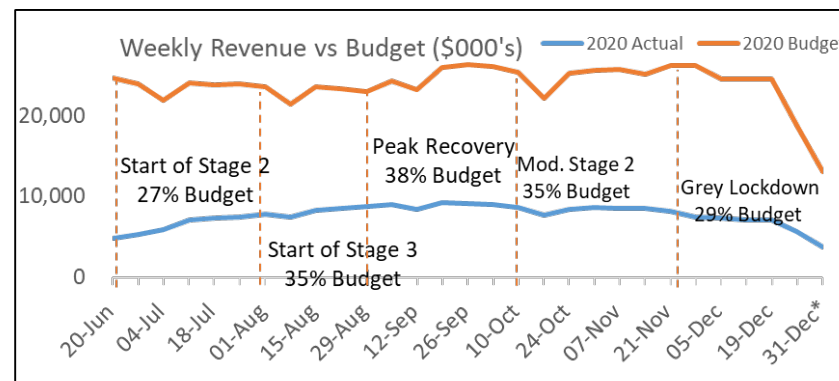
**Richard J. Leary**  
**Chief Executive Officer**  
**January 2021**

# COVID-19 dashboard

## 2020 YTD ridership and revenue



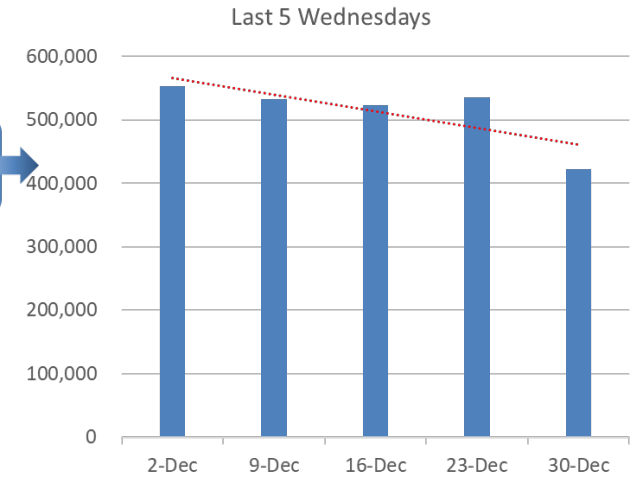
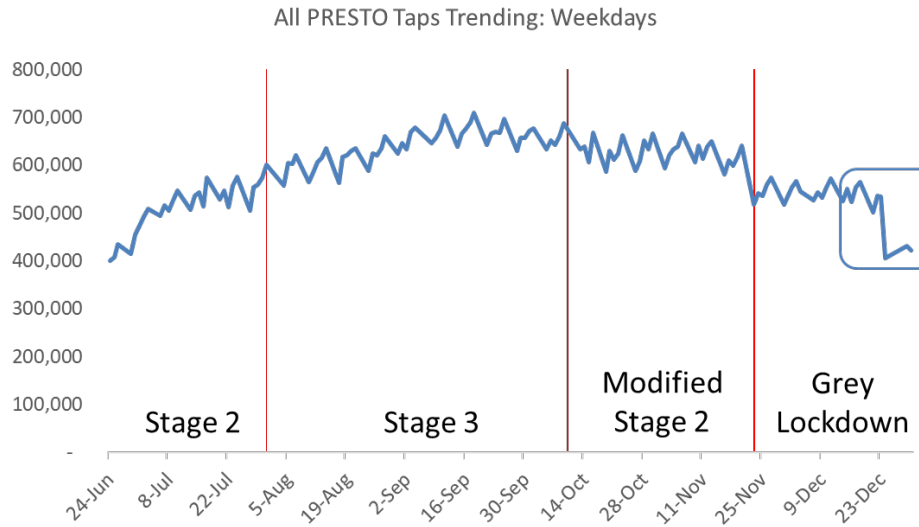
2020 RIDERSHIP (000's)				
Week Ending	BUDGET	ACTUAL	CHANGE	%
05-Dec	10,339	3,223	(7,116)	(68.8)
12-Dec	10,324	3,137	(7,187)	(69.6)
19-Dec	10,258	3,117	(7,141)	(69.6)
26-Dec	8,313	2,504	(5,809)	(69.9)
31-Dec*	5,602	1,691	(3,911)	(69.8)



2020 REVENUE (\$000's)				
Week Ending	BUDGET	ACTUAL	CHANGE	%
05-Dec	\$24,567	\$7,288	(\$17,279)	(70.3)
12-Dec	\$24,573	\$7,116	(\$17,457)	(71.0)
19-Dec	\$24,493	\$7,034	(\$17,459)	(71.3)
26-Dec	\$18,827	\$5,594	(\$13,233)	(70.3)
31-Dec*	\$13,029	\$3,757	(\$9,272)	(71.2)

\* December 27-31 100% complete. December 2020 monthly pass sales is 51.4K, 6.9K lower than November sales of 58.3K.

# PRESTO taps December 30, 2020



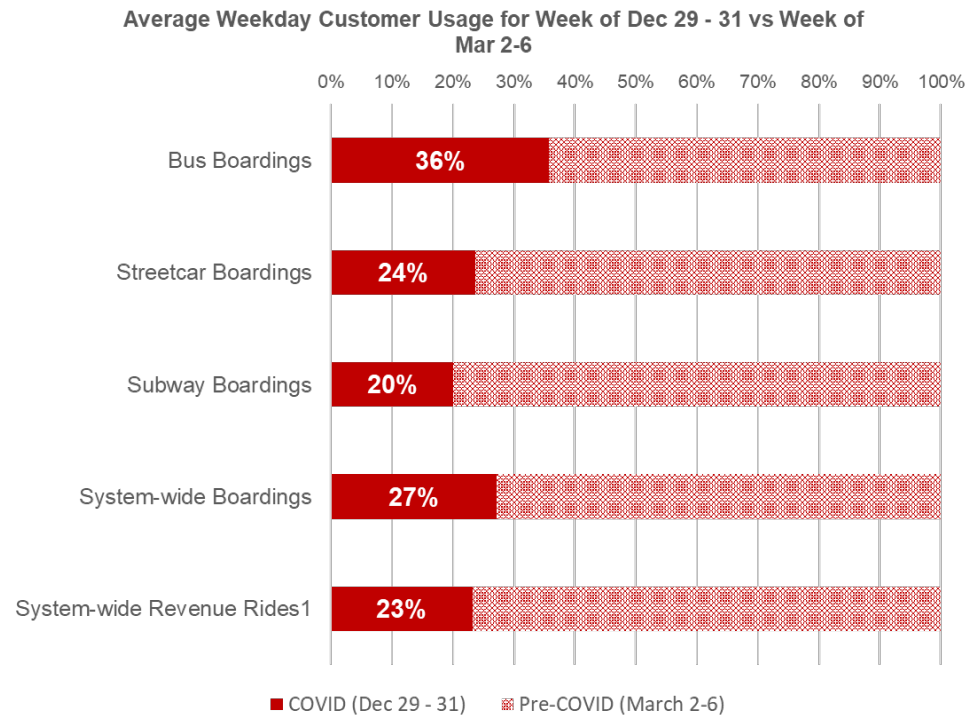
Report Day	Pre Nov. 23 Lockdown	PreCOVID-19
Wednesday, December 30, 2020	Wednesday, November 18, 2020	Monday, March 2, 2020
421,332	599,782	1,717,443
	(30%) ▼	(75%) ▼

	Taps	#	%
Wed, 2-Dec	553,230	-	-
Wed, 9-Dec	532,445	(20,785)	(4%)
Wed, 16-Dec	522,779	(9,666)	(2%)
Wed, 23-Dec	534,843	12,064	2%
Wed, 30-Dec	421,332	(113,511)	(21%)
<b>Total</b>		(131,898)	(24%)



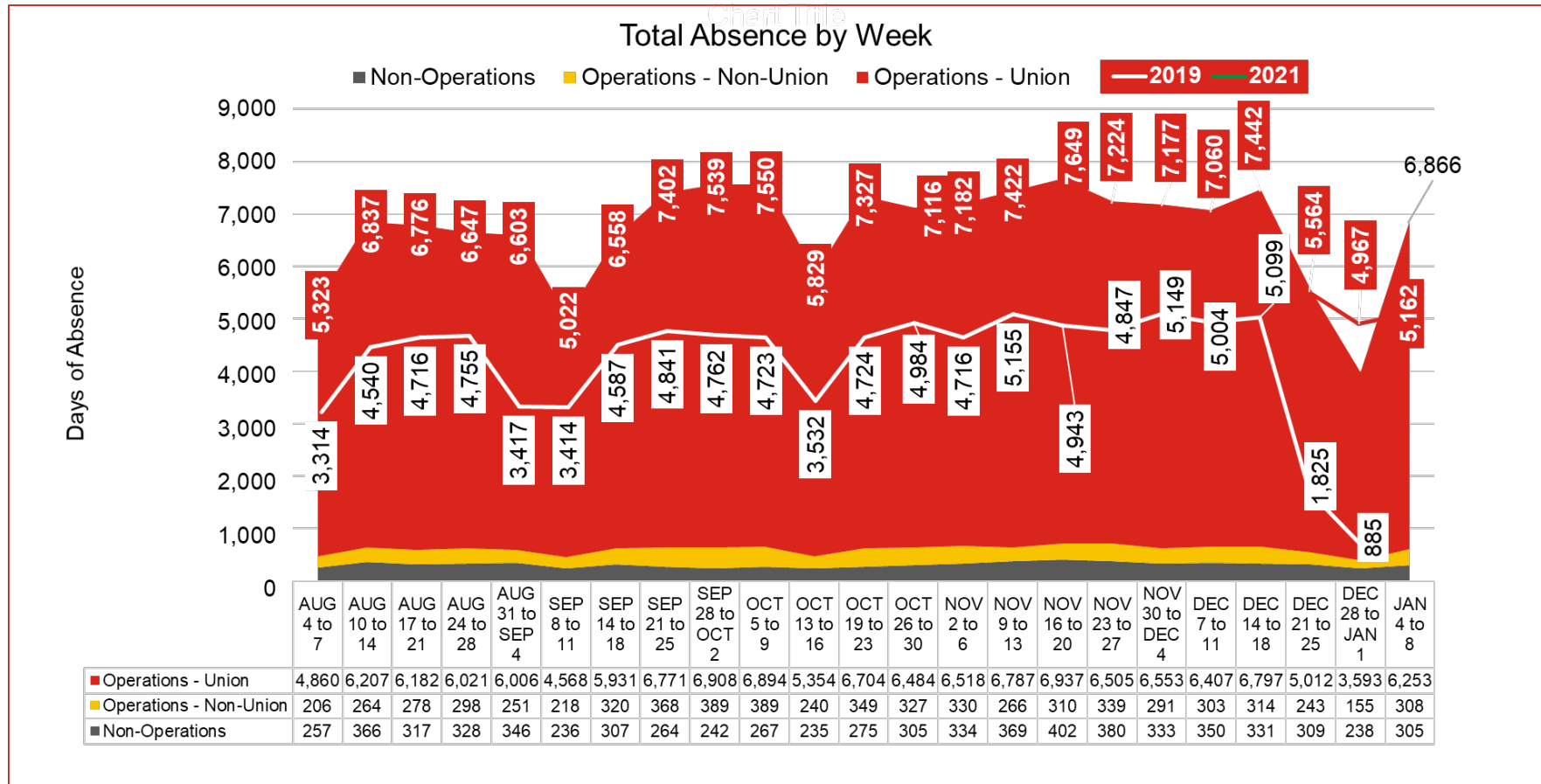
## Average weekday customer use: Week ending December 31

Customer Usage	Pre-COVID (March 2-6)	Dec 29 - Dec 31	% of Pre-COVID
Bus Boardings	1,381,000	494,000	36%
Streetcar Boardings	350,000	83,000	24%
Subway Boardings	1,492,000	299,000	20%
<b>Total System-wide Boardings</b>	<b>3,223,000</b>	<b>876,000</b>	<b>27%</b>
System-wide Revenue Rides	1,720,000	398,000	23%





# Employee absences



Note: 2020 data source is the Serviceability & Absentee Monitoring System (SAMS). Attendance is reported daily Monday to Friday excluding statutory holidays. Absences include sickness, AWOL, absences related to occupational injuries, approved and unapproved unpaid leaves, and paid leaves. Year over year comparison is done on the same categories and excludes paid leaves such as bereavement, jury duty, etc. Dips in weekly absences are generally explained by statutory holidays because only 4 days are reported. 2019 data aligned by weekday (begins at March 25, 2019) and is sourced from the Absence Management System (AMS).

## Transit services January 8, 2021

	Subway Service	Streetcar Service	Bus Service	Wheel-Trans
<b>Service Output (per Planned Service)</b>	Line 1 104% Service Line 2 107% Service	97.86% Service	96.81% Service	Service Reduced
<b>Mitigating steps to meet operational needs</b>	Meeting 100% of service at a reduced capacity. <sup>1</sup>	Meeting 100% of service at a reduced capacity. <sup>1</sup>	Meeting 100% of service at a reduced capacity. <sup>1</sup>  Extra buses added to key routes for front line workers	Service Reduction due to decrease in weekly Ridership (down 55% versus 2020 budget estimates)
<b>Operator COVID-19 Related Absences</b>	6	5	38	3
<b>COVID-19 Absence Rate</b>	0.8%	0.9%	0.9%	0.6%
<b>OT hours (hh:mm)</b>	0:00	0:00 <sup>2</sup>	92:30 <sup>2</sup>	0:00

<sup>1</sup> Reduced Capacity is defined in the Ridership Response Service Plan: 77% or greater than that of the pre-COVID-19 service levels, this has been in effect since May 10, 2020

<sup>2</sup> Excludes capital overtime

## Mask compliance

- We are currently surveying customers both who are wearing a mask and those wearing a mask **correctly** (i.e. covers mouth, nose and chin)
- Compliance (this slide) = Wearing mask correctly
- Surveys are completed during day time
- About 97% of customers complied with mask rules
- There is variation between locations, and mode

Location	Date	Total Observations	Correct Usage %	Incorrect Usage %	Mode
Sheppard Stn	28-Dec-20	809	94%	6%	Bus
Pape Stn	30-Dec-20	1,454	94%	6%	Bus
Broadview Stn	31-Dec-20	2,280	97%	3%	Subway
<b>Total</b>		<b>4,543</b>	<b>95%</b>	<b>5%</b>	

Period	Total Observations	Correct Usage %	Incorrect Usage %
AM (6-9am)	0	N/A	N/A
Midday (9am-3pm)	2,064	96%	4%
PM (3-7pm)	2,479	95%	5%
Early Evening (7-10pm)	0	N/A	N/A

Mode	Total Observations	Mask %	No Mask %
Subway	2,280	97%	3%
Bus	2,263	94%	6%

## Mask adoption

- Adoption (this slide) = Wearing mask (correctly or not correctly)
- **99%** of customers are wearing a mask
- Surveys are completed during day time
- There is little variation between locations, time of day and mode

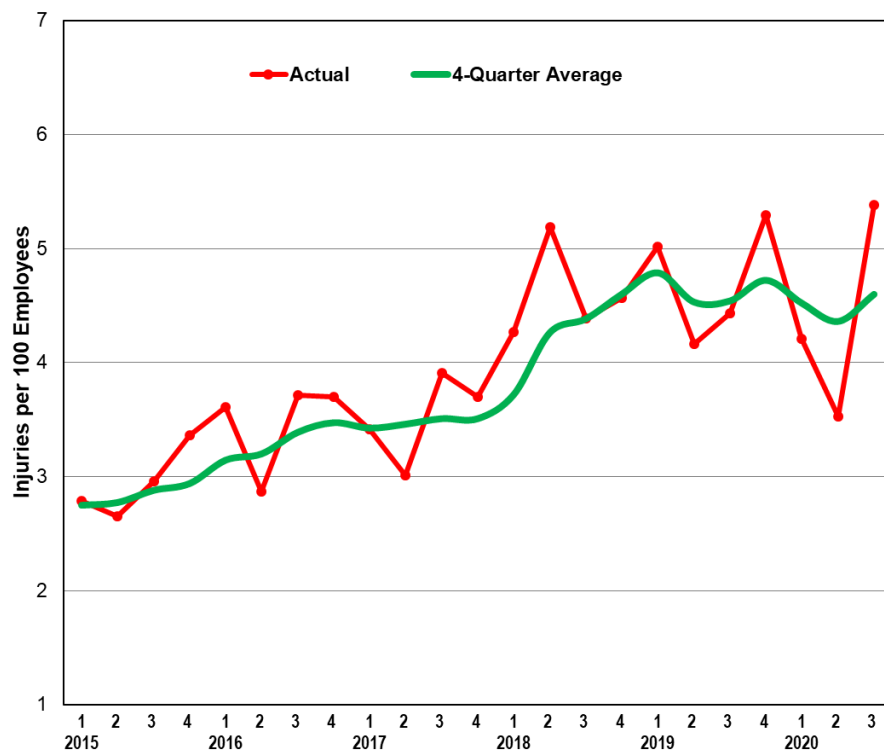
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<b>Total</b>		<b>4,543</b>	<b>99%</b>	<b>1%</b>	

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Mode	Total Observations	Mask %	No Mask %
Subway	2,280	99%	1%
Bus	2,263	98%	2%

# Safety and security

## Lost-time injuries rate (LTIR)



### Definition

Number of lost-time injuries reported per 100 employees.

### Contact

Betty Hasserjian,  
Chief Safety Officer (Acting)

### Results

The LTIR in Q3 2020 was 5.4 injuries per 100 employees — an increase from Q2 (3.5) and the same time last year (4.4).

### Analysis

The LTIR in Q3 was 17% higher than the four-quarter average. There has been an upward trend in the LTIR since 2015.

### Action plan

Musculoskeletal/ergonomic type injuries (e.g. overexertion, reach/bend/twist, repetition) continue to account for 23% of all lost-time injuries, representing the highest injury event type since 2014. The Ergonomic Musculoskeletal Disorder Prevention Program, currently being implemented, focuses on

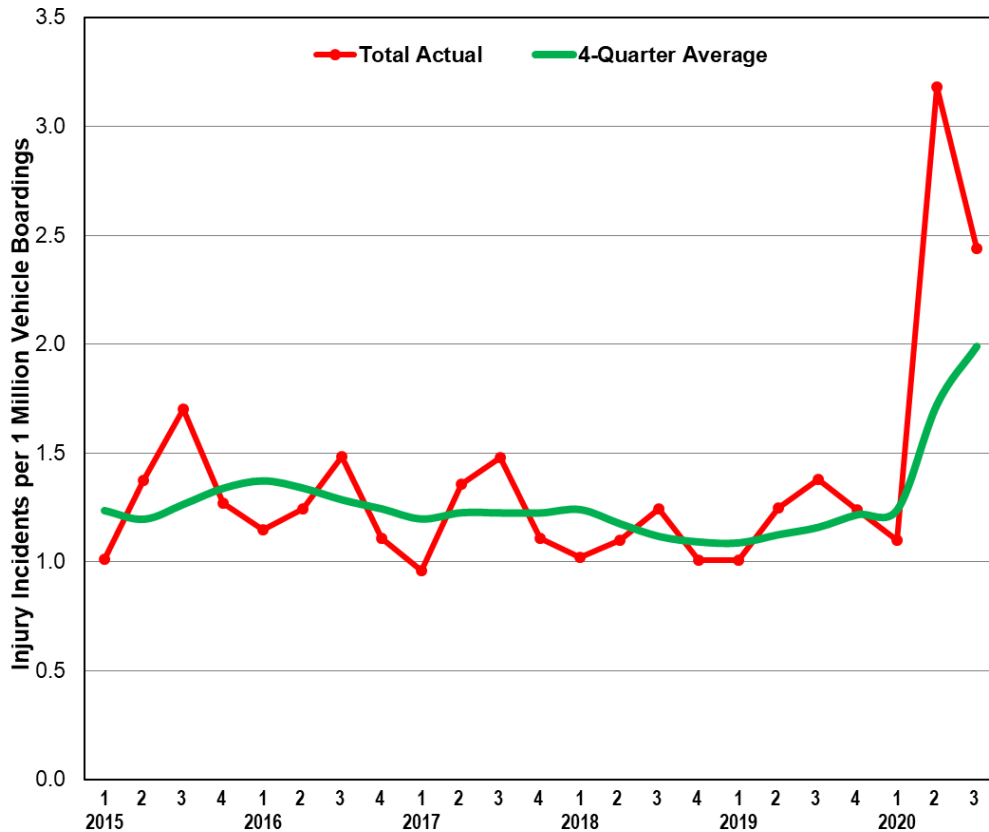
preventing such injuries and resolving ergonomic concerns. Specific training modules for high risk groups (e.g. Elevating Devices, Wheel-Trans Operators, and Track Maintenance) have been developed. The train-the-trainer sessions have been deferred to winter 2021 due to the ongoing global pandemic.

Acute Emotional Event injuries account for 17% of all lost-time injuries and represent the second highest injury event type.

**Note:** *In January 2018, under the Workplace Safety and Insurance Board Act, the Province introduced two legislative changes: 1) The new policy on Chronic Mental Stress allows for compensation due to work-related stressors like bullying or harassment; 2) The policy on Traumatic Mental Stress is revised to broaden the spectrum of psychological claims. These changes have created an opportunity for an increase in the reporting of claims related to emotional trauma injuries.*

**Note:** *Q4 2020 data will be available in the March 2021 CEO's Report.*

## Customer injury incidents rate (CIIR)



### Definition

Number of customer injuries per one million boardings.

### Contact

Betty Hasserjian,  
Chief Safety Officer (Acting)

## Results

The CIIR in Q3 2020 was 2.44 injury incidents per one million vehicle boardings — a decrease from Q2 (3.2) and an increase from the same time last year (1.4).

## Analysis

The CIIR in Q3 was 23% higher than the four-quarter average. The four-quarter average line shows a statistically significant upward trend in the CIIR. The overall increase in the CIIR in 2020 was mainly due to the significant decrease in the overall TTC ridership as a result of the COVID-19 pandemic and state-of-emergency declaration.

The decrease in the CIIR in Q3 compared to Q2, was partly due to the small increase in ridership in the summer compared to spring 2020.

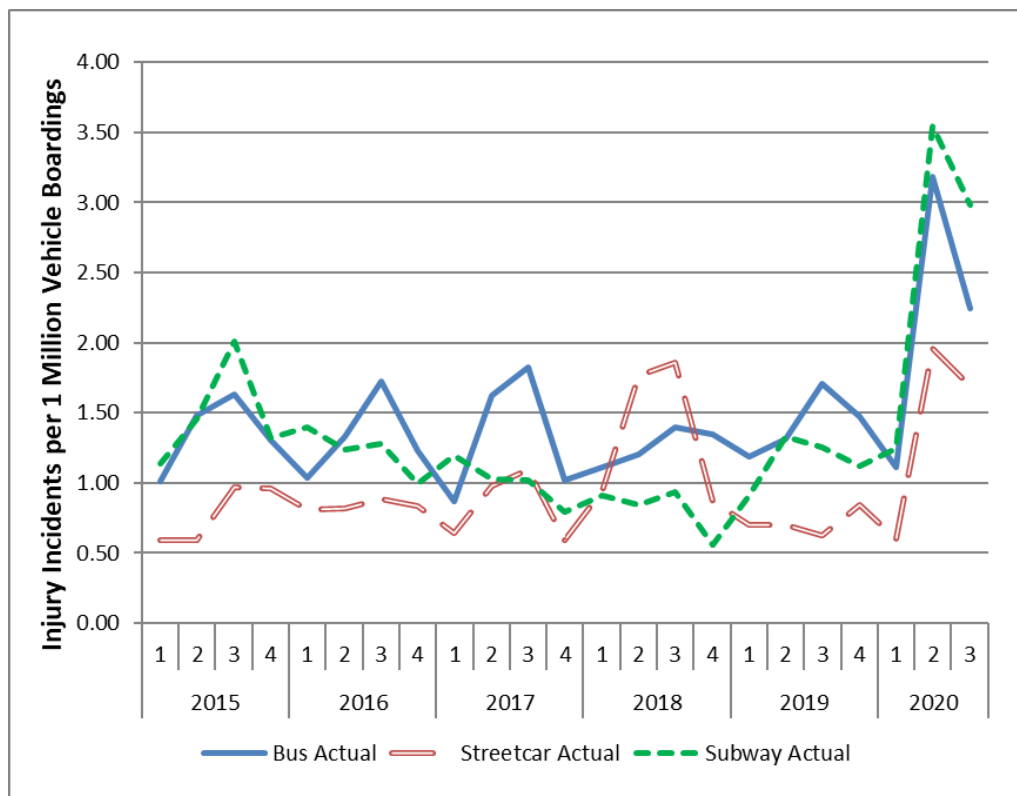
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## Action plan

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We will continue to monitor the CIIR and existing customer safety initiatives.

**Note:** Q4 2020 data will be available in the March 2021 CEO's Report.





## Regulatory compliance

At the May 29, 2019 Audit and Risk Management Committee meeting, a commitment was made to report to the Board on compliance to Safety, Health and Environment regulatory orders and to provide assurance that Commissioners have discharged their legal responsibilities. The table entitled *Order compliance* summarizes the number of regulatory orders issued from January 1 to October 3, 2020 and their status.

**Note:** Q4 2020 data will be available in the March 2021 CEO's Report.

### Contact

Betty Hasserjian,  
Chief Safety Officer (Acting)

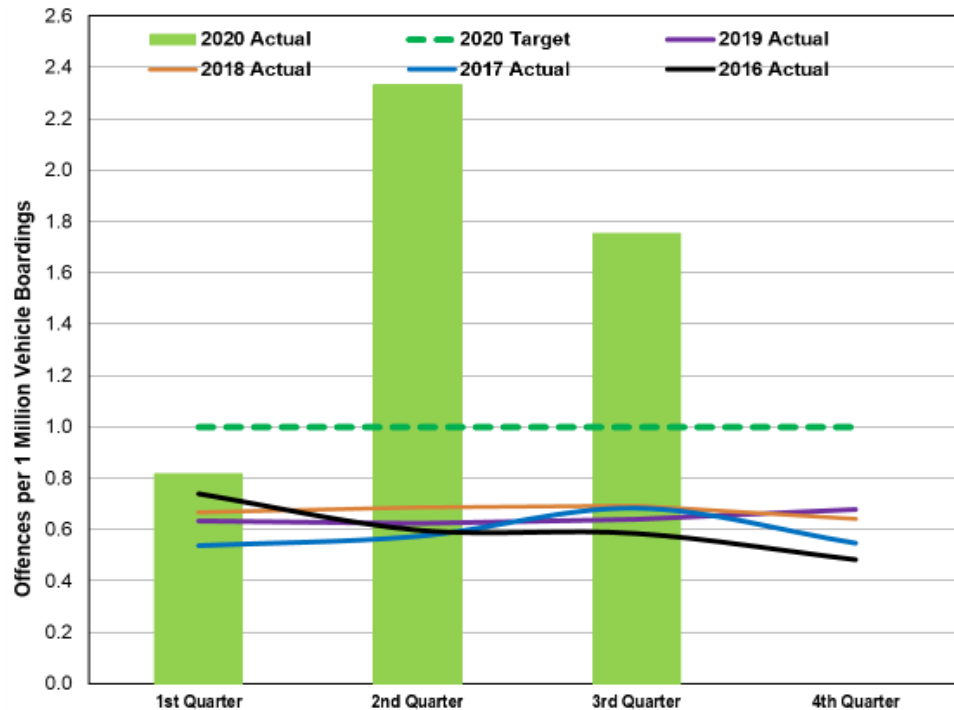
## Order compliance

Type	Number of Orders Issued		Status
	Requirement Orders <sup>1</sup>	Non-compliance Orders <sup>2</sup>	
Ministry of Labour Orders	4	7	Compliance Achieved
Ministry of the Environment, Conservation and Parks Orders	0	0	Not Applicable
Technical Standards and Safety Authority Orders	0	0	Not Applicable
City of Toronto - Notice of Violation	0	0	Not Applicable
Toronto Fire Services Code Violations	17	92	Compliance Achieved

<sup>1</sup> Orders issued to provide documentation/information.

<sup>2</sup> Orders issued to remedy contraventions of the Occupational Health and Safety Act or regulations, Environmental Protection Act, City of Toronto Sewers By-Law and Ontario Fire Code.

## Offences against customers



### Definition

Number of offences against customers per one million vehicle boardings.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

In Q3, the number of offences against customers per one million vehicle boardings was 1.75. This is a 25% decrease from last quarter and a 174% increase from the same time last year.

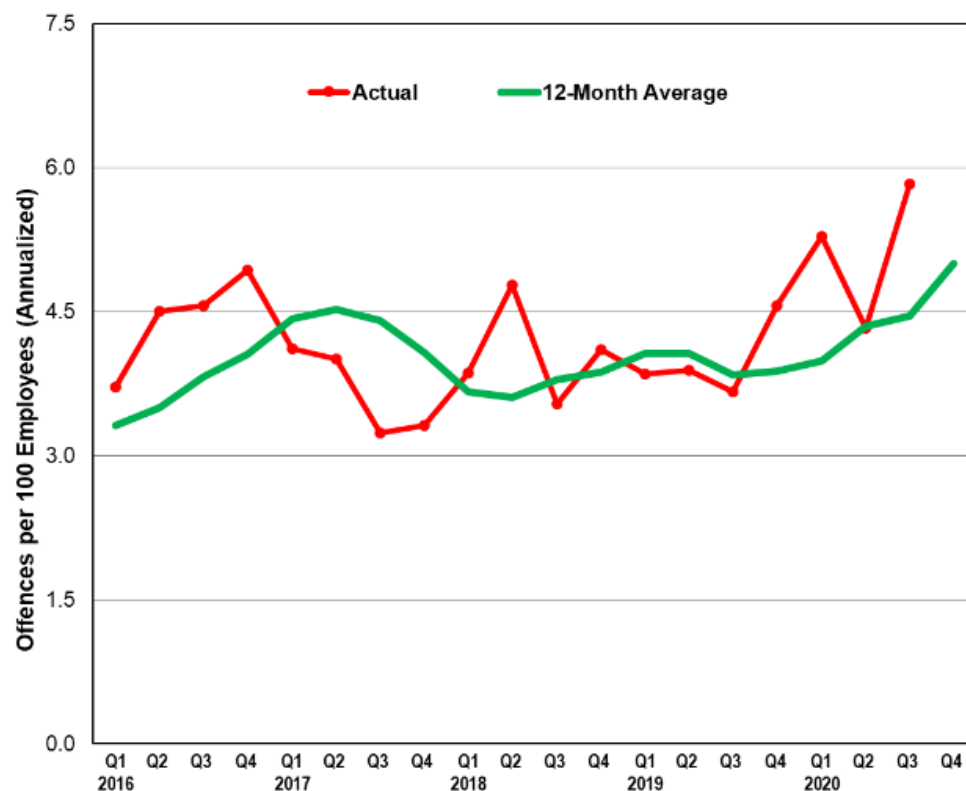
### Analysis

The decrease in this rate is due to increased ridership in Q3, compared to the pandemic low point of ridership in Q2. Overall, there was an increase in the number of offences compared to the previous quarter — 156 and 107 offences, respectively. There was an increase in the number of assaults and sexual assaults, along with an increase in the other offences, such as threats, harassment, indecent exposure and potential sexual offenders.

### Action plan

We continue to regularly monitor offences and allocate Transit Special Constables across the network to provide support in the way of special details and initiatives that assist with ongoing and emerging issues. Additionally, a new class of Special Constables that began training in August 2020 were deployed with their coach officers on October 25. The next class of 20 Special Constables started training in October.

## Offences against staff



### Definition

Number of offences per 100 employees.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

In Q3, the number of offences against staff increased to 5.83 offences per 100 employees. This is a 35% increase from last

quarter and a 59% increase from the same time last year.

### Analysis

There was an overall increase in offences against staff in Q3 compared to Q2 — 210 offences and 166 offences, respectively. This increase was partially driven by employee assaults on buses, likely due to increased ridership numbers as COVID-19 restrictions were lifted.

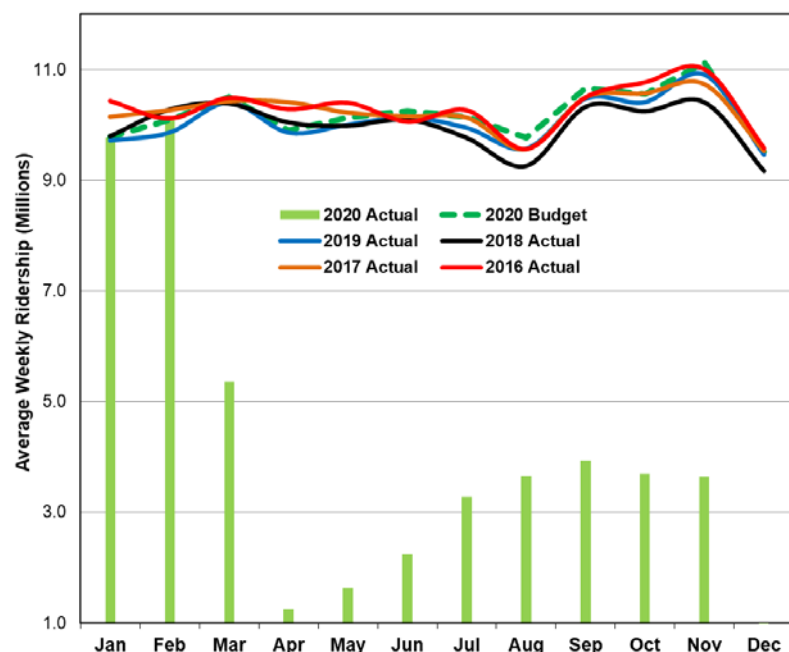
### Action plan

We continue to regularly monitor offences and allocate Transit Special Constables across the network to provide support in the way of special details and initiatives that assist with ongoing and emerging issues.

Additionally, a new class of Special Constables that began training in August 2020 were deployed with their coach officers on October 25. The next class of 20 Special Constables started training in October.

# Ridership

## Ridership



### Definition

Average number of journeys per week, including paid and free journeys (e.g. two-hour transfers and children 12 and under). A journey

with transfers is counted as one journey. The total is derived from cash, tickets and token counts, PRESTO data, diary studies and ridership analytics.

### Contact

Josie La Vita,  
Chief Financial Officer

### Results

Period 11 (November 1 to November 28, 2020) revenue ridership totalled 14.584 million or 3.646 million passengers per week. This represents a 1.1% decrease from period 10 (3.688 million passengers per week). Ridership was 29.908 million or 67.2% below budget and 29.029 million or 66.6% below the comparable period in 2019.

Year-to-date (periods 1-11) revenue ridership totalled 211.329 million, which was 277.335 million or 56.8% below budget and 270.129 million or 56.1% below the comparable period in 2019.

Year-to-date ridership now includes adjustments for 5.758 million rides lost in March and 1.311 million in

April due to reduced monthly pass travel.

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## Analysis

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Toronto entered modified Stage 2 of the Province's reopening on October 10 and subsequently entered grey zone lockdown on November 23. Weekly ridership averaged at 3.8 million at the beginning of November and dropped to 3.4 million at the end of November during grey zone lockdown. Weekly ridership is expected to retract further in December as the city of Toronto stays in lockdown.

Period 11 ridership is 66.6% below 2019 results. This represents a 2.0% decline over Period 10, which was 64.6% below 2019 ridership levels. The decline is partially due to increased COVID-19 restrictions at the end of the period.

Ridership is not expected to rise as the city remains in a state of emergency. Even after the emergency measures are lifted, it is expected that ridership will take time to recover to its pre COVID-19 levels.

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## Action plan

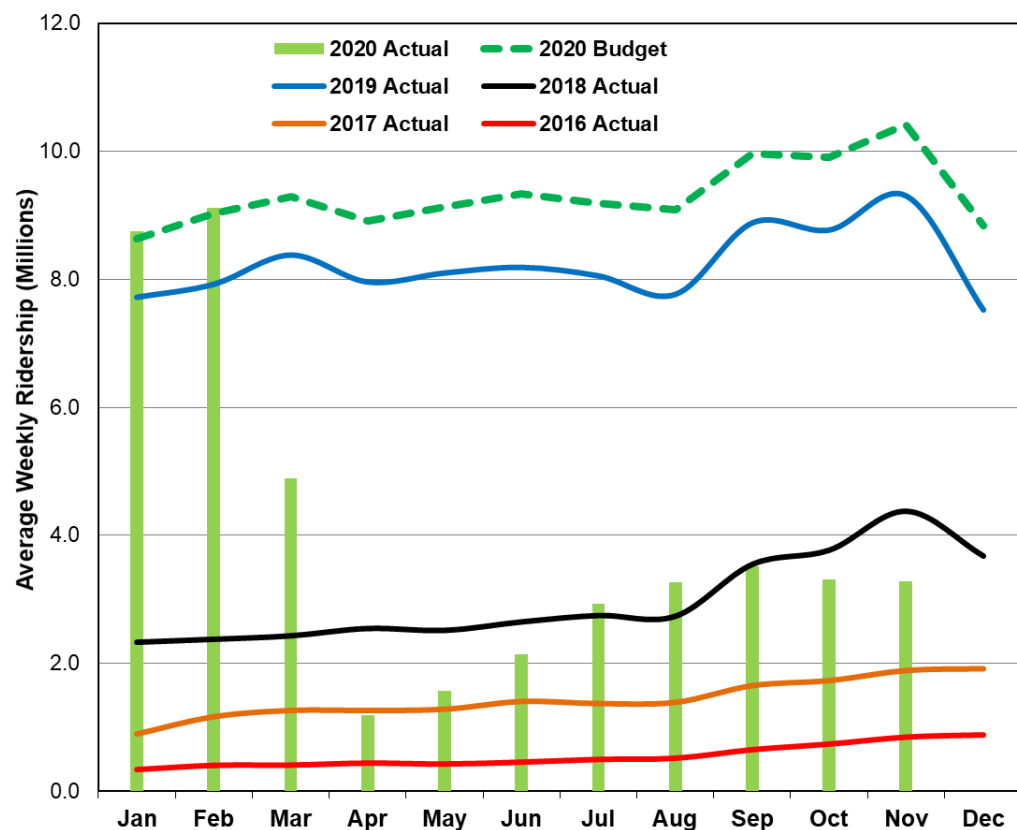
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In January, we are continuing to operate the demand-responsive service plan as outlined in the 2021 Annual Service Plan (ASP) approved by the TTC Board in December. Bus service is scheduled at 100%, streetcar at 83% and subway at 86% of pre-COVID levels. Overall, the TTC is operating 97% of pre-COVID levels.

The ASP includes the restoration of bus service comprising of most express routes and the continued provision of demand-responsive buses to deploy where additional capacity is required. Flexible buses will be used on high-demand routes and in specific high-demand cases. For example, flexible buses are being used to serve a new Amazon Fulfillment Centre in Scarborough where 1,600 essential workers are employed. The flexible buses provide additional capacity over and above regular scheduled service during a shift change when demand peaks.

We will continue to monitor ridership and adjust service to match capacity with demand.

## PRESTO ridership



### Definition

Average number of journeys per week using PRESTO fare media, including PRESTO taps and PRESTO pass rides. PRESTO ridership is included in TTC ridership totals.

### Contact

Josie La Vita,  
Chief Financial Officer

## Results

Period 11 (November 1 to November 28, 2020) PRESTO ridership totalled 13.133 million or 3.283 million passengers per week. This represents a 1.0% decrease from Period 10 (3.316 million passengers per week). PRESTO ridership was 28.513 million or 68.5% below budget and 24.076 million or 64.7% below the comparable period in 2019.

Year-to-date (periods 1-11) PRESTO ridership totalled 191.431 million. This is 253.588 million or 57.0% below budget and 202.785 million or 51.4% below the comparable period in 2019.

Year-to-date ridership now includes adjustments for 5.293 million rides lost in March and 1.311 million in April due to reduced monthly pass travel.

## Analysis

The PRESTO adoption rate for period 11 increased slightly to 90.1% from 89.9% in Period 10. The rate is expected to stay at the current level

as outstanding tickets and tokens continue to be used.

51,394 monthly passes were sold for December, a decrease of 6,908 over November. The largest decrease was in the adult and post secondary group (6,408), followed by seniors (303) and youth (197).

As COVID-19 cases continue to rise, period pass sales are not expected to increase as uncertainty of travel restriction increases.

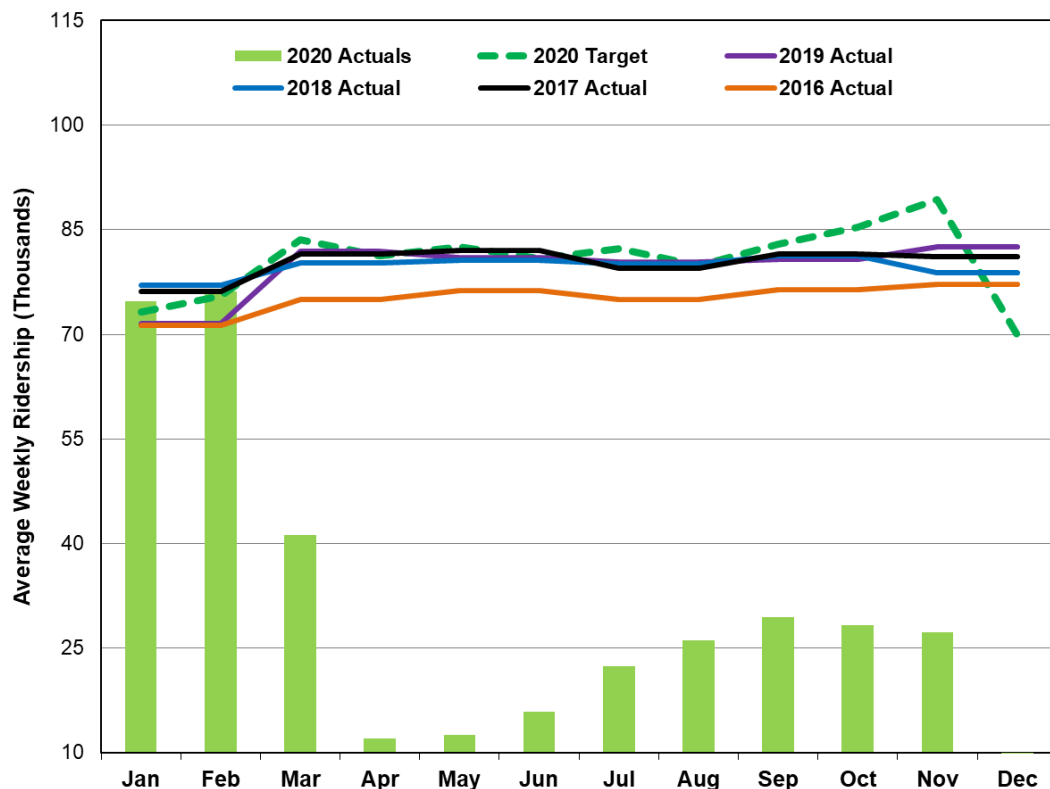
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### **Action plan**

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PRESTO adoption is expected to increase over time as legacy media is phased out, more PRESTO fare options are made available and marketing initiatives encourage further PRESTO adoption.

## Wheel-Trans ridership



### Definition

Average number of journeys per week using both Wheel-Trans dedicated services and contracted services. Wheel-Trans ridership is not included in the TTC ridership totals.

### Contact

James Ross,  
Chief Operating Officer

## Results

Ridership in Period 11 (November 1 to November 28, 2020) was 109,239 or 27,310 passengers per week. This figure was 69.4% lower than the budgeted 89,340 customers per week.

In terms of year-over-year growth, the Period 11 year-to-date (periods 1-11) ridership is 58.0% lower compared to the same period in 2019, and is currently 58.9% (2.28 million) under the year-to-date 2020 budget.

## Analysis

Wheel-Trans has experienced a decrease in ridership in response to the City of Toronto pandemic protocols implemented on November 14 with Red Control restrictions. Also, as of November 23, further measures were put in place requesting trips outside the home to be for essential reasons only. Many non-essential businesses were closed throughout the city. Many day programs remain closed. Most trip requests by customers are for



medical reasons as well as for essential goods and services. Customers have been self-monitoring and reducing trip requests based on these restrictions. Wheel-Trans continues to ensure trips are provided to customers in a safe, secure manner.

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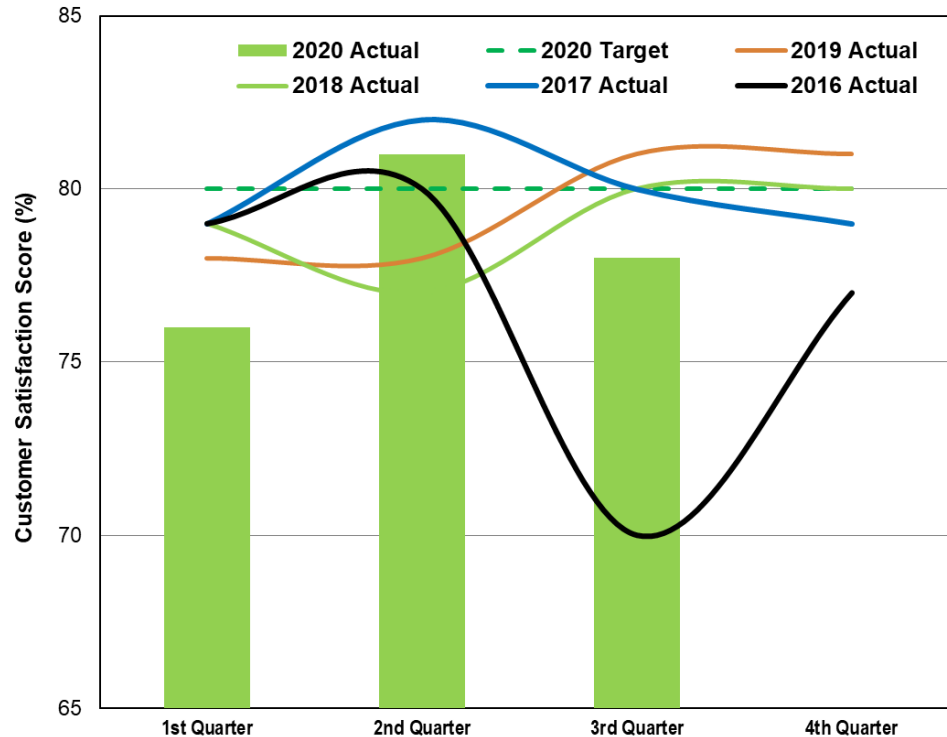
### **Action plan**

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Trip demand will continue to be monitored and current safety measures will remain in effect, including PPE, extra cleaning of vehicles and solo-rides for customers. Service levels will continue to be monitored with adjustments made when required.

# Customer experience

## Customer satisfaction



### Definition

Overall satisfaction: How satisfied were you overall with the quality of the TTC's service on the last TTC trip you took?

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

## Results

In Q3 2020, 78% of customers reported high levels of satisfaction with TTC services. This represents a decrease from last quarter (81%) and the same time last year (81%).

## Analysis

Overall satisfaction peaked in August (84%) and dropped significantly in September (74%), diverging from 2019 scores. The decrease was largely driven by bus riders, who reported lower satisfaction with trip duration, the helpfulness of staff and levels of crowding.

Perceptions of safety on the TTC also fell significantly in September compared to previous months, particularly in customer confidence in their ability to physically distance on vehicles and in stations.

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## Action plan

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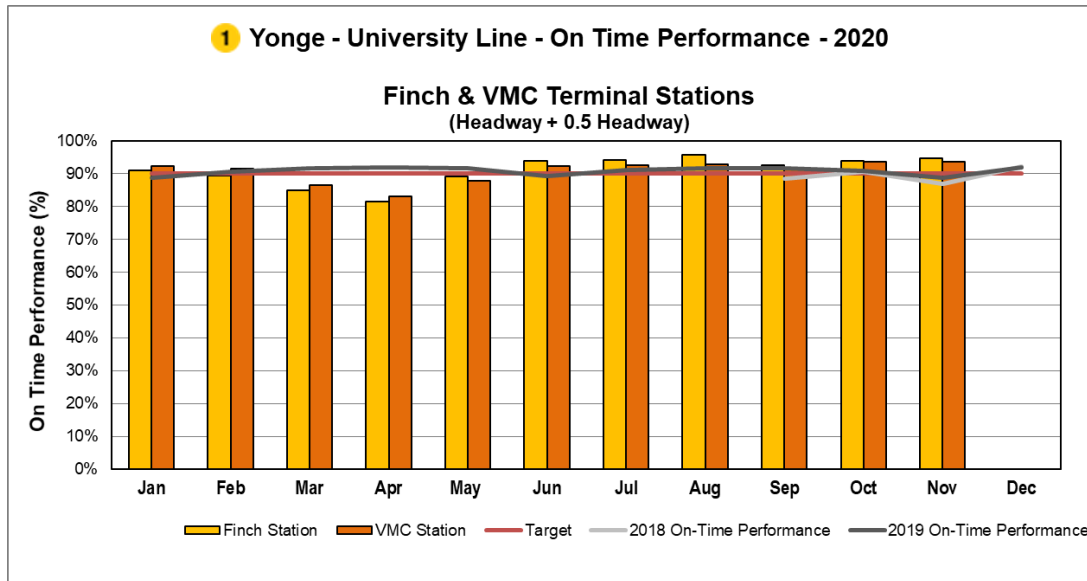
We continue to monitor higher volume routes, particularly at rush hour, and direct additional buses where they are needed most. We are also conducting regular audits of mask use as physical distancing has become more challenging. As of November 20, 99% of customers were observed to be wearing a mask.

Since late March, we have been conducting customer surveys focused specifically on the pandemic. Results have helped inform safety measures, communication efforts and ridership forecasting.

**Note:** Q4 2020 data will be available in the March 2021 CEO's Report.

## Subway services

### Line 1 (Finch and Vaughan Metropolitan Centre terminal stations): On-time performance (OTP)



#### Definition

OTP measures the headway adherence of all service trains at end terminals. Data represents Monday-to-Friday service between 6 a.m. and 2 a.m. To be on time a train must be within 1.5 times of its scheduled headway.

#### Contact

James Ross,  
Chief Operating Officer

## Results

This line improved in November to 94.2%, up from the 93.7% we recorded in October. Our target of 90% has been met for the last six months.

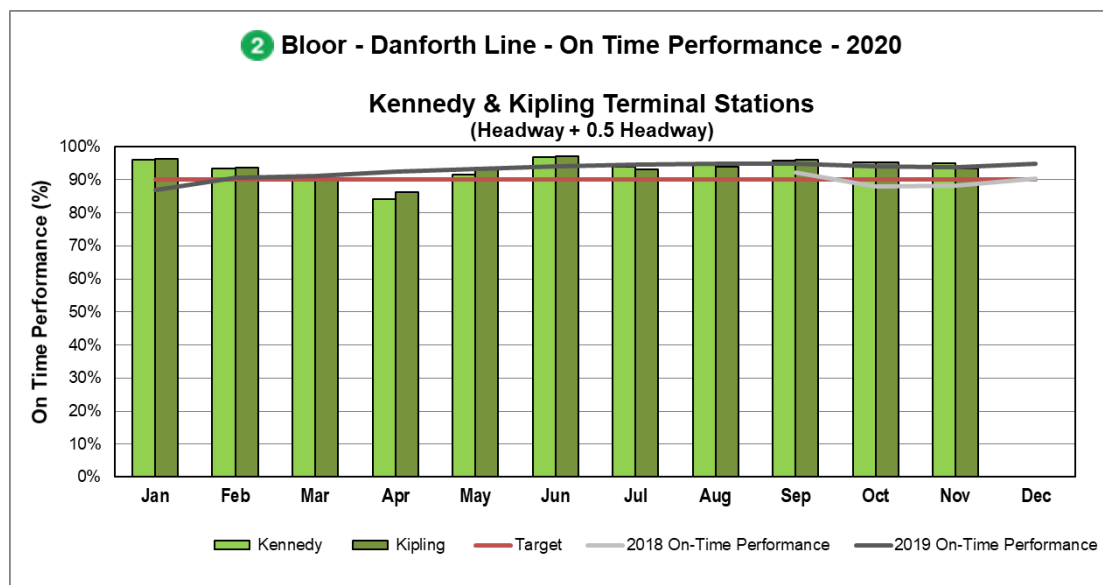
## Analysis

On November 21, we successfully commissioned Automatic Train Control (ATC) on this line from Queen Station to Rosedale Station. ATC is now in operation from Vaughan Metro Centre Station to Rosedale Station. This will not only allow for more efficient travel, but will also reduce or eliminate many common signal failures — reducing or eliminating many delays.

## Action plan

We do not anticipate any significant changes moving forward, but we are constantly monitoring ridership and service levels and making adjustments where necessary to ensure punctual service levels are delivered.

## Line 2 (Kennedy and Kipling terminal stations): On-time performance (OTP)



### Definition

OTP measures the headway adherence of all service trains at end terminals. Data represents Monday-to-Friday service between 6 a.m. and 2 a.m. To be on time a train must be within 1.5 times of its scheduled headway.

### Contact

James Ross,  
Chief Operating Officer

### Results

This line improved in November to 94.2%, down slightly from the 95.4% we recorded in October.

Our target of 90% was met.

### Analysis

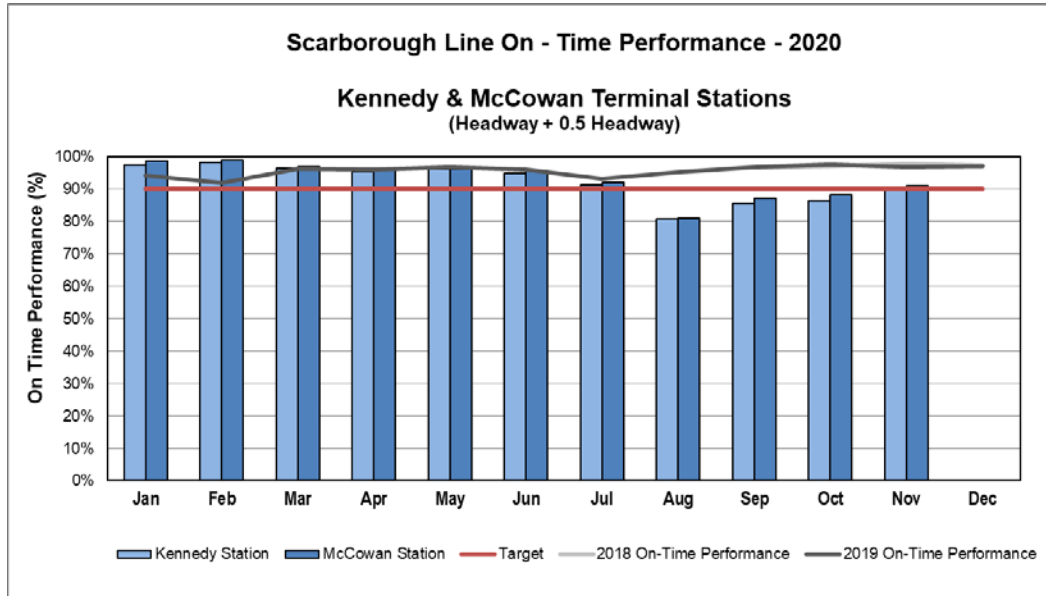
Year-to-date, we have had 4.7% fewer total delay minutes than the same time period in 2019. Most of the general delay categories have improved, except staff related incidents that increased significantly during the first months of the pandemic when we did not have enough available operators.

Operator attendance has since improved, and our service levels have been adjusted to our ridership levels.

### Action plan

We do not anticipate any significant changes moving forward, but we are constantly monitoring ridership and service levels and making adjustments where necessary to ensure punctual service levels are delivered.

## Line 3 (Kennedy and McCowan terminal stations): On-time performance (OTP)



### Definition

OTP measures the headway adherence of all service trains at end terminals. Data represents Monday-to-Friday service between 6 a.m. and 2 a.m. To be on time a train must be within 1.5 times of its scheduled headway.

### Contact

James Ross,  
Chief Operating Officer

### Results

In November OTP, was 90.4%, an improvement from the 87.4% recorded in October and the first time we've been able to meet our target since July.

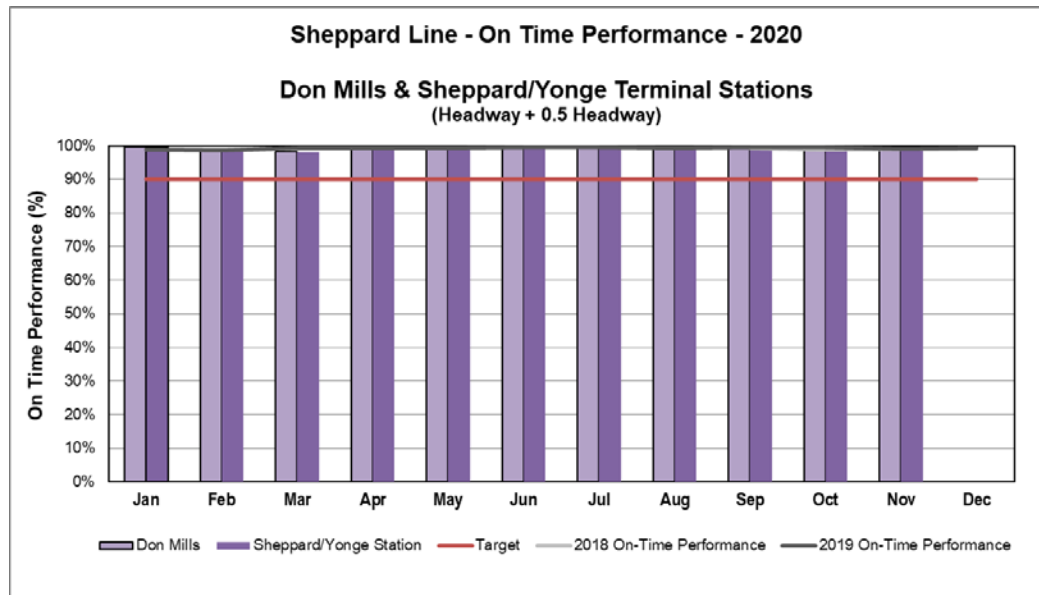
### Analysis

In 2020, year-to-date we have recorded 10.9% fewer delay minutes when compared to the same time in 2019, mainly due to the decrease in ridership and improved weather.

### Action plan

As we have not yet been able to return to five trains in peak periods a review of our schedule is being initiated to align schedule expectations with what can be delivered.

## Line 4 (Don Mills and Sheppard-Yonge terminal stations): On-time performance (OTP)



### Definition

OTP measures the headway adherence of all service trains at end terminals. Data represents Monday-to-Friday service between 6 a.m. and 2 a.m. To be on time a train must be within 1.5 times of its scheduled headway.

### Contact

James Ross,  
 Chief Operating Officer

### Results

OTP remained stable in November (99.2%), slightly higher than October (99.0%).

Our target of 90% was met.

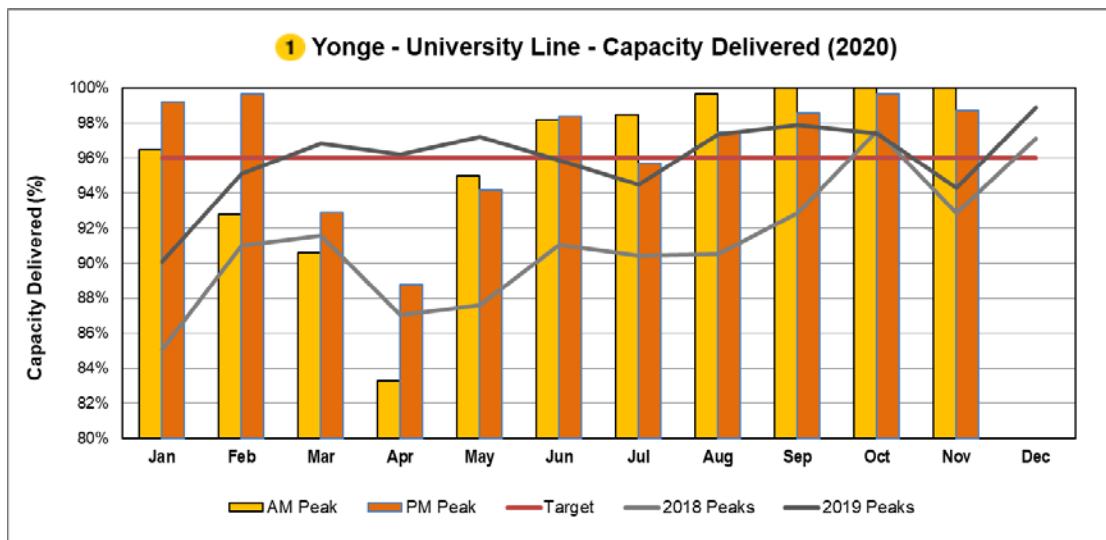
### Analysis

Line 4 ran as scheduled without the challenges we observed on our other lines.

### Action plan

There are no anticipated changes for this line.

## Line 1: Capacity

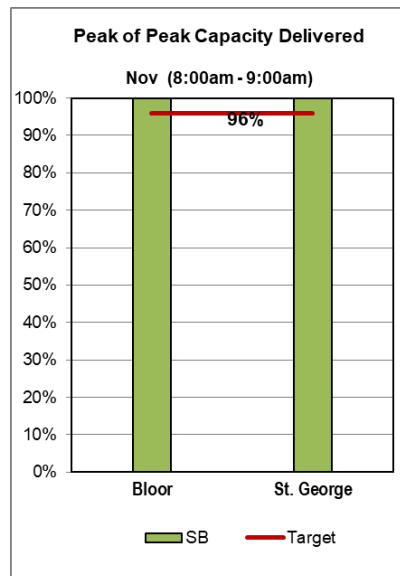


### Definition

Total number of trains that travelled through 12 key sampling points during a.m. and p.m. peak as a percentage of trains scheduled. Data is based on Monday-to-Friday service. Peak periods: 6 a.m. to 9 a.m. and 3 p.m. to 7 p.m.

### Contact

James Ross,  
Chief Operating Officer



## Results

Despite a drop in the p.m. peak performance, the strong a.m. peak resulted in a combined average of 99.8% for November, a significant improvement over November 2019 (94.3%).

Peak-of-the-peak capacity delivered remained at 100% at both Bloor and St George stations.

Our target for this measure is 96% and was met.

## Analysis

On November 21, we successfully commissioned Automatic Train Control (ATC) on this line from Queen Station to Rosedale Station, and ATC is now in operation from Vaughan Metropolitan Centre Station to Rosedale Station. This will not only allow for more efficient travel, but will also reduce or eliminate many common signal failures.

With decreased ridership, particularly in the a.m. peak, we continue to see train throughput at Bloor Station and



St George Station that exceeds target most mornings.

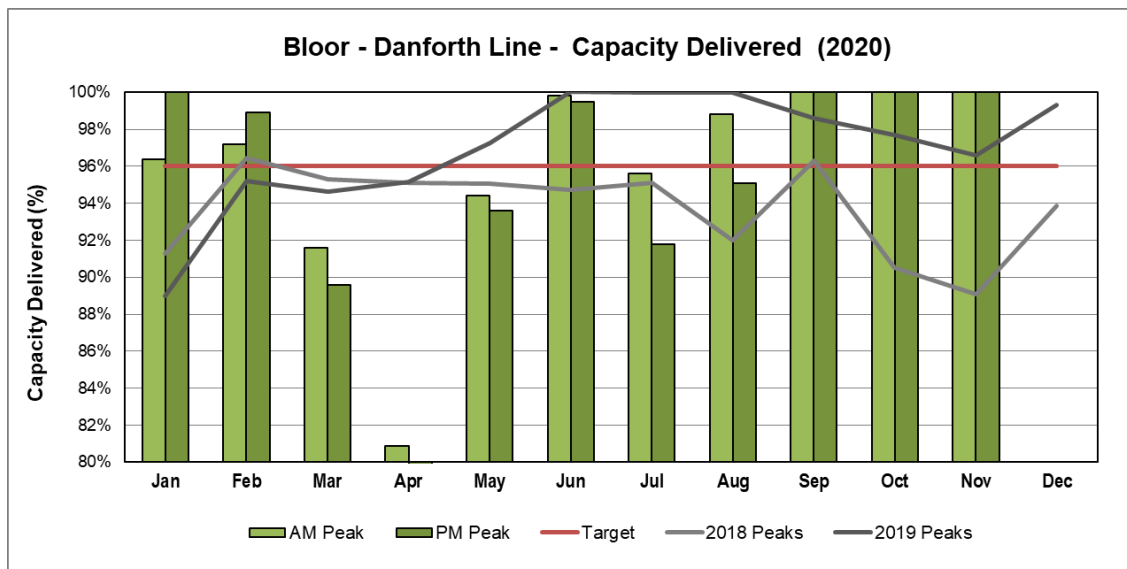
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**Action plan**

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We do not anticipate any significant changes moving forward, but we are constantly monitoring ridership and service levels and making adjustments where necessary to ensure punctual service levels are delivered.

## Line 2: Capacity



### Definition

Total number of trains that travelled through 10 key sampling points during a.m. and p.m. peak as a percentage of trains scheduled. Data based on Monday-to-Friday service. Peak periods: 6 a.m. to 9 a.m. and 3 p.m. to 7 p.m.

Note: Capacity delivered is the actual train count divided by the scheduled train count for each hour at sampled locations. Data is based on weekday service from Monday to Friday.

### Contact

James Ross,  
Chief Operating Officer

### Results

With both a.m. and p.m. peaks at 100% in November, we recorded a combined average of 100% for the third consecutive month, and saw a significant improvement over November 2019 when we recorded 96.6%.

Our target for this measure is 96% and was met.

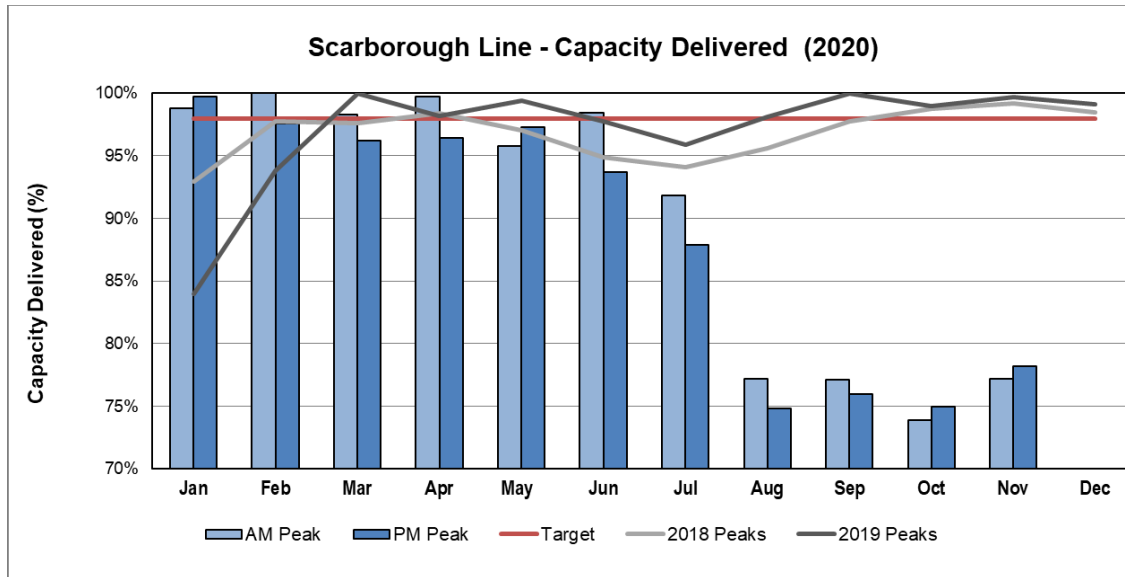
### Analysis

Although usually not required to maintain our capacity, we are continuing to supply two Run-As-Directed trains during peak periods, resulting in our very high level of throughput.

### Action plan

We do not anticipate any significant changes moving forward, but we are constantly monitoring ridership and service levels and making adjustments where necessary to ensure punctual service levels are delivered.

## Line 3: Capacity



### Definition

Total number of trains that travelled through two key sampling points during a.m. and p.m. peak as a percentage of trains scheduled. Data is based on Monday to Friday service.

Peak periods: 6 a.m. to 9 a.m. and 3 p.m. to 7 p.m.

### Contact

James Ross,  
Chief Operating Officer

### Results

In November, this metric improved slightly to 78.0%, up from the 74.5% we achieved in October.

Our target of 98% was not met.

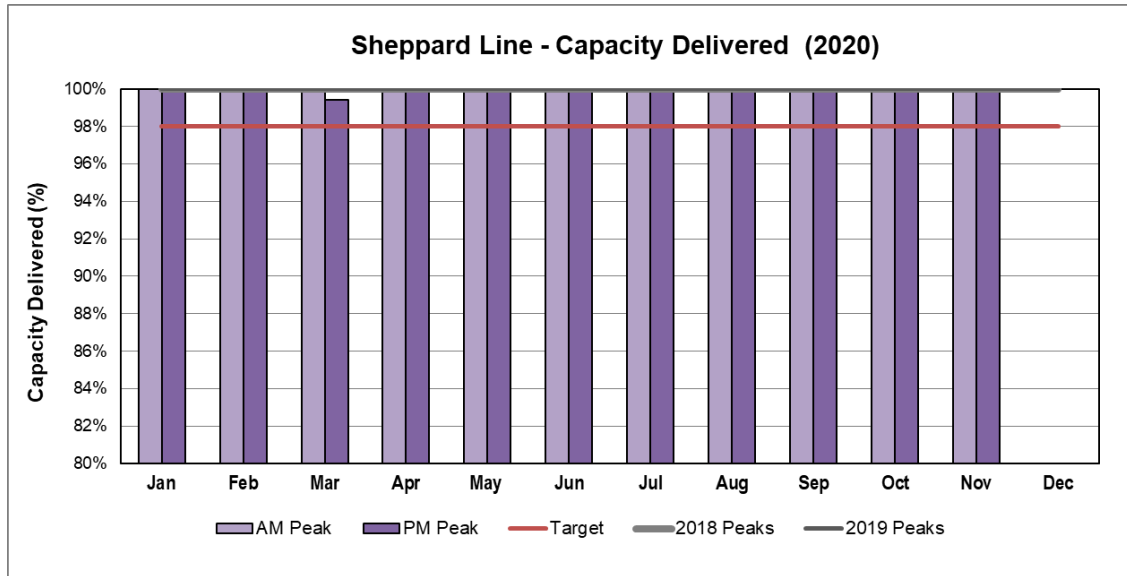
### Analysis

Mechanical issues with our rolling stock continue to impact train availability. We are operating four of the five scheduled trains during most peak periods.

### Action plan

As we have not yet been able to return to five trains in peak periods a review of our schedule is being initiated to align schedule expectations with what can be delivered.

## Line 4: Capacity



It is worth noting that in October this line marked four years of safe operation since the implementation of One-Person Train Operation in 2016.

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### Action plan

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There are no anticipated changes planned for this line.

### Definition

Total number of trains that travelled through two key sampling points during a.m. and p.m. peak as a percentage of trains scheduled. Data is based on Monday to Friday service.

Peak periods: 6 a.m. to 9 a.m. and 3 p.m. to 7 p.m.

### Contact

James Ross,  
Chief Operating Officer

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### Results

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This line has remained at 100% since April and easily meets target.

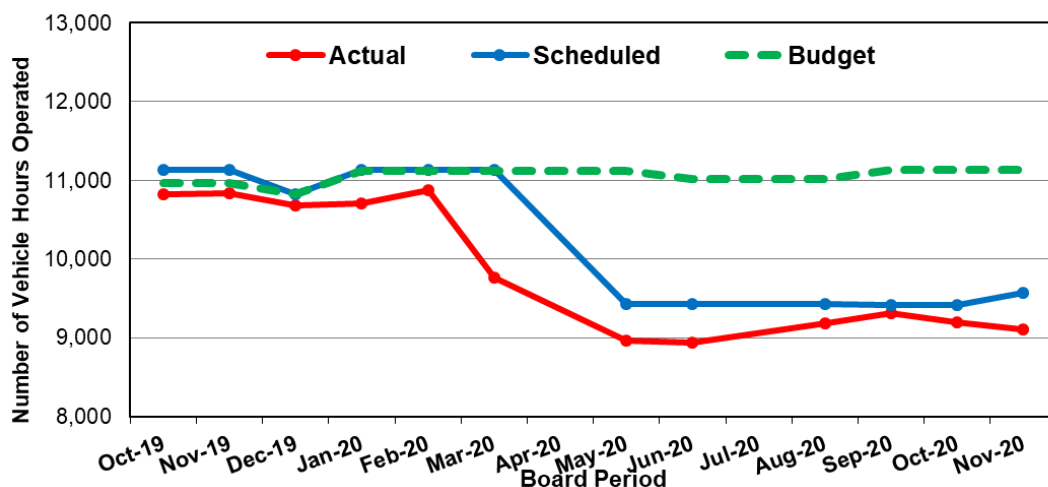
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### Analysis

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This line has not been affected by many of the issues affecting other lines, as reflected in the level of performance.

## Subway: Weekly service hours



### Definition

Calculated duration of time that all revenue trains are in service.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

In the November 2020 Board Period (November 22 – December 19), the TTC planned 86% of regular subway service compared to pre-pandemic service.

The TTC budgeted 11,133 weekly service hours while 9,578 weekly service hours were scheduled to operate, which represents a variance of -14%.

Of the 9,578 weekly service hours scheduled to operate, 9,101 weekly service hours were actually delivered, which represents a variance of -5%.

### Analysis

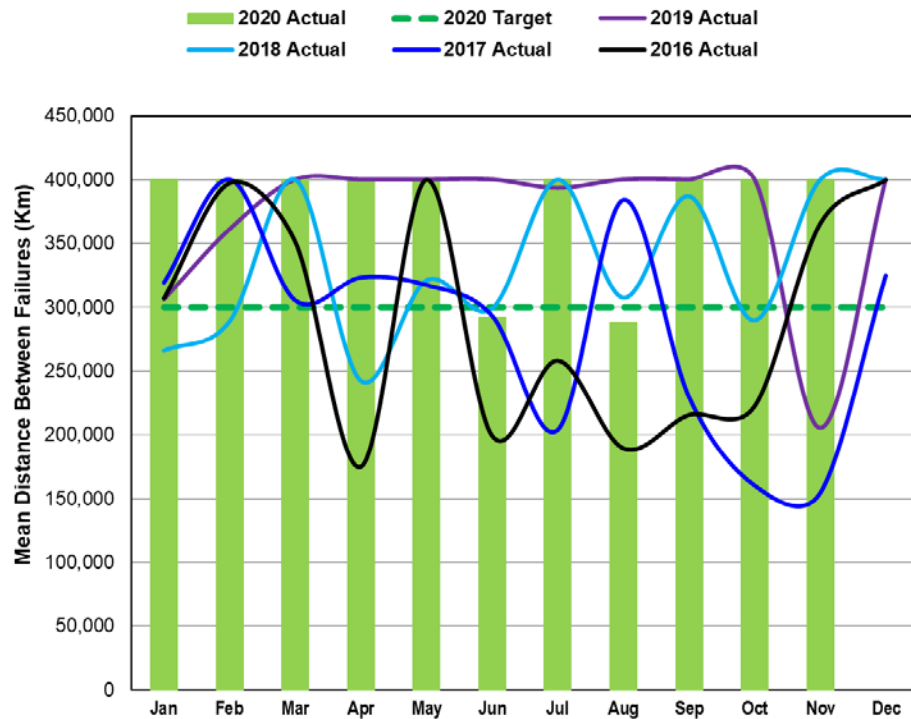
Scheduled service hours are lower than budgeted as a result of the demand-responsive service plan which takes into account lower ridership demand due to the COVID-19 pandemic.

Actual service hours are below the scheduled service hours as a result of the ongoing state-of-good repair program for subway infrastructure, including the 10-day closure that occurred in early December as well as early access and weekend closures.

### Action plan

We will continue to monitor service hours during the pandemic.

## Subway T1 train: Mean distance between failures (MDBF)



### Definition

Total kilometres travelled in month compared to the number of rolling stock equipment incidents resulting in delays of five minutes or more. Includes all seven days of service. T1 trains operate on Line 2.

### Contact

Rich Wong,  
Chief Vehicles Officer

## Results

The T1 fleet achieved a MDBF greater than 400,000 kilometres in November, which is above the target of 300,000 kilometres.

## Analysis

In November, there were five delay incidents greater than or equal to five minutes. The passenger door system had three delay incidents, followed by the low voltage and truck systems each with one delay incident.

The three passenger door-related incidents were due to a faulty door control relay panel (DCRP), and two faulty door master switch panels (DMSP). Root cause for the faulty DCRP is still under investigation. The DCRP has since been replaced and the passenger doors were cycle tested to be working. The two faulty DMSP's root causes are still under investigation. Both DMSPs have been replaced, and the doors were tested to be working properly.

The low voltage incident was related to a faulty battery monitor PCB. The battery monitor PCB has since been replaced, and the car has been

flagged for monitoring for technical staff. The battery monitor PCB had been in service for 7664 days (21 years). The root cause of failure is to be determined by technical staff.

The truck incident was a result of a tripped over-rotation sensor. Root cause has been determined to be poor quality of the maintenance inspection of the component. Technical staff will be performing increased procedure audits of the workforce as a corrective action. The truck over-rotation sensor gap was adjusted by carhouse personnel. The train was tested and returned back into revenue service.

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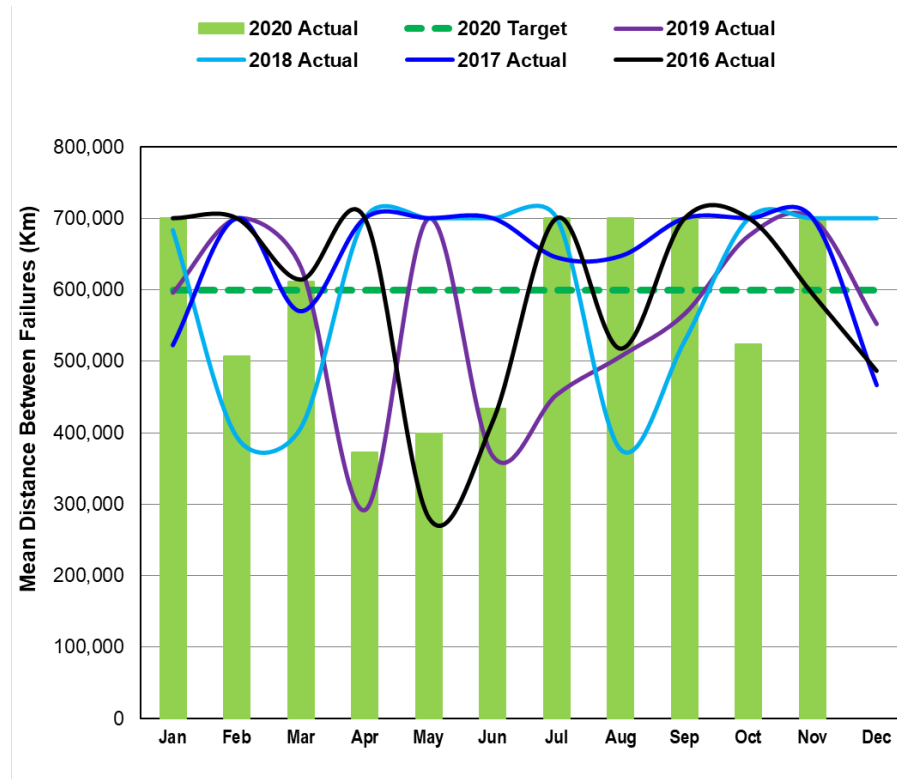
### **Action plan**

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A new 25-year state-of-good-repair scope is currently in development to begin in 2022.

Technical staff will be performing increased procedure audits as a corrective action to address quality of work issues. Technical staff will also continue monitoring and investigating the electronic faults related to the passenger door system.

## Subway TR train: Mean distance between failures (MDBF)



### Definition

Total kilometres travelled in month compared to the number of rolling stock equipment incidents resulting in delays of five minutes or more. Includes all seven days of service. TR trains operate on Line 1 and Line 4.

### Contact

Rich Wong,  
Chief Vehicles Officer

## Results

The TR fleet achieved a MDBF greater than 700,000 kilometres in November, which is above the target of 600,000 kilometres.

## Analysis

In November, there were four delay incidents greater than or equal to five minutes. The passenger door system had two incidents, followed by the propulsion inverter and the cab door system with one delay incident each.

The two passenger door-related incidents were a result of a defective lead screw and a resettable door control relay. The root causes of both passenger door systems are still under investigation. The defective lead screw was replaced and the door rollers were adjusted. The doors were cycle tested with positive results. The door control relay and speed sensor #4 were reset by the line mechanic and resumed revenue service with no further issues detected.

The propulsion inverter incident was due to a defective link voltage sensor. The defective link voltage



sensor has since been replaced. The root cause of failure is still under investigation.

The cab door-related incident was due to a loose upper cab door track. The loose upper cab door track was secured tightly and the cab door was tested to be working properly. The root cause of failure is still under investigation.

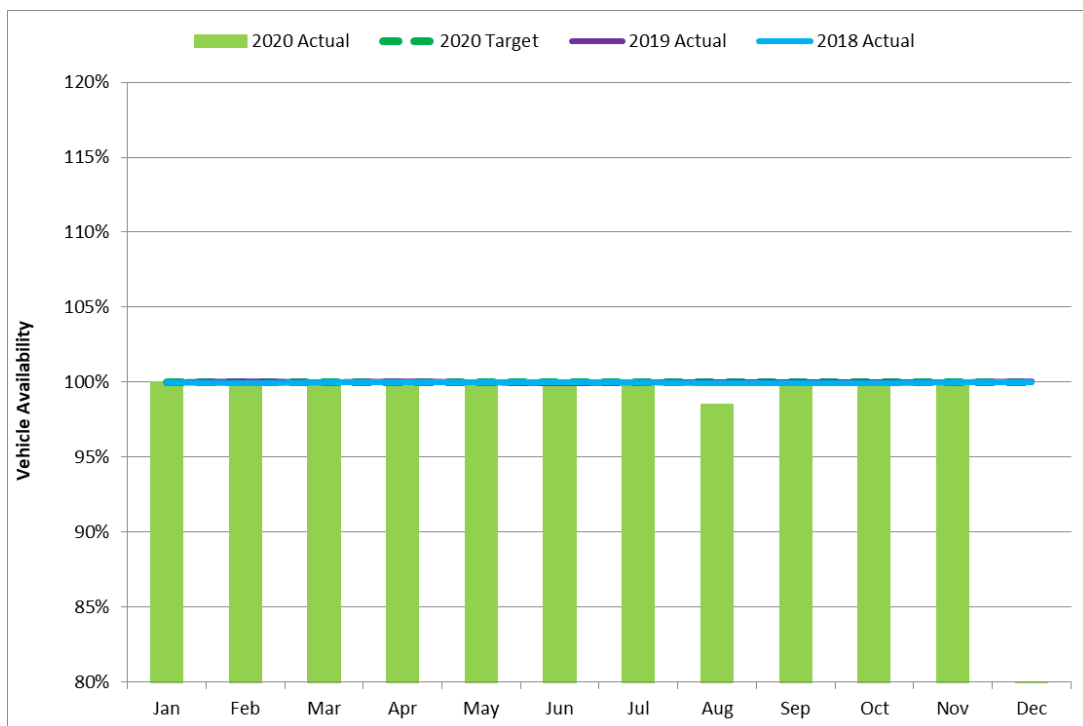
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### **Action plan**

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All incidents have been resolved. All trains returned back into revenue service with no further issues. A TR passenger door lead screw is in scope for state-of-good-repair replacement starting 2022. Technical staff will continue investigating the failures above and will monitor the fleet for negative trends.

## Subway: Service availability



### Definition

Daily average number of trains put into service (including RADs) compared to the number of trains scheduled for the a.m. peak period. Data represents Monday to Friday only. Holidays excluded.

### Contact

Rich Wong,  
Chief Vehicles Officer

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## Results

Vehicle availability in November was 100%.

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## Analysis

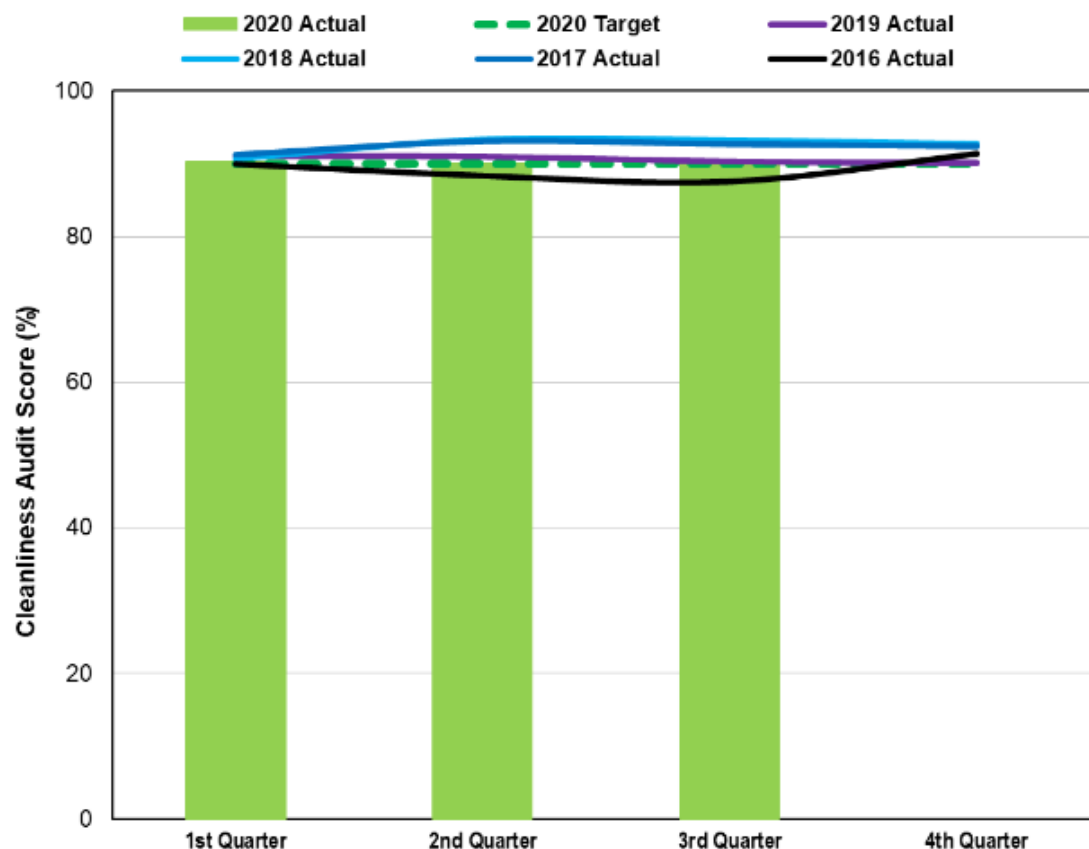
We continue to meet the service requirements, achieving the target of 100% vehicle availability. All vehicles were available for service when required.

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## Action plan

We will continue with the delivery of safe, reliable and clean vehicles to service on all lines.

## Subway: Vehicle cleanliness



### Definition

Average results of third party audit conducted each quarter. Average of “prior” “mid-day” and “end of service” results. Audits conducted weekdays only, excluding holidays.

### Contact

Rich Wong,  
Chief Vehicles Officer

### Results

The average cleanliness rating of 90.1% in Q3 2020 is above the target of 90.0%. We have recorded a score of greater than or equal to 90.0% since Q4 2016.

### Analysis

Areas of strength in vehicle cleanliness across all fleets and lines were the ceilings, etching/scratchitti, graffiti/stickers and mandatory decals. Factors impacting overall cleanliness scores in Q3 2020 were the overall door cleanliness, windows and exterior. Some trash and debris were documented in the mid-day and end-of-day audits at different stations across all lines.

### Action plan

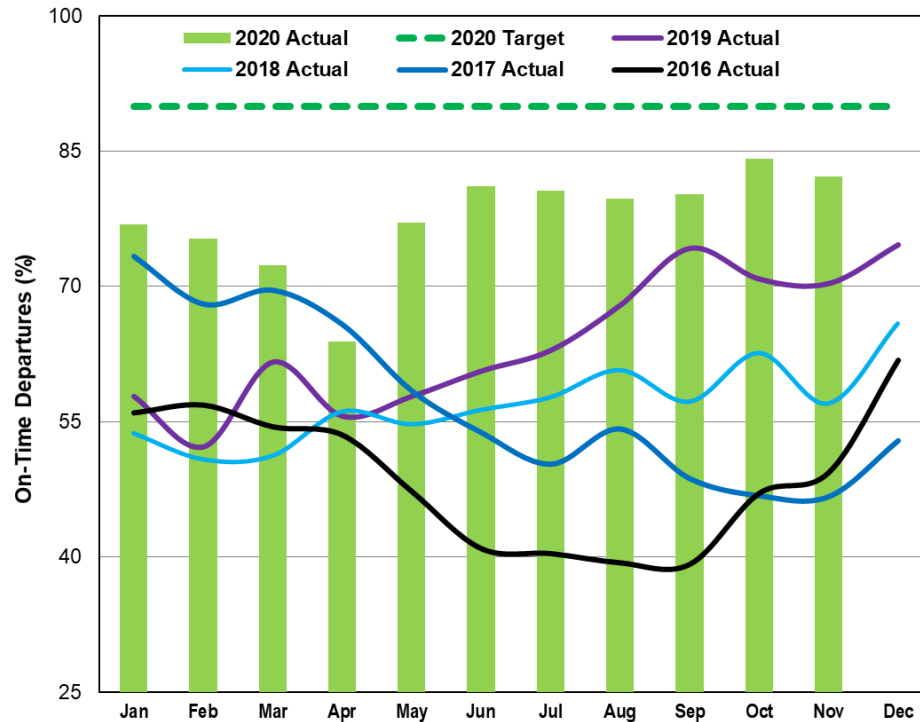
Exterior vehicle washes are being performed on all vehicle fleets. A focused power wash program on the T1 fleet commenced in September. The program will start for the TR fleet in 2021. The floor wash cycle

continues to be addressed once every 14 days.

In response to the COVID-19 pandemic, end terminal cleaning staff have been performing additional disinfection of all high touch points (poles and stanchions) twice a day after rush hour on all revenue vehicles.

## Streetcar services

### Streetcar: On-time performance (OTP)



#### Definition

On-time performance measures vehicle departures from end terminals. Vehicles are considered on time if they depart within 59 seconds earlier or five minutes later

than their scheduled departure time. Includes all seven days of service. Night routes are excluded.

#### Contact

James Ross,  
Chief Operating Officer

#### Results

OTP in November was 82.2%, a decrease compared to October (84.2%), but an increase over the same period in 2019 (70.3%). Our target of 90% was not met.

#### Analysis

Streetcar OTP in November varied considerably through the month, reaching a high of 87.2% on November 10 (Week 46) and a low of 65.2% on November 22 (Week 48). November 22 was the first day of the November Board Period and also a day when a significant amount of snowfall impacted streetcar performance.

The 505 Dundas route performed poorly for much of the month, due to the route being impacted between November 12 and 23 due to track repair work on the west end of Dundas Street and at Dundas and River streets. This work required

diversions around these areas throughout this timeframe, along with full replacement of streetcars by buses on this route for several days in the middle of this work. With this, the performance of this route dropped considerably in November (66.6%) compared to last month (86.0%).

The ongoing 506 Carlton diversion via Bloor Street and Lansdowne Avenue and the construction-related delays related to this routing also negatively impacted performance for the month. This route's performance dropped to 67.6% in November from 75.0% in October.

Lastly, track repairs on St. Clair Avenue near Caledonia Avenue required replacement buses between Gunns and Lansdowne loops for the weekend of November 7/8. This resulted in a high percentage of missed trips on the route for the weekend.

510 Spadina route and early departures on the 509 Harbourfront route. Service levels are also currently under review for upcoming board periods. Any adjustments that are implemented will be monitored from a performance perspective.

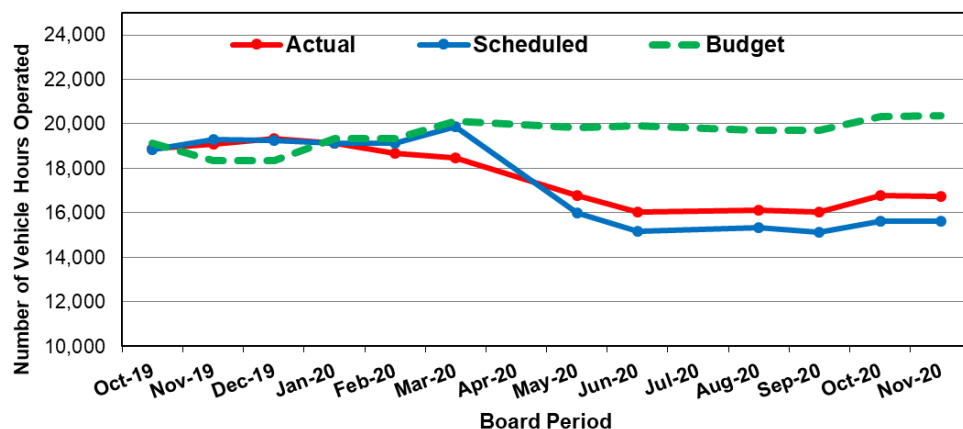
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### **Action plan**

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Reviews are underway to improve the percentage of missed trips on the

## Streetcar: Weekly service hours



### Definition

Service hours are calculated from the time a streetcar leaves the yard to when it returns to the yard. Measured daily.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

In the November 2020 Board Period (November 22 – December 19), the TTC planned 86% of regular streetcar service compared to pre-pandemic service.

When accounting for both regular and construction related service, the TTC budgeted 20,389 weekly service hours while 15,646 weekly service hours were scheduled to operate. Of the 15,646 weekly service hours

scheduled to operate, 16,724 weekly service hours were actually delivered, which represents a variance of 7%.

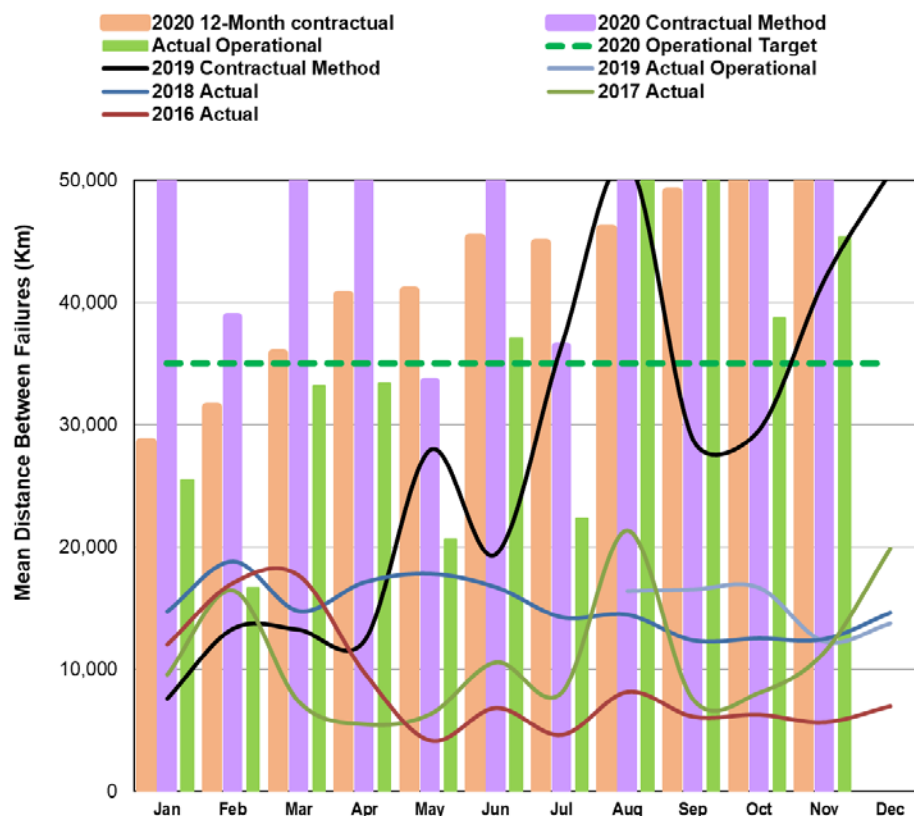
### Analysis

Scheduled streetcar hours are lower than budgeted as a result of the demand-responsive service plan which takes into account lower ridership demand due to COVID-19.

### Action plan

We will continue to monitor service hours during the pandemic.

## Streetcar: Mean distance between failures (MDBF)



### Definition

Total kilometres travelled by the Low-Floor Light Rail Vehicle (LFLRV) fleet compared to the number of incidents (defined contractually) resulting in delays of five minutes or more. Includes all

seven days of service. A threshold of 35,000 km was established to reflect the manufacturer's obligations for reliability. The operational MDBF includes incidents defined contractually, as well as delay incidents that are caused by

failures of equipment from other vendors and delays caused by TTC operations.

### Contact

Rich Wong, Chief Vehicles Officer

### Results

The monthly contractual MDBF for the streetcar fleet in November exceeded 50,000 kilometres.

The 12-month average contractual MDBF also exceeds 50,000 kilometres.

The monthly operational MDBF for the LFLRV fleet in November was 45,354 kilometers. This is an increase of 1,252 kilometers from previous period.

### Analysis

In November, there were a total of eight relevant failures under the contractual reliability method. The top contributors were the train and cab controls system with two and the train control management system with two.



With respect to the operational method, there were a total of 17 delays. The top contributors to these failures, in addition to the contractual reliability failures, include the high voltage system with four failures, ramp system with three failures and the disc brake system with two failures.

The high voltage system failures in November were due a trolley pole rope coming out of catcher, a missing shoe and worn-out trolley pole carbons.

Investigation shows that the rope was not retracting into the faulty catcher, which had caused the rope to break. The missing shoe is currently undergoing root cause analysis (RCA) with TTC Engineering. The worn trolley pole carbon is suspected to be from a poor quality inspection or a missed replacement schedule. Staff are following up to determine the exact cause. Additional technical and quality audits are being performed and adherence to maintenance cycles are being reviewed.

The ramp system failures were due to bent side guard assemblies, which had prevented the ramp from retracting, and an exterior ramp control box cover, which would not close. The functionality of the ramp system is inspected before the vehicle is placed into service.

The disc brake system had two failures recorded, due defective hydraulic power units (HPU). Investigation into the cause of the failures indicates component quality in both these cases.

All of these failures are being reviewed and corrected by staff. Compared to October, contractual failures have decreased by seven and operational failures by five. Although service mileage decreased compared to October, reduction in operational failures contributed to an increase in operational reliability for November.

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### Action plan

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Vehicle modification programs designed to address the root cause(s) of failures are at various

stages of development and implementation. These reliability improvement programs continue to be refined as the LFLRV vehicles in service mileage increases and more in-service data becomes available.

**Train and cab control system:** We are continuing to work with Bombardier to review master controller failure modes and determine corrective actions that will be implemented in a future fleet modification in Q2 2021. Additionally, an engineering investigation of other electrical failures is underway. This includes improving quality of work during maintenance activities.

**Train control management system:** We are working with Bombardier to review the vehicle control unit failure modes and determine corrective actions. Data logger failures are also under engineering investigation.

**Brake system:** Quality control containment and improvements have been implemented at supplier sites. In addition, component improvements (e.g. seals, guidance shaft and locking pins) are in

validation and planning stages with implementation targeted for Q1 2021

**Door system:** We are continuously working to improve the reliability on different door components. This includes an ongoing fleet inspection on the door seal for potential catching issues. This failure mode is under engineering investigation and supplier root cause analysis.

**Communication system:** A camera modification program that addresses known issues with image quality and stability has faced ongoing delays due to the impact of the pandemic on the supplier. Passenger information system failures are under engineering investigation.

**High voltage power system:** Multiple modifications aimed to improve various sub-systems are being implemented on the fleet. This includes adjusting the limit switch on the main switch, and replacement of some trolley pole and pantograph components with more robust ones (e.g. bracket and chain).

In addition to the contractual programs, operational reliability

improvements being made to improve MDBF include:

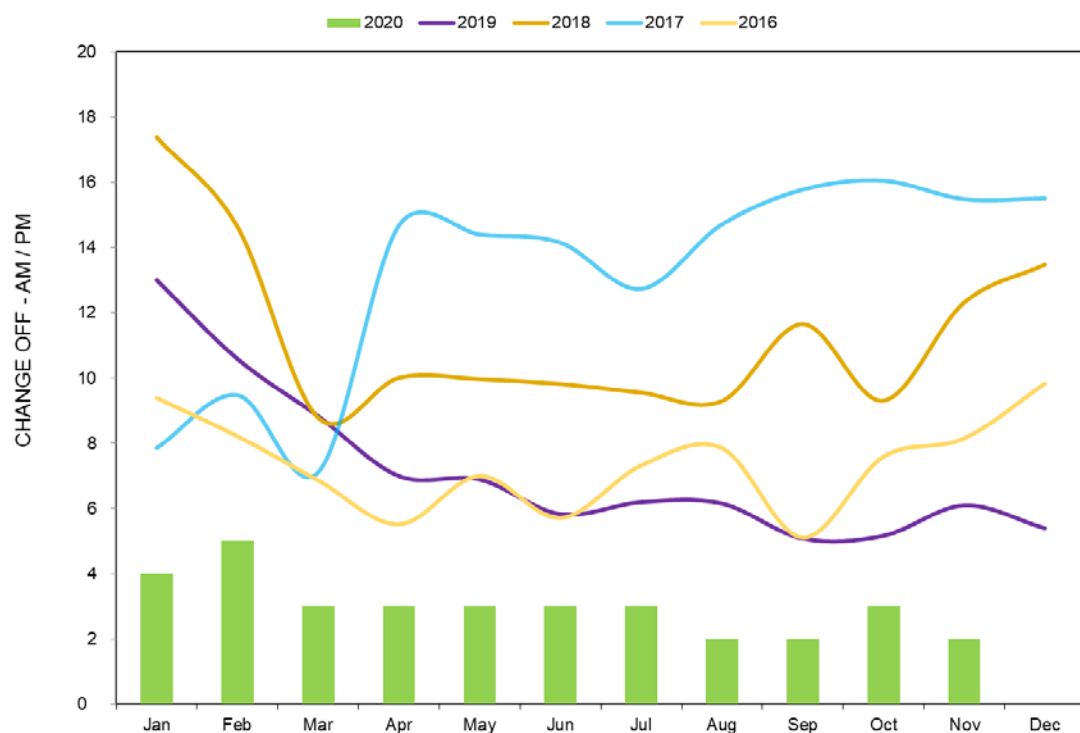
**High voltage system:** Implementation and monitoring of high voltage preventative maintenance practices, along with increased inspection audits to reduce failures. This includes a secondary review of all vehicles returning from service after inspections have started to prevent omissions. Completion of a fleet modification program for catcher braking force to resolve failures related to catcher functionality.

**Ramp system:** We will continue the maintenance program, which includes updated processes to reduce debris-related failures and bent side guards. We will investigate a modified design to prevent bending of side guards.

**Disc brake system:** We are working with Bombardier to provide a brake caliper redesign that will improve overall system reliability. In addition, all HPU failure modes are being tracked with an updated analysis guide to identify root causes and introduce potential changes. There is currently a system validation of a

software upgrade to prevent pressure mismatch faults. We will continue to improve response to in-service single disc brake faults to prevent failures from impacting service.

## Streetcar: Road calls and change offs (RCCOs)



### Definition

Average daily number of vehicle-equipment failures requiring a road call for service repair or a change off to a repair facility for a replacement vehicle. Includes Monday to Friday only.

### Contact

Rich Wong  
Chief Vehicles Officer

### Results

The target for the maximum number of RCCOs is 1.5% of peak daily

service, including Run-As-Directed (RAD) vehicles. In November, the target of 1.5% (or 2 of 133 vehicles) was met.

### Analysis

The daily average number of RCCOs for November decreased by one compared to October. The continued low cycling of major systems from reduced passenger loading due to the pandemic contributed to low RCCO numbers in November. Improving preventative maintenance procedures, including daily review of failure and repair data to prevent vehicles with potential issues from entering service, targeted assessment of concern areas and increased inspection audits, also contributed to low RCCO numbers. Compared to October, there was a reduction in failures of the passenger door and disc brake system, along with ramp equipment.

Failures of the high voltage system due to worn carbons and the sander system, which had defects related to the sand compressor, have increased. However, overall failures requiring RCCOs have improved.

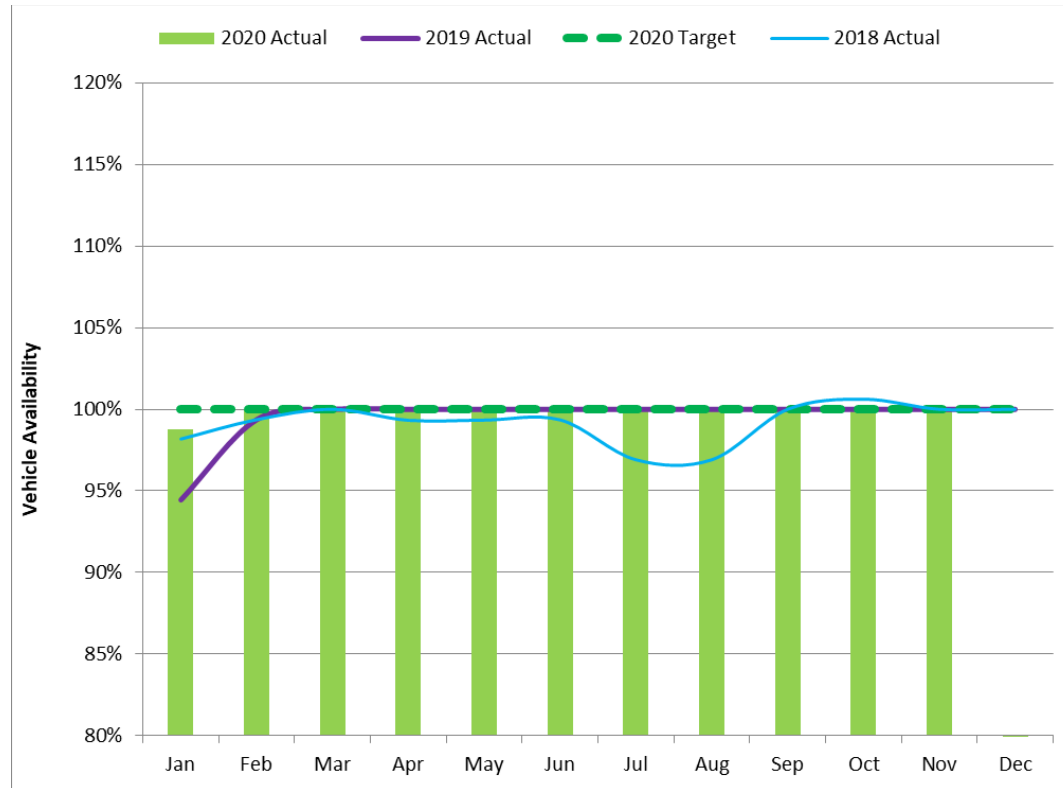
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**Action plan**

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Staff will continue to monitor and improve inspection and preventative maintenance performance to further reduce failures. Bombardier and TTC staff are aware of the component reliability issues related to the LFLRV and continue to investigate the problems to determine a resolution.

## Streetcar: Service availability



### Definition

Daily average number of streetcars put into service (including RADs) compared to the number of streetcars scheduled for the a.m. peak period. Data represents Monday-to-Friday only. Holidays excluded.

### Contact

Rich Wong,  
Chief Vehicles Officer

## Results

The target for streetcar availability is 100% of peak daily service, including Run-As-Directed (RAD) vehicles. In November, the target requirements were met with an average of 133 vehicles available for service.

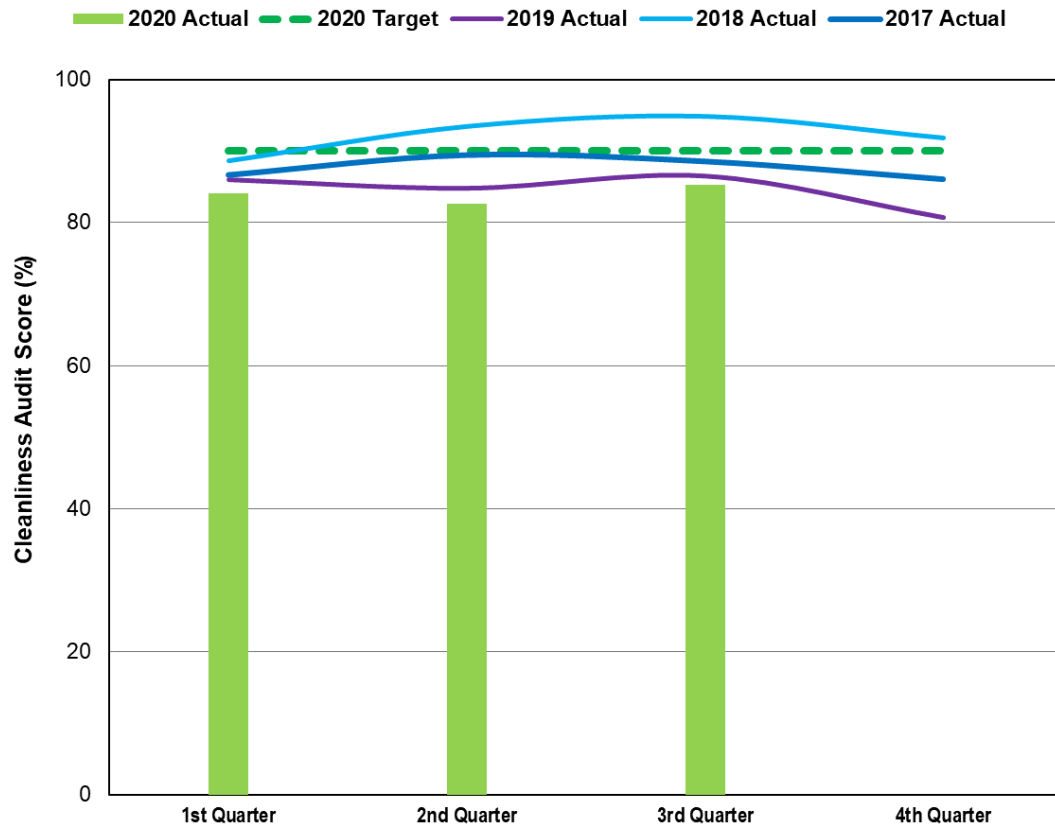
## Analysis

The availability target continues to be met. Reduced service levels due to the pandemic, provides opportunity for increased vehicle maintenance.

## Action plan

The availability target will be achieved with continued pre-service and preventative maintenance practices.

## Streetcar: Cleanliness (pre-service)



### Definition

Results of third-party audit conducted each quarter. “In-service” and “post-service” cleanliness results. Audits conducted weekdays only, excluding holidays.

### Contact

Rich Wong,  
Chief Vehicles Officer

## Results

The audit score for streetcar pre-service cleanliness in Q3 2020 was 85.2%. This is an increase from Q2 (82.6%) and a decrease from Q3 2019 (86.5%). Overall performance was below the target of 90%.

## Analysis

We have implemented two initiatives:

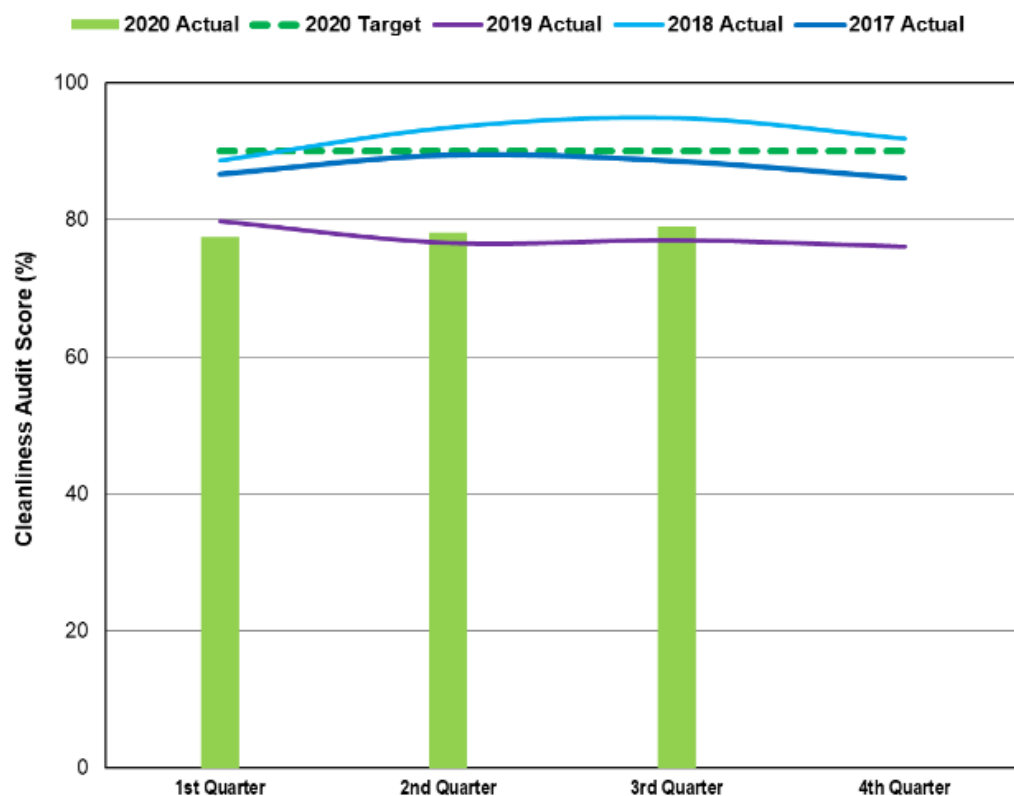
- Application of barrier film on the rear roof of the vehicle, which has improved exterior cleanliness.
- A passenger seat replacement program, which has replaced 2,208 seats year-to-date as an initiative to refresh the fleet, has improved results in that area.

## Action plan

The exterior carwash system is undergoing upgrades so that washing can be improved.

We will continue to improve vehicle cleaning through proper scheduling of programs and replacement of passenger seats.

## Streetcar: Cleanliness (in-service and post-service)



### Definition

Results of third-party audit conducted each quarter. “In-service” and “post-service” cleanliness results. Audits conducted weekdays only, excluding holidays.

### Contact

Rich Wong,  
Chief Vehicles Officer

### Results

The audit score for streetcar in-service and post-service cleanliness

in Q3 2020 was 79.0%. This is an increase from both Q2 (78.1) and Q3 2019 (77.0%). Overall performance was below the target of 90%.

### Analysis

Cleanliness improvements can be attributed to the reduced passenger ridership levels due to the COVID-19 pandemic, in addition to improved pre-service cleaning procedures.

Accumulation of dirt and sand deposits on the floors, negatively impacted in-service and post service cleanliness results for Q3 2020. Floors and vehicle exteriors have been identified as areas requiring improvement.

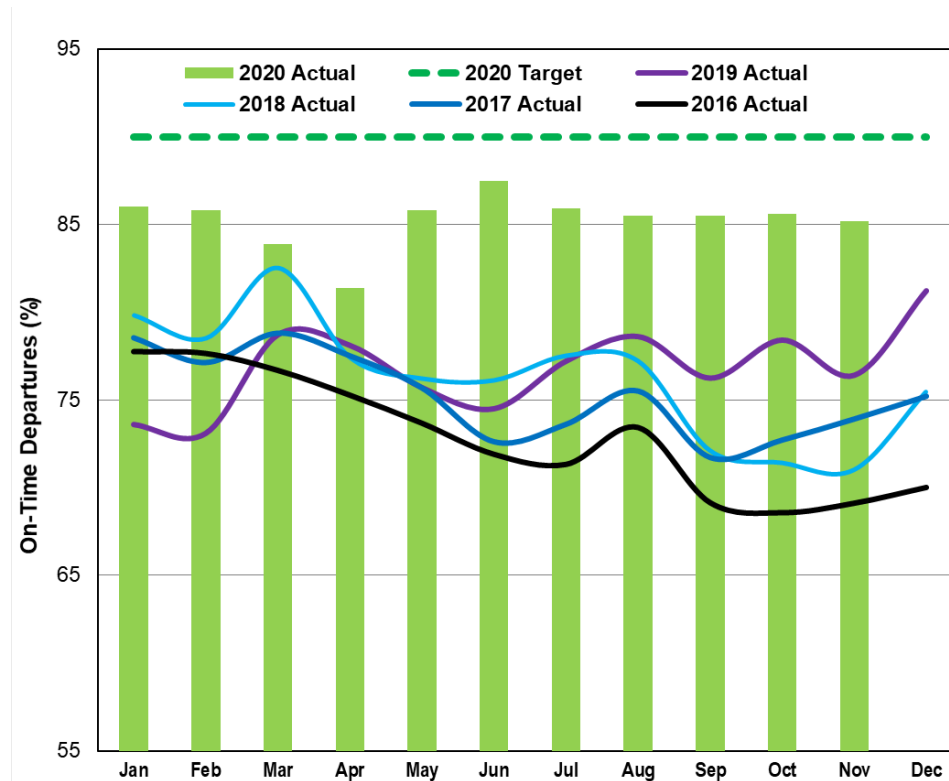
### Action plan

We are currently reviewing additional cleaning processes to target interior cleanliness. We are also actively undertaking mid-day disinfecting of vehicles in response to the COVID-19 pandemic. Staff will continue to monitor and investigate opportunities to improve overall cleanliness.



## Bus services

### Bus: On-time performance (OTP)



#### Definition

OTP measures vehicle departures from end terminals. Vehicles are considered on time if they depart

within 59 seconds earlier or up to five minutes later than their scheduled departure time. Includes all seven

days of service. Night routes are excluded.

#### Contact

James Ross,  
Chief Operating Officer

#### Results

OTP in November was 85.2%, a small decrease compared to October (85.6%), but an increase over the same period in 2019 (76.4%). Our target of 90% was not met.

#### Analysis

Bus performance in November reached a weekly high of 86.2% in week 47 and a low of 84.2% in week 45. The percentage of early (3.9%), late (7.4%), and missed (3.5%) trips in November remained consistent with the previous period.

The Eglinton East priority bus lanes were implemented with the start of the October Board Period and thus used for all of the November period. The major routes operating on this corridor (86 Scarborough, 116 Morningside, 905 Eglinton East Express, and the 986 Scarborough

Express) combined for 82.5% OTP for the period, a slight increase compared to the same period in 2019 (79.7%).

Eight 900-series express bus routes were reintroduced with the November Board Period (beginning the last week of the November period, Week 48). These eight routes combined for an 80.9% performance level for the week, a significant improvement over the same scores these eight routes combined for in Week 48 in 2019 (66.0%).

Finally, bus performance did not reach the 90% target during the period on any particular operating day, but did achieve a high of 89.2% on November 15.

adjustments, such as 900-series express routes).

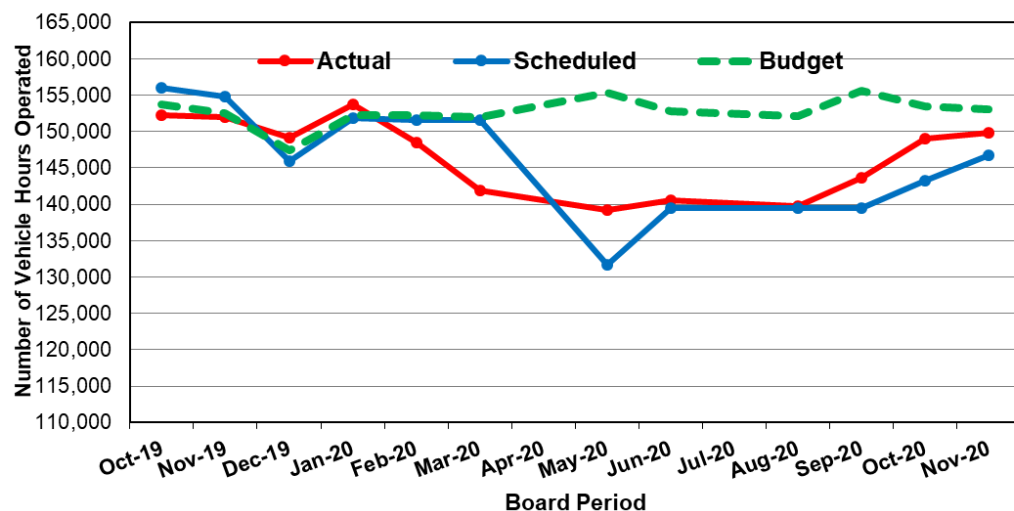
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### **Action plan**

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A road map identifying the bus routes that will undergo schedule reviews in 2021 is in development. This work will identify and prioritize bus routes that are deficient in scheduled travel time. It will also outline timing of these changes, aligning other major considerations, such as major route assessments and reintroductions (due to COVID-19 service

## Bus: Weekly service hours



### Definition

Service hours are calculated from the time a bus leaves a garage to the time it returns to the garage. Measured daily. Board period total calculated using a weekly average.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

In the November 2020 Board Period (November 22 – December 19), the TTC planned 96% of regular bus service compared to pre-pandemic service.

When accounting for both regular and construction-related service, the TTC budgeted 153,029 weekly service hours while 146,763 weekly service hours were scheduled to

operate which represents a variance of -4%.

Of the 146,763 weekly service hours scheduled to operate, 149,903 weekly service hours were actually delivered, which represents a variance of 2%.

### Analysis

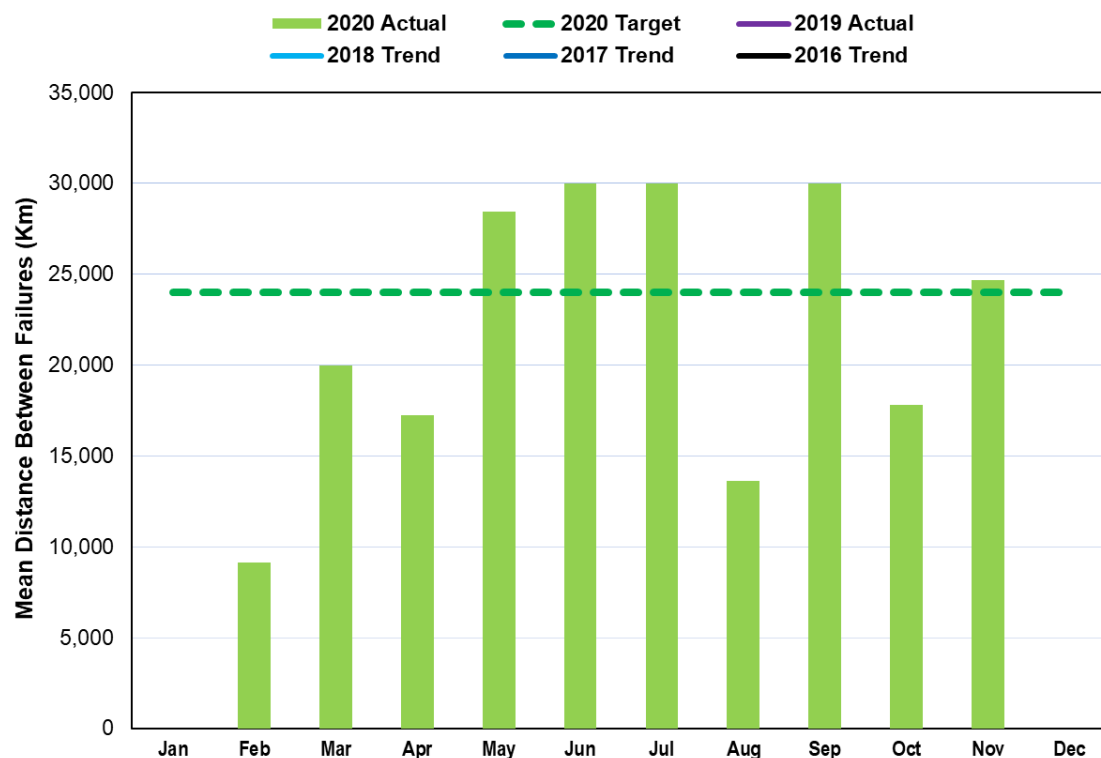
Scheduled weekly service hours are lower than budget for two reasons. First, regular service hours are reduced as part of the demand-responsive service plan. Second, construction service hours are less than budgeted due to changes in construction.

Actual weekly service hours are higher than scheduled as a result of TTC operators returning from layoff in November. This service was delivered over and above the schedule.

### Action plan

Schedules will be updated to account for operators returning from layoff over the coming board periods.

## Bus (eBus): Mean distance between failures (MDBF)



### Definition

Total kilometres accumulated over the eBus fleet compared to the total number of chargeable mechanical road calls. Data included for all seven days of service.

### Contact

Rich Wong  
Chief Vehicles Officer

## Results

The eBus fleet achieved a combined MDBF of 24,700 kilometres in Period 11.

## Analysis

In Period 11, there were 25 New Flyer, 25 Proterra and 10 BYD buses in-service travelling a total distance of 123,252 kilometres. The eBus fleet continues to operate on short runs based on range capability, averaging 146.75 kilometres per day, similar to last period. eBuses have not accumulated sufficient service mileage for appropriate failure analysis.

Failures on the eBus fleet are mostly dependent on the manufacturer and are random in nature. Staff are monitoring two sets of failures on the eBuses. One set involves the electric propulsion and energy storage system related to eBus technology. The other systems are those that are common to all buses such as HVAC, doors, etc.

## BYD

- Traction motor reduction gear defect
- Exit door touch bar defect

## New Flyer

- Suspension faults related to suspension
- Control modules and shock absorbers
- Charge port door faults
- ePower steering motor faults

## Proterra

- Battery string offline issues
- Axle shaft noise
- Door mechanism faults

We will continue to closely monitor the performance of these buses as service mileage increases.

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## **Action plan**

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Various investigations and design changes are underway, which are being managed as part of the testing programs. Key ongoing retrofit campaigns performed by the manufacturers to address the

reliability and availability of the fleets are as follows:

## BYD

- Floor heater
- Belly pan

## New Flyer

- Battery tub
- Dual charge port door

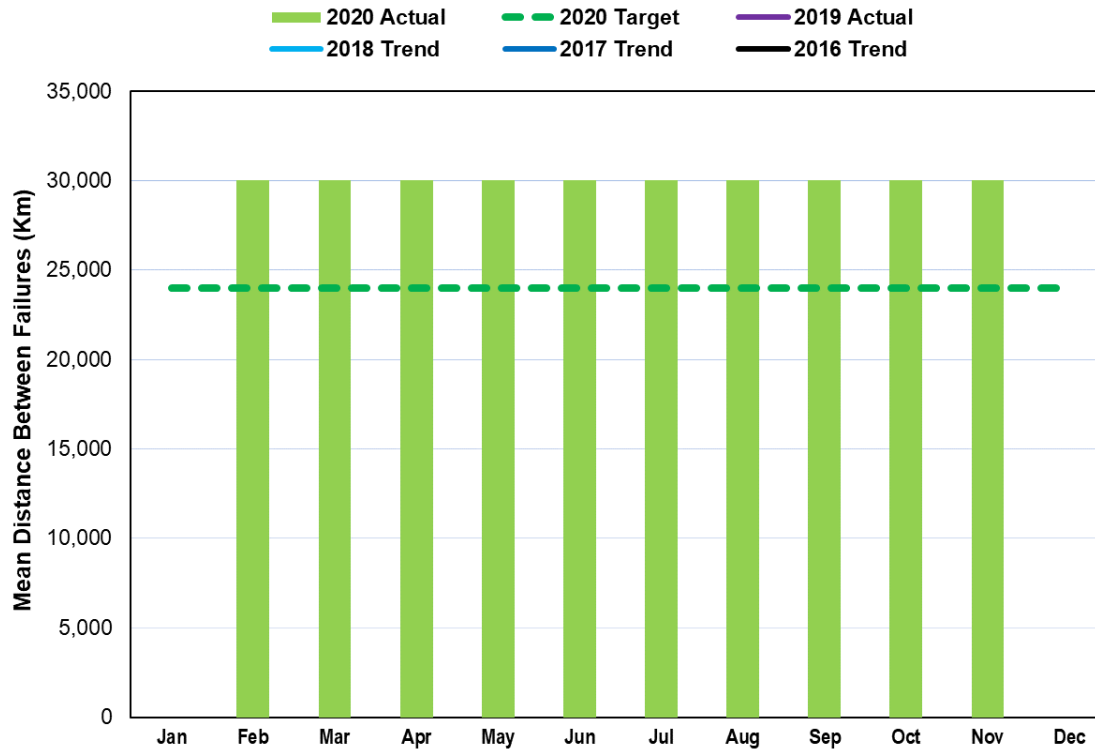
## Proterra

- Operator convector
- Air compressor

Proterra has experienced several rear door-related issues that are being addressed by an ongoing door sensor improvement campaign and mechanical linkage design improvements.

Spare parts are being scaled and registered to support maintenance activities for the eBuses.

## Bus (Hybrid): Mean distance between failures (MDBF)



### Definition

Total kilometres accumulated over the hybrid fleet compared to the total number of chargeable mechanical road calls. Data included for all seven days of service.

### Contact

Rich Wong  
Chief Vehicles Officer

## Results

The hybrid bus fleet achieved a MDBF of 30,000 kilometres in Period 11.

## Analysis

Nova LFS Hybrid buses equipped with the BAE Hybrid drive system are performing well above the expected reliability with respect to the hybrid powertrain system. However, this fleet experienced 16 hybrid propulsion-related failures in this period, mostly related to red high voltage interlock fault. Some hybrid system power losses were related to the battery temperature sensor malfunction, which has been escalated to BAE/Nova engineering.

Our hybrid fleet is built on the same Nova LFS platform as the diesel fleet and they share similar failure modes, such as cooling and engine emission-related failures as described in the diesel bus section of this report. These failures are being corrected alongside the Nova LFS diesel fleet via the same reliability programs.

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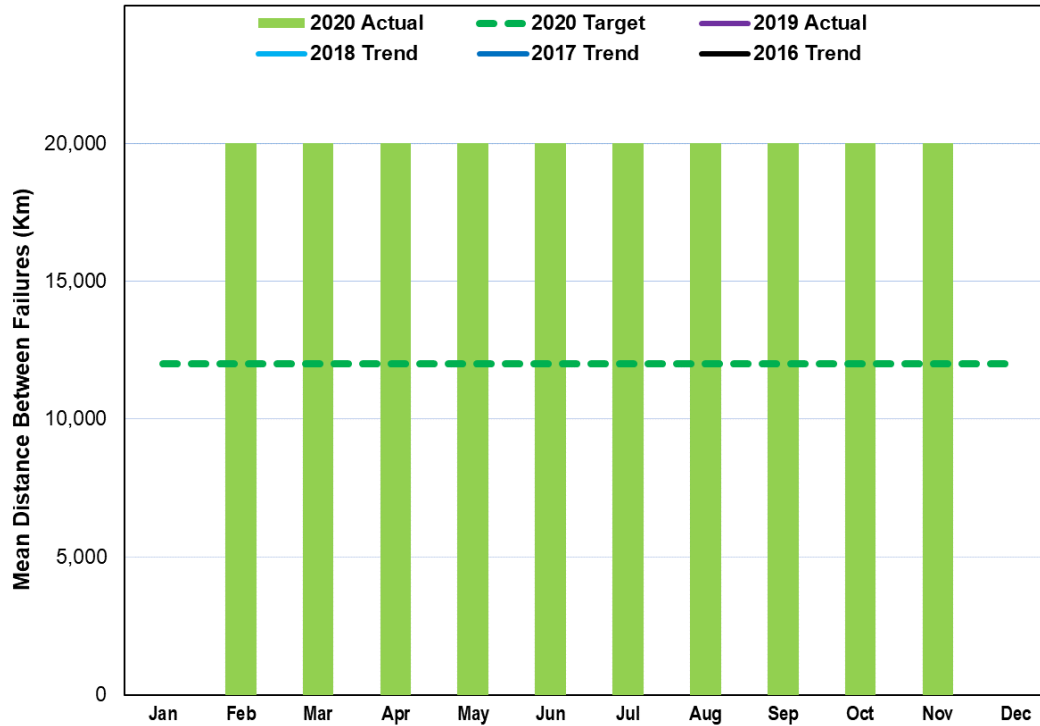
## Action plan

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BAE engineering has determined that the high voltage interlock faults are related to abnormally high load from the HVAC unit. Nova bus engineering is working with BAE systems to resolve this issue. The new bus warranty group is continuing to follow up with involved parties for resolution. Various other warranty campaigns are underway for failures exceeding the contract limits. However, these failures are not affecting service at this time.

Quarterly technical review meetings for Nova buses are taking place with participation from Nova Bus, BAE Systems, and TTC staff. These buses are performing well above target and we foresee a continuation of this trend.

## Bus (Clean Diesel): Mean distance between failures (MDBF)



### Definition

Total kilometres accumulated over the clean diesel fleet compared to the total number of chargeable mechanical road calls. Data included for all seven days of service.

### Contact

Rich Wong  
Chief Vehicles Officer

## Results

The diesel bus fleet achieved a MDBF of 20,000 kilometres in Period 11.

## Analysis

The Nova LFS diesel buses continue to improve with respect to cooling system failures. However, cooling system leaks remain the top failure mode for this Nova bus model. Daily temperature swings adversely affect the clamping force at hose connections, which may create minor coolant leaks.

This fleet continues to improve with respect to engine and diesel exhaust emission controls. However, unpredictable sensor failures remain a challenge for Cummins engines used in transit applications.

## Action plan

The articulated Nova LFS60 bus rebuild program is on schedule with 84% (64 of 76) of the fleet



overhauled. The remaining 12 buses in progress are at various stages of the program. This program is on schedule to be completed in Q1 2021.

Air and electrical system rebuild programs are continuing on the 8400-8716 series buses, with 88% (277 of 315) buses completed. These programs will continue with subsequent series in 2021 and onwards. The LFS40 Nova buses, purchased in 2015, will begin their scheduled rebuild program in December 2020.

Cooling system failures are being addressed through state-of-good-repair (SOGR) and cooling system technical packages, which provide guidance in performing a comprehensive system repair and servicing. These packages are customized for each bus type in the fleet.

Parts are now being received and kits are being created for the cooling system design change to rubber hoses (improved sealing) and heat shrink clamps (less maintenance) for the Nova 8620-8964 bus series set to

begin in Q1 2021. Telematics predictive coolant level reports are in development with the VISION team. We are in the final stages of testing the broadcast message capabilities of the system.

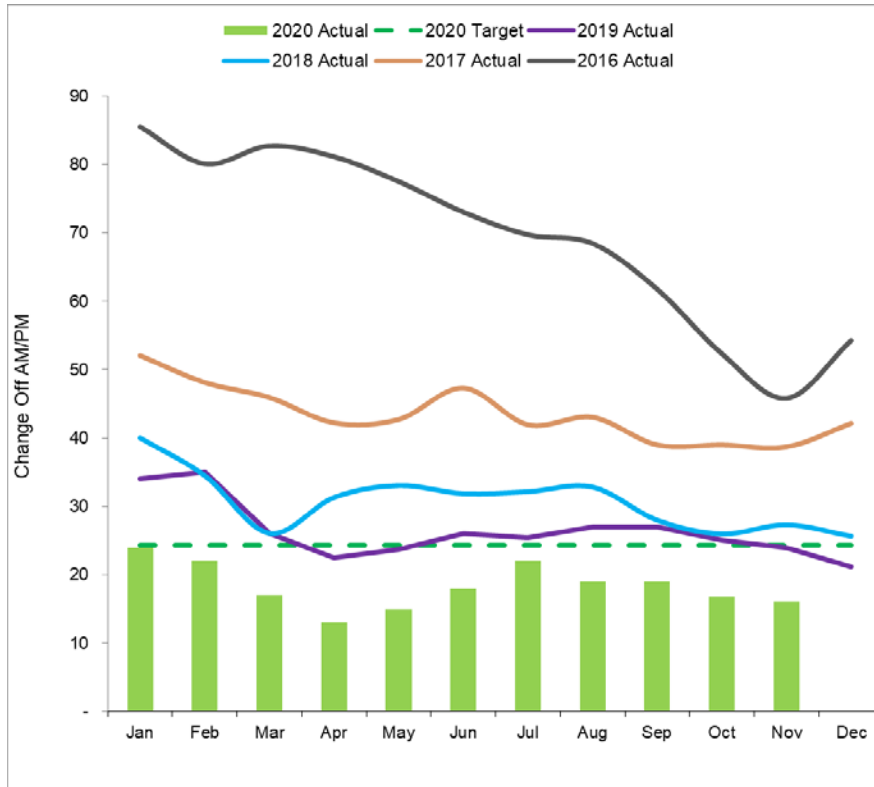
Cummins emission controls and after-treatment failures are being addressed through remote telematics health monitoring, fleet wide engine oil analysis, root cause investigations with Cummins and the Aftermarket warranty group.

Training is underway for coach technicians on the Cummins Expert Diagnostic system. This system will lead the technician through a Cummins-approved and directed fault-based comprehensive diagnosis and repair.

To further reduce emission-related failures we also have implemented a diesel particulate filter two stage quality control program. Recent emission system reliability improvements can be largely attributed to this program. Predictive telematics emission performance reports are in development with VISION team.

Overall continuous improvement in reliability of our fleet is achieved through the implementation of several key reliability and retrofit programs. Examples include: SOGR inspections (86% completed), road call and change Off (RCCO) root cause analysis, special seasonal preventive maintenance programs (fall checks are 100% completed), engine oil analysis, engineering modifications, and various other system specific programs targeting high failure modes.

## Bus: Road calls and change offs (RCCOs)



### Definition

Average daily number of vehicle-equipment failures requiring a road call for service repair or a change off to a repair facility for a replacement vehicle. Monday to Friday data only.

### Contact

Rich Wong,  
Chief Vehicles Officer

## Results

The average number of RCCOs in November was 16 per day, well below the target of 1.5% of peak service currently set at 24.

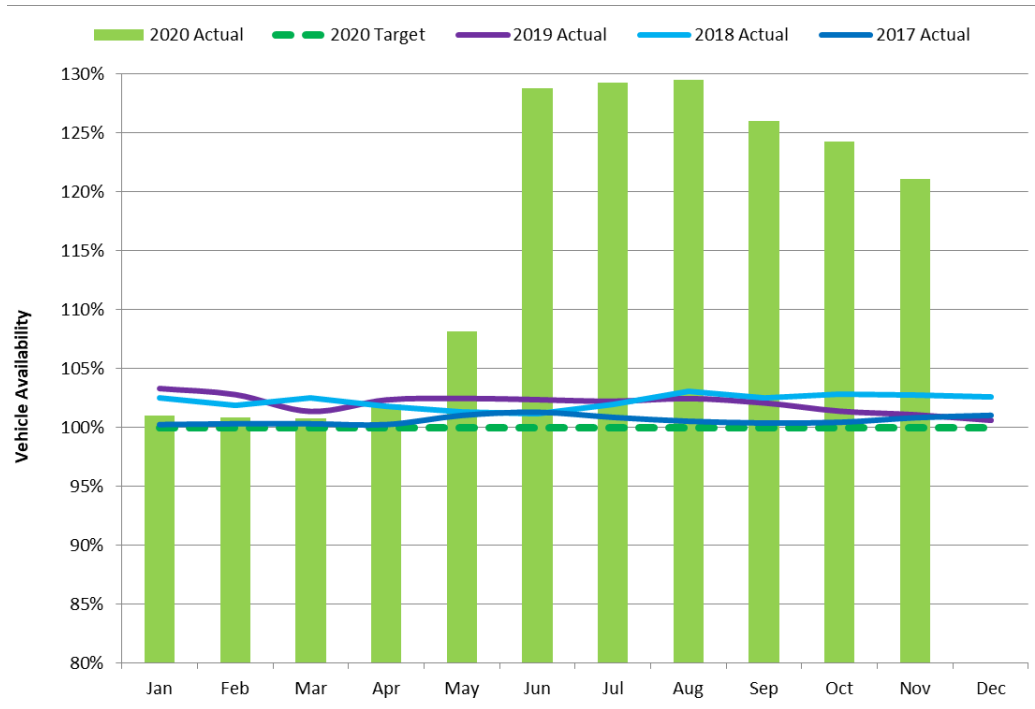
## Analysis

RCCOs remain below the target of 1.5%. This is a result of the improved reliability of the bus fleet and a reduction in service due to the pandemic.

## Action plan

We continue to monitor and control road calls via daily tracking, gap analysis, reliability programs, and working closely with the service line contractor to continually look at opportunities to reduce road calls.

## Bus: Service availability



or 119% of planned service, above the target of 1,410 buses.

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### Analysis

The gap in service requirements in November (1,410) and available vehicles (1,675) is due to temporarily reduced service levels as a result of the pandemic. We expect a recovery in service level requirements and are currently taking the opportunity to complete outstanding retrofit projects on our fleet.

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### Action plan

We will continue to monitor and control all aspects of maintenance that support continuous improvement initiatives.

### Definition

Daily average number of buses put into service (including RADs) compared to the number of buses scheduled for the a.m. peak period. Data represents Monday to Friday only. Holidays excluded.

### Contact

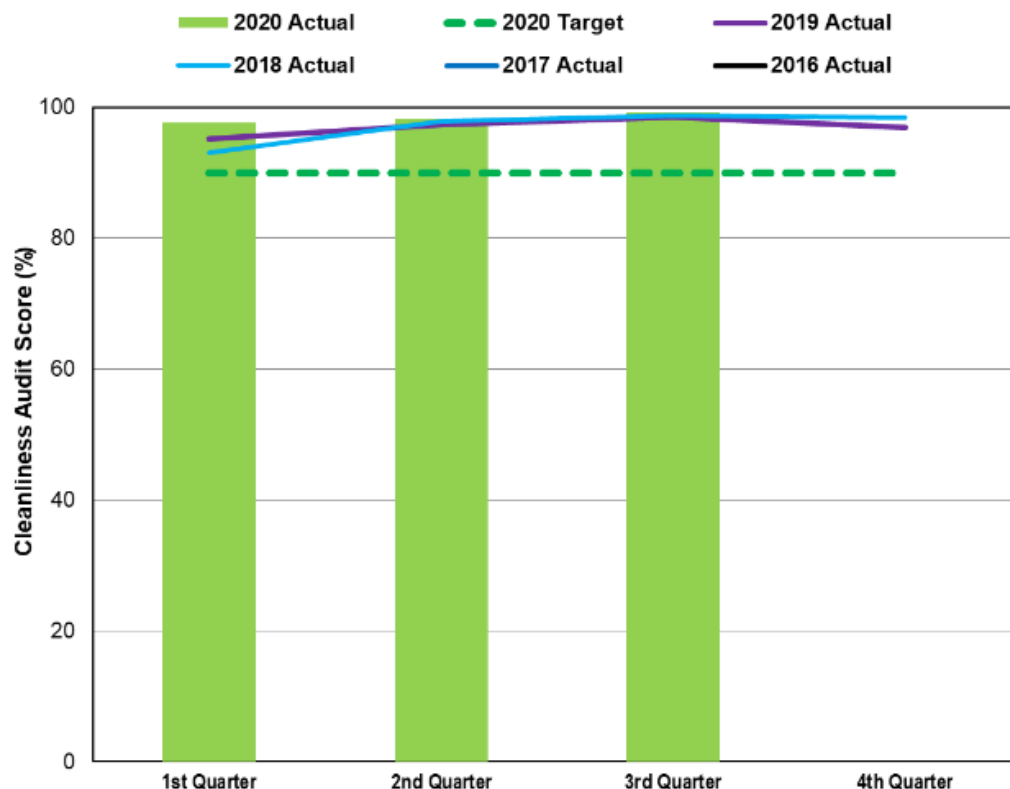
Rich Wong,  
Chief Vehicles Officer

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### Results

The average number of buses available for a.m. peak service in November was 1,675 buses per day

## Bus: Cleanliness (Pre-service)



### Definition

Results of third party audit conducted each quarter. “Pre-service” cleanliness results. Audits conducted weekdays only, excluding holidays.

### Contact

Rich Wong,  
Chief Vehicles Officer

### Results

The pre-service bus cleanliness audit score in Q3 was 99.2%. This is an increase from Q2 (98.3%) and Q3 2019 (98.6%). Performance was above the target of 90%.

### Analysis

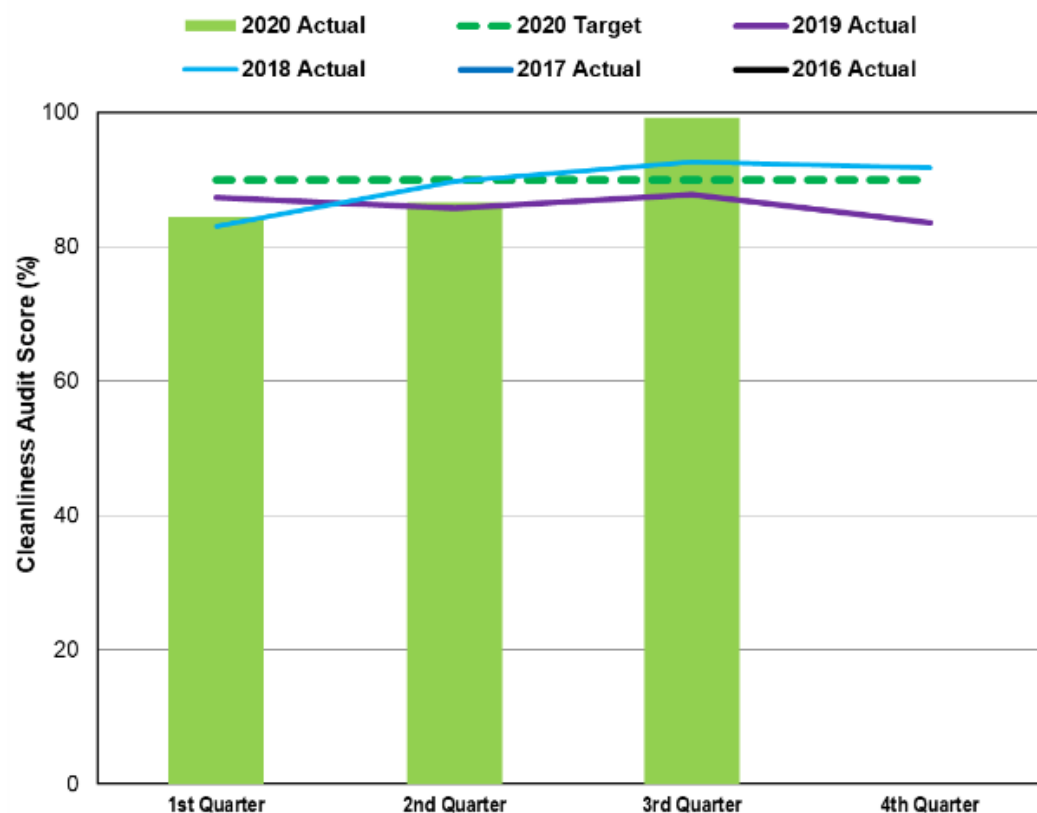
The score deduction of 0.8% is strictly due to the wheel assembly cleanliness of buses coming out of the wash rack. The wash rack is not able to perfectly clean the rims, as required by the current contract scoring structure.

### Action plan

We will be investigating the root cause of the lower audit score for wheel assemblies by review of audit criteria, contractor performance and other discovered contributing factors. We will continue to closely monitor and control cleaning contractor performance.

In response to the COVID-19 pandemic, we are performing specific cleaning and disinfection of all buses at multiple points during service: post-service, post a.m. rush and during servicing.

## Bus: Cleanliness (In-service & post-service)



### Definition

Results of third party audit conducted each quarter. “In-service” and “post-service” cleanliness results. Audits conducted weekdays only, excluding holidays.

### Contact

Rich Wong,  
Chief Vehicles Officer

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### Results

The in-service and post-service bus cleanliness average audit score in Q3 was 99.3%. This is an increase from Q2 (86.7%) and Q3 2019 (87.7%). Performance was above the target of 90%.

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### Analysis

The high cleanliness score can be attributed to a few factors during Q3. First, the summer weather provides for perfect condition for bus operation. Additionally, our bus fleet experienced less usage in this quarter due to reduced service in response to the pandemic.

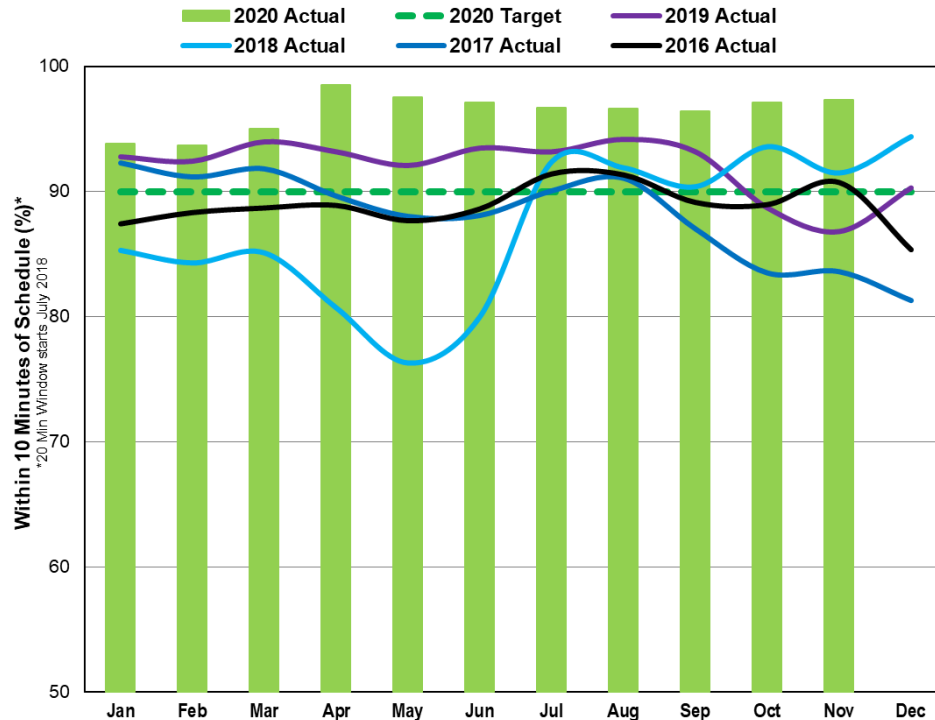
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### Action plan

We will continue to monitor the cleanliness of the fleet post service to determine whether increasing the frequency of cleaning is required.

# Wheel-Trans Services

## Wheel-Trans: On-time performance (OTP)



### Definition

Measures on-time performance of all trips conducted by Wheel-Trans buses. Seven days a week, all time periods included. To be on time, the

trip must arrive within 20 minutes of its scheduled arrival.

### Contact

James Ross,  
Chief Operating Officer

## Results

OTP in Period 11 (November 1 - November 28) increased by 0.2% from the previous period to 97.3%, and is 10.5% higher than the same period in 2019.

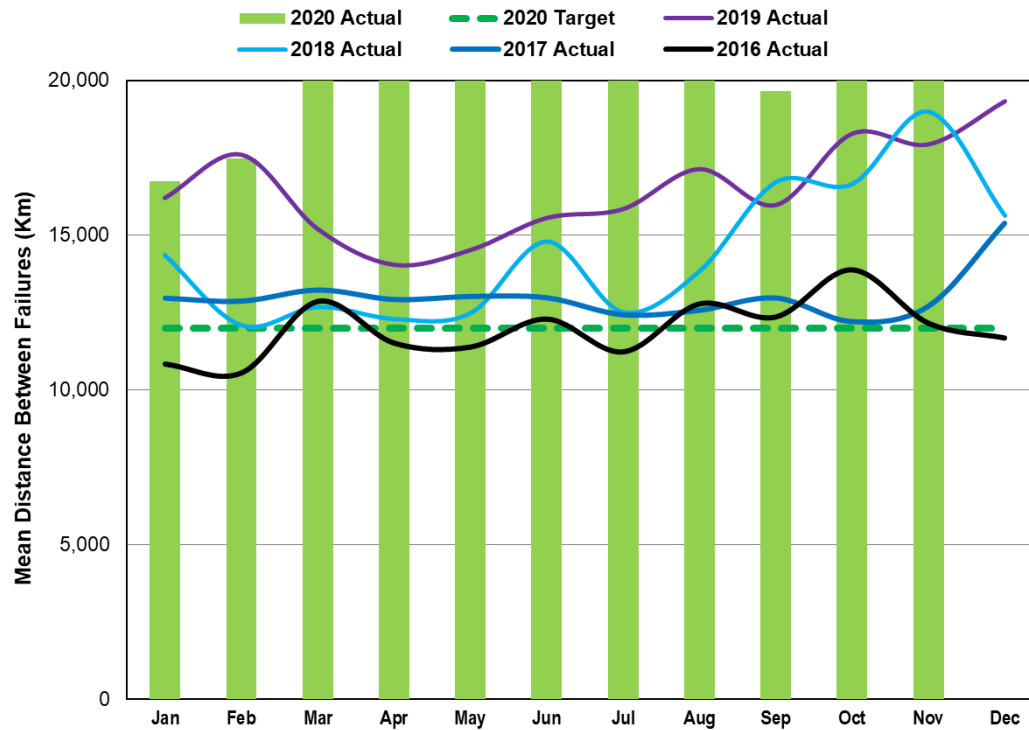
## Analysis

Improved performance can be attributed to the focus on managing day of service trips, a reduction in ridership, and scheduling and dispatching software upgrades. OTP has been continuously improving with the target being met for the past 12 months.

## Action plan

We remain focused on service efficiencies while ensuring buses maintain OTP targets.

## Wheel-Trans: Mean distance between failures (MDBF)



### Definition

Total kilometres accumulated over the entire fleet compared to the total number of chargeable mechanical road calls. Data included for all seven days of service.

### Contact

Rich Wong,  
Chief Vehicles Officer

## Results

The Wheel-Trans MDBF in November was 20,000 kilometres, exceeding the target of 12,000 kilometres. This is a significant reliability improvement from November 2019 (17,596 kilometres).

## Analysis

Exhaust system and engine mechanical issues account for most of the service interruptions on the Wheel-Trans bus fleet in November.

## Action plan

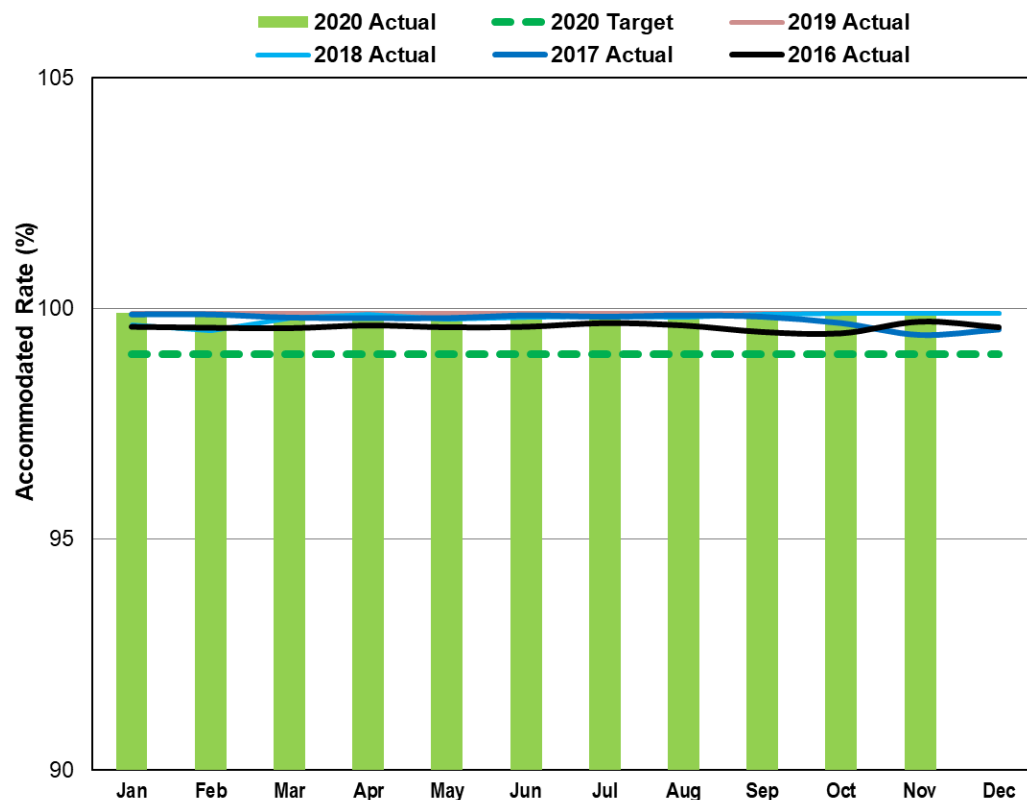
To help mitigate exhaust system issues on the Friendly bus fleet, we continue to perform post-repair exhaust system checks on all Friendly buses. We are also approximately 10% of the way through a program that focuses on the Friendly and ProMaster passenger door switches and adjustments.

The ProMaster bus tune-up program is 55% completed. This program

focuses on the vehicle's ignition, components, such as ignition coils, spark plugs and PCV valves. This program will reduce engine mechanical issues and starting failures experienced on the ProMaster fleet. We will continue to monitor the effectiveness of this program as part of our continuous improvement process.



## Wheel-Trans: Accommodated service



### Definition

Accommodated rate is the percentage of passengers requesting Wheel-Trans services that are actually provided trips by either a Wheel-Trans bus, accessible taxi or sedan taxi.

### Contact

James Ross,  
Chief Operating Officer

## Results

The accommodated rate in November was 99.9%. This is 0.9% above our target, and consistent with the same period in 2019.

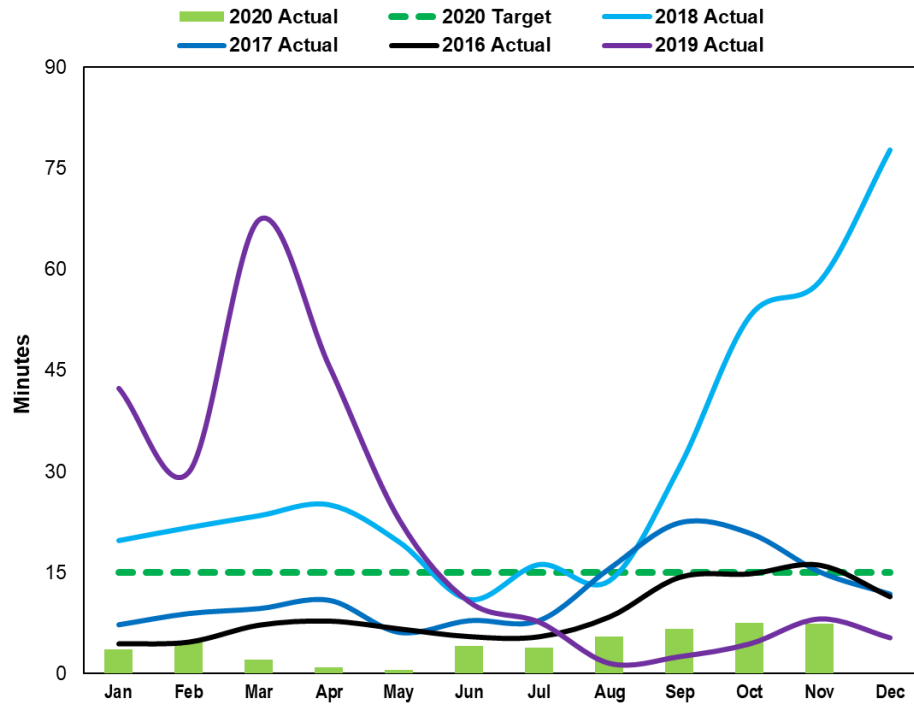
## Analysis

We continue to make every effort to provide an accommodation rate of 100% during the pandemic. With the City of Toronto recommending essential trips only, the focus remains on ensuring all life-sustaining, medical and essential trips are accommodated. Screening and other safety measures remain in place so that customers are provided the appropriate trip.

## Action plan

We will remain focused on ensuring all essential trips are provided in a safe manner. City protocols will be monitored and service adjustments will be made to respond to these changes.

## Wheel-Trans Contact Centre: Average wait time



### Definition

The average amount of time a customer waits in the queue before their call is answered.

### Contact

James Ross,  
Chief Operating Officer

## Results

The average wait time in Period 11 (November 1 - November 28) was 7.4 minutes. This is slightly lower than the 7.5-minute average in October, and below our target of 15 minutes.

## Analysis

We have seen a slight decrease in our average call volumes and wait times with the implementation of a city-wide lockdown period on November 23, 2020. Customers continuing to take advantage of our self-booking website and the soft launch of our overflow call centre contract have both contributed to the decrease in the average wait time.

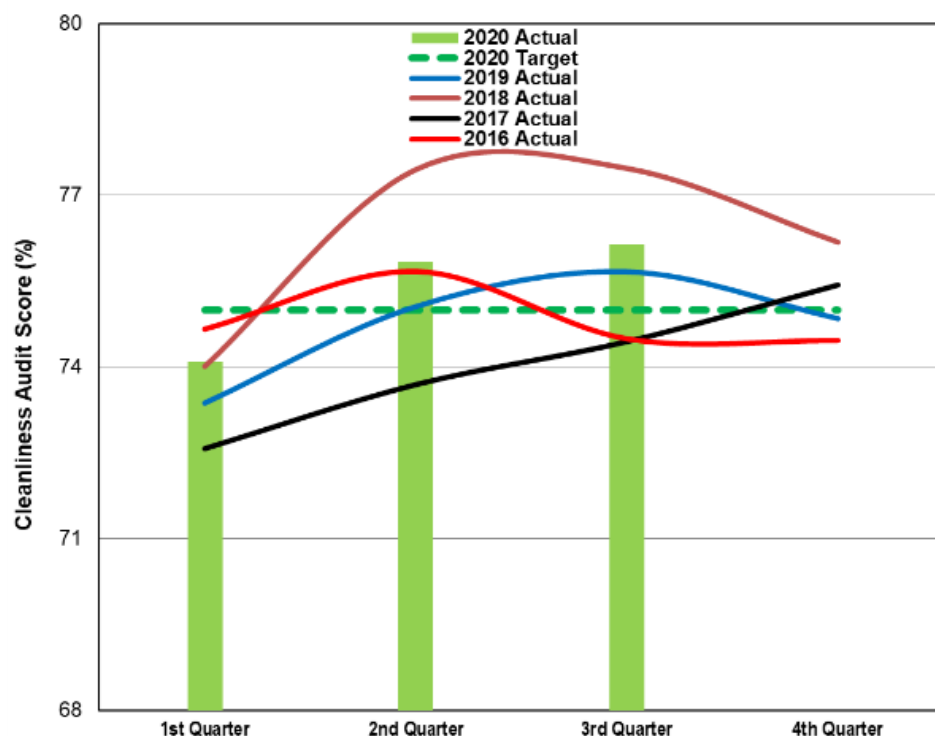
## Action plan

Our contact centre staff will be working closely with our new overflow contract provider to train, review and monitor their performance as we strategically integrate their services.

This implementation will address specific peak periods during the week that we anticipate increased call volumes in an effort to further reduce wait times. The training period will be extensive and have multiple review points to ensure all key performance indicators are being addressed, all while greatly assisting in our efforts to further reduce wait times for our customers.

## Station services

### Station cleanliness



#### Definition

Average results of a third party audit conducted each quarter of all 75 stations. Audits are conducted weekdays only, excluding holidays.

#### Contact

James Ross,  
Chief Operating Officer

## Results

The Q3 cleanliness audit score was 76.1%, which is an increase of 0.3% from Q2 (75.8%).

## Analysis

Of 22 components that are scored, six increased in their score, 15 remained the same, while only one (public washrooms) saw a slight decrease.

41 stations (55%) met or exceeded the target score, 24 stations (32%) scored between 70.0% and 75.0%, while only 10 stations (13%) scored below 70.0%.

The top three scoring stations in Q2 were: York University (95.7%), Pioneer Village (91.1%) and Vaughan Metropolitan Centre (88.3%).

The bottom three scoring stations in Q2 were: Coxwell (68.5%), Dundas West (68.3%) and Lansdowne (68.3%).

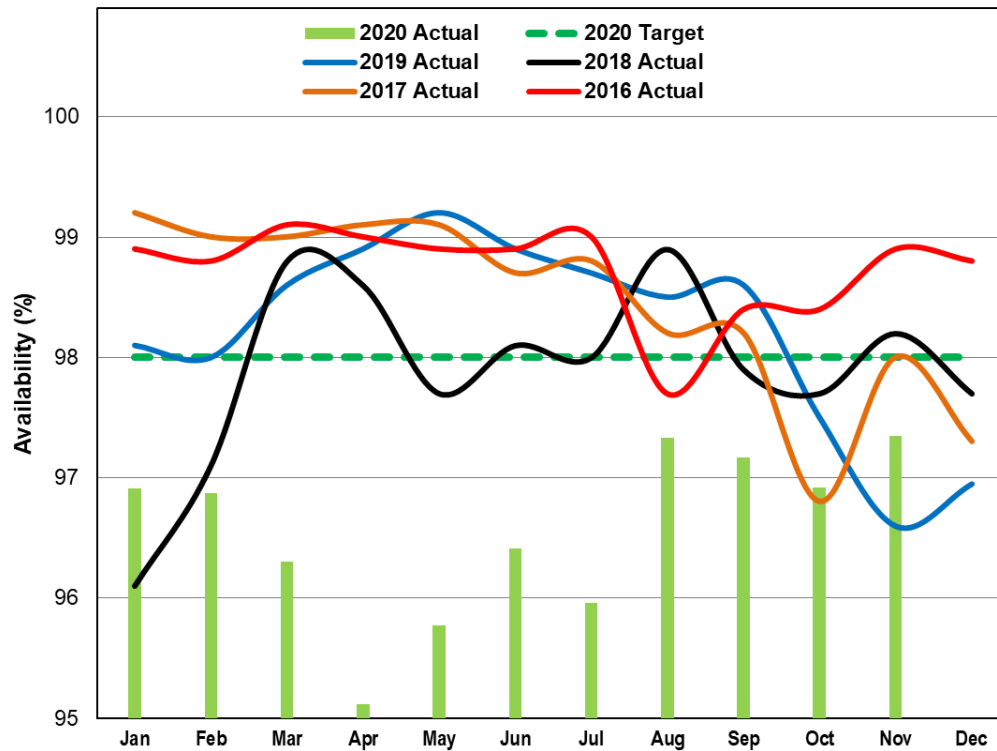
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## **Action plan**

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There were 32 employees recalled from furlough to Temporary Building Serviceperson positions at the start of Q4 to allow for a modified version of seasonal projects to be carried out. Station lighting and floor care will be the emphasis of the modified projects.

## Elevator availability



### Definition

Percentage of total available subway elevator service hours during subway revenue service in a given month.

### Contact

Fort Monaco,  
Chief Infrastructure and Engineering  
Officer

## Results

Elevator availability in November was 96.4% — under the target of 98%. Performance decreased in November compared to the previous month (96.9%).

## Analysis

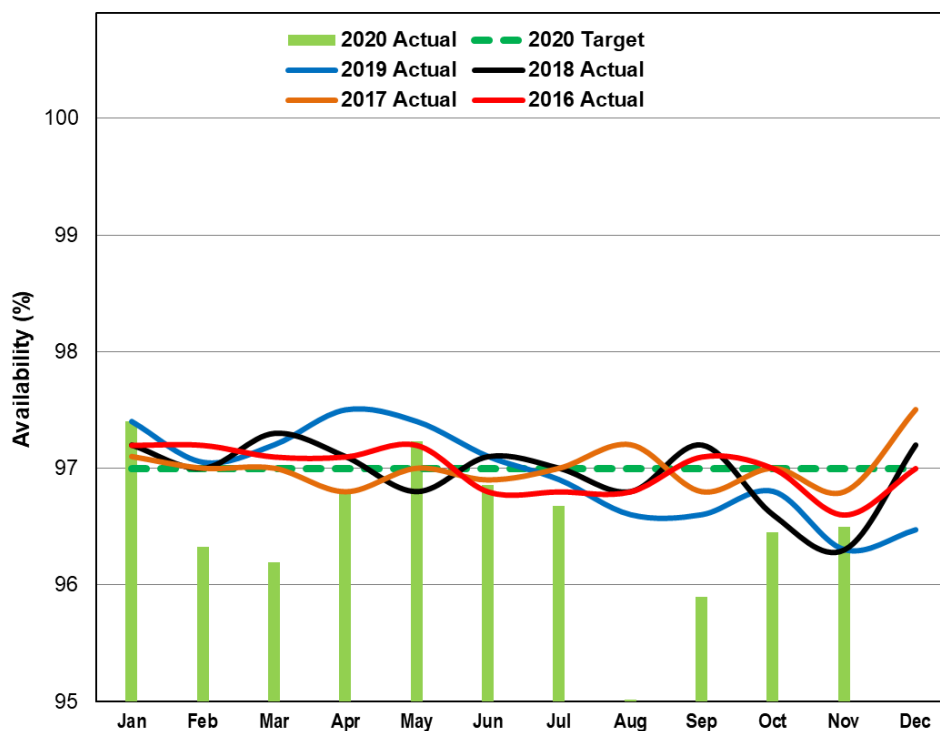
Two elevators out-of-service at Eglinton West Station due to Eglinton Crosstown Light Rail Transit construction negatively impacted performance in November.

## Action plan

Eglinton West Station elevators are now back in service.

We will continue performing preventative maintenance to meet reliability and availability targets.

## Escalator availability



### Definition

Percentage of total available escalator service hours during subway revenue service in a given month.

### Contact

Fort Monaco,  
Chief Infrastructure and Engineering  
Officer

## Results

Escalator availability in November was 96.5% — under the target of 97%. There was no change in performance compared to the previous month.

## Analysis

The following factors negatively impacted escalator service in November:

- Safety and construction: An investigation of the Lawrence Station entrance on the north-west corner of Yonge Street and Lawrence Avenue has resulted in the entrance being closed off. The escalator serving the entrance has been turned off and will remain off until the entrance reopens.
- The new vendor for supply and installation of escalator handrails lacks the capacity of past vendors and has been unable to meet contract requirements. This resulted in escalators remaining out-of-service for more than 700 operating hours in November.

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**Action plan**

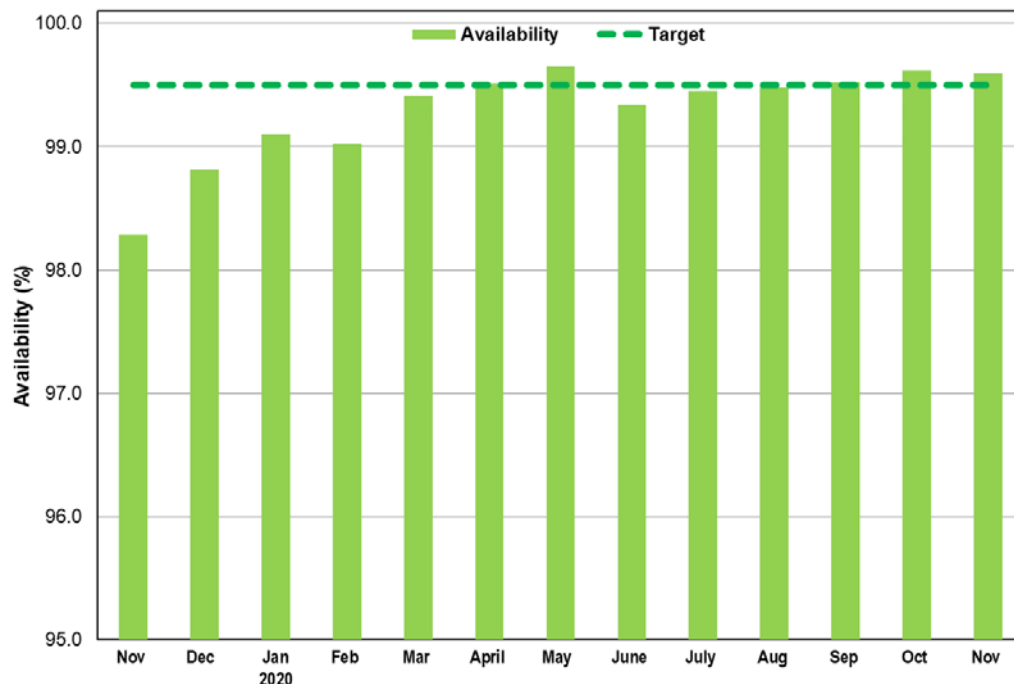
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Lawrence Station escalator to be turned on when entrance reopens.

Discussions with the TTC's Legal Department are underway to address vendor supplying escalator handrails.



## Fare gates



### Definition

Percentage of time fare gates equipped with PRESTO are available for use. Availability data provided by manufacturer for 24 hours a day, seven days a week.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

Fare gate availability averaged 99.59% in November, which

represents a slight decrease of 0.03% from last month and an increase of 1.30% over the same time in 2019. Availability was above the 99.5% target.

### Analysis

These results reflect the continued ongoing efforts of both the TTC and Scheidt & Bachmann (S&B) to address hardware and software issues with the fare gates. With the current modification programs in place, we expect performance to continue to improve.

### Action plan

We continue to work with S&B to address ongoing hardware and software issues. A number of programs have been developed and are currently being implemented. These include:

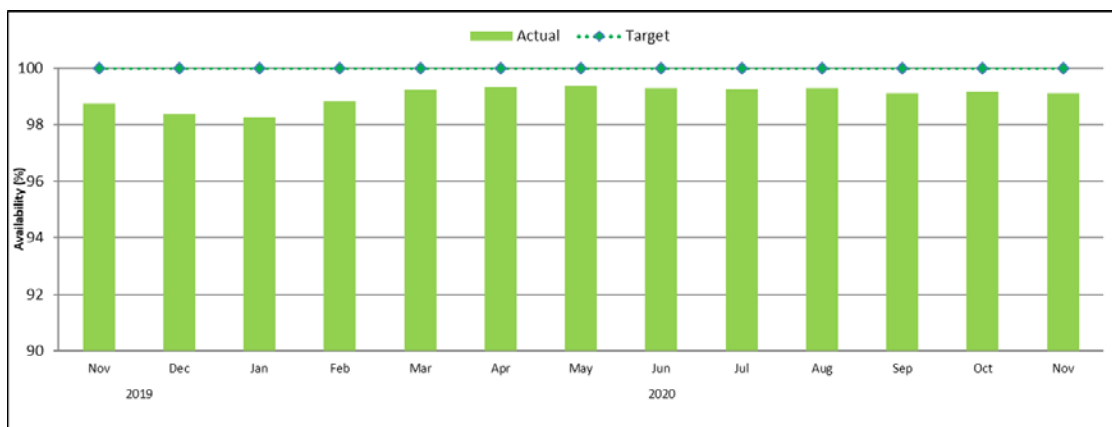
- In September 2020, we completed an upgrade of the control and operating system for the fare gates. This upgrade will allow us better visibility and reporting functionality.

- An additional software upgrade was completed in September 2020. This software update will address a number of ongoing issues with the fare gates and will further improve reliability. The teams are currently monitoring the new software and documenting any issues in preparation for future software releases.
- The program to replace the industrial computers in the fare gates was completed in Q4 2019. The S&B second-generation industrial computer, with a new solid state drive (SSD), will provide a number of improvements including: Extending the hard drive capacity, improving and protecting the hard drive sectors, increasing the hard drive speed (faster read/write — start-up time will be improved), extending the data logging, and helping address the USB disconnect issue we are currently having with the fare gates.
- S&B development teams are currently completing a further in-

depth review of ongoing issues with the fare gate motors. The final report has been completed. The team has completed a number of the recommendations from the report and expects continued improvement in the fare gates. The TTC has received an upgraded motor type and the teams are currently conducting field testing of this new motor.

These plans will help to address the following issues: screen freezing, tap/no entry, card reader failures, and motor and heater failures. We have additional software and hardware updates in the planning stage, which will add functionality and provide further fixes to known problems, improving the fare gate availability.

## PRESTO card readers



### Definition

The total percentage of all PRESTO card readers that are in working order and available for customer use.

PRESTO card readers are devices that are installed onboard TTC surface vehicles (buses and streetcars) and allow customers to pay their fare by tapping on the device.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

PRESTO card reader availability averaged 98.89% in November, which represents an decrease of 0.21% from the previous month. Availability remains below the target of 99.99%.

### Analysis

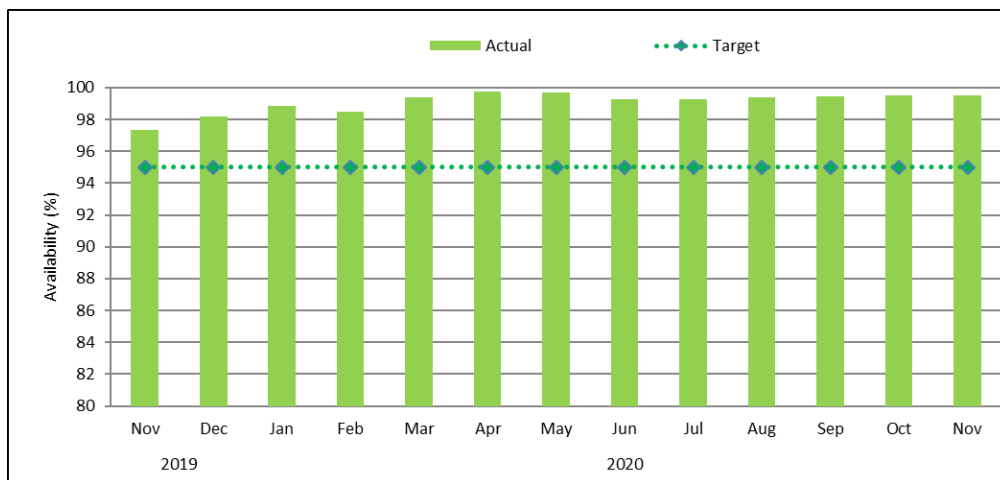
The decrease in availability is attributed to an increase in Bus Fare Transaction Processor (BFTP) card reader issues.

### Action plan

We will continue to monitor availability.

**Note:** Availability data from Metrolinx may be subject to inaccuracies, as indicated in previous updates and confirmed by the Auditor General's report. We are working with Metrolinx to improve the methodology for determining availability including the frequency at which the devices are polled for availability status. Further updates will be provided.

## PRESTO Fare Vending Machines (FVM)



### Definition

The average percentage of daily availability of PRESTO FVMs are based on duration of identified fault incidents to time of resolution. Cash collection incidents are currently not reflected in the calculation. PRESTO FVMs allow customers to load funds onto their PRESTO cards via credit or debit payment, purchase new PRESTO cards, view balance and card history and activate any products purchased online. The

FVMs are installed at station entrances.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

PRESTO FVM availability averaged 99.53% in November, which represents an increase of 0.01%

from the previous month. Availability remains above the target of 95.00%.

### Analysis

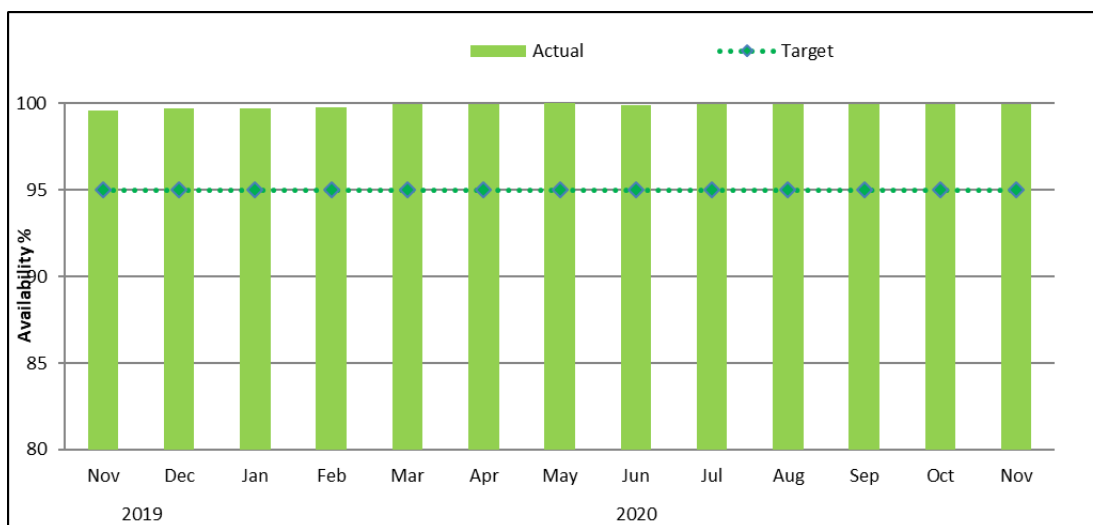
The increase in availability is attributed to the replacement of printer components, which has decreased the number of printer failures.

### Action plan

We will continue to monitor availability.

**Note:** Availability data from Metrolinx may be subject to inaccuracies, as indicated in previous updates. We are working with Metrolinx to improve the methodology for determining availability. Further updates will be provided.

## PRESTO Self-Serve Reload Machines (SSRM)



### Definition

The average percentage of daily PRESTO SSRM availability are based on duration of identified fault incidents to time of resolution. PRESTO SSRMs allow customers to load funds onto their PRESTO cards via credit or debit payment. The device also allows customers to view their balance and card history, and activate any products purchased online. The SSRMs are installed at subway station entrances.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

PRESTO SSRM availability averaged 99.98% in November, which represents an increase of 0.04% from the previous month. Availability remains above the target of 95.00%.

### Analysis

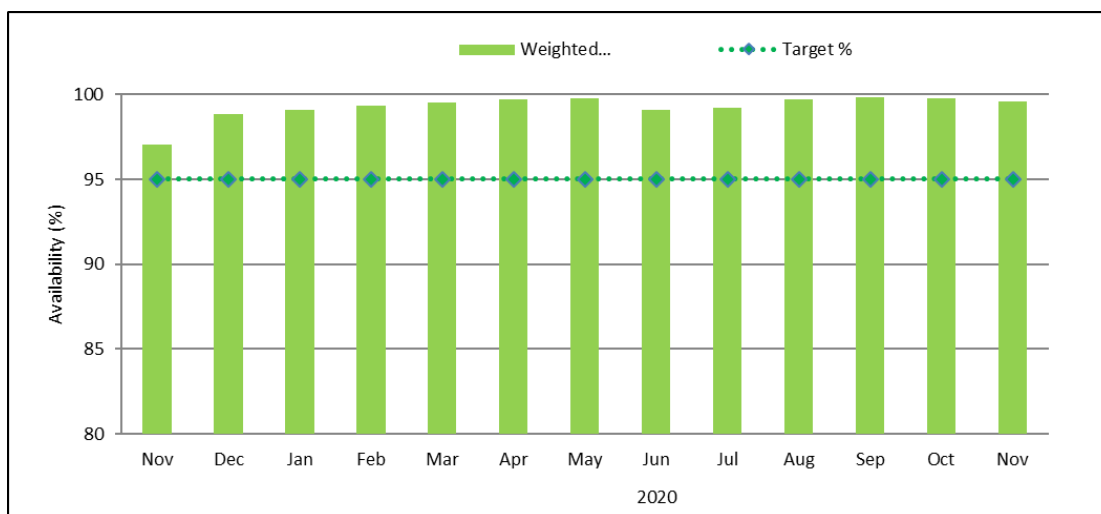
The increase in availability is attributed to the timelier resolution of application software issues.

### Action plan

We will continue to monitor availability.

**Note:** Availability data from Metrolinx may be subject to inaccuracies, as indicated in previous updates. We are working with Metrolinx to improve the methodology for determining availability. Further updates will be provided.

## PRESTO Fares and Transfer Machines (FTM)



### Definition

The average percentage of daily availability of PRESTO FTMs are based on duration of identified fault incidents to time of resolution. Cash collection incidents are currently not reflected in the calculation. The FTMs are Single Ride Vending Machines (SRVMs), installed on the new TTC streetcars and at selected streetcar stops. These allow customers to purchase Proof of Payment tickets.

### Contact

Kathleen Llewellyn-Thomas,  
Chief Strategy & Customer Officer

### Results

PRESTO FTM availability averaged 99.59% in November, which is a decrease of 0.15% from the previous month. Availability remains above the target of 95.00%.

### Analysis

The decrease in availability is attributed to an increased number of customer display and software issues.

### Action plan

We will continue to monitor availability.

**Note:** Availability data from Metrolinx may be subject to inaccuracies, as indicated in previous updates and confirmed by the Auditor General's report. We are working with Metrolinx to improve the methodology for determining availability. We are also in discussions with Metrolinx to restore the debit/credit payment feature for new streetcars. Further updates will be provided.

For further information on TTC  
performance, projects and services,  
please visit [ttc.ca](http://ttc.ca)

