



Safety and Operations Committee

Board Information Item III-A

March 11, 2021

**Metro Performance Report
Q2/FY21**

Washington Metropolitan Area Transit Authority

Board Action/Information Summary

☐ Action ☒ Information

MEAD Number:
202246

Resolution:
☐ Yes ☒ No

TITLE:

FY2021 Metro Performance Report – Q2

PRESENTATION SUMMARY:

Highlights from the Fiscal Year (FY) 2021 Second Quarter (Q2) Metro Performance Report.

PURPOSE:

Inform the Board of Metro's FY2021 performance (July - December 2020) on safety and service reliability key performance indicators.

DESCRIPTION:

There are no Interested Parties in this matter.

Key Highlights:

- Metro set FY2021 targets for metrics related to safety and service reliability in alignment with guidance from the Federal Transit Administration. The targets for safety events, employee injuries, and bus and rail fleet reliability aim for continuous improvement over prior years' performance. Targets for on-time performance, elevator and escalator availability, customer injuries and crime aim to maintain FY2020 performance levels. When applicable, the targets account for declines in ridership related to the pandemic.
- During the first six months of FY2021, targets were met for 18 of 20 measures. Metrobus on-time performance was near target, while the target was missed for red signal overruns.
- The pandemic continues to have a mixed impact on Metro's performance as lower ridership and less traffic result in fewer collisions, fewer customer-related incidents and injuries, and faster running times.

Background and History:

Metro has publicly reported performance for key operational measures since 2010. The Q2 FY2021 Metro Performance Report highlights Metro's performance on a suite of key performance indicators (KPIs) that evaluate how well the agency is delivering its mission to provide safe, equitable, reliable and cost-effective public transit and meeting the standards the Board has set for safety and service. These KPIs follow industry

standard and align to the safety performance measures established in the Federal Transit Administration's National Public Transportation Safety Plan. The report compares performance for the period of July 2020 – December 2020 to the targets that Metro set for the fiscal year.

Within Metro, this data is used on an ongoing basis to inform decision-making. The Department of Safety and Environmental Management (SAFE) utilizes multiple datasets to monitor safety activities that impact employees and the riding public. Within Operations, these measures are actively tracked by staff through a series of "Stat" performance review meetings that encourage data-driven analysis and decision-making. Departments develop fiscal year business plans with these and other measures and key actions that demonstrate departmental contribution to Metro's mission. These activities all contribute toward Metro's performance-based planning and programming approach.

Discussion:

Metro set FY2021 targets for KPIs related to safety and service reliability in alignment with guidance from the Federal Transit Administration. This guidance recommends setting realistic targets that take into account relevant goals, objectives, staffing and funding constraints. Based on the guidance, a multi-step approach to target-setting was followed:

1. Establish a baseline by analyzing trends over the last three or five years, performance during the pandemic, and peer performance (for measures where benchmarking is possible).
2. Identify and estimate influencing factors, including ridership, service levels, revenue miles, employee availability and work schedules, and capital investment plans.
3. Determine approach: continuous improvement, hold steady at FY2020 levels (if performance in FY2020 did not meet target, or significant changes in the operating or funding environment make continuous improvement challenging), or no target due to high levels of uncertainty surrounding key drivers, like ridership and service levels.
4. Set numerical target and establish a performance band.

The targets for safety events, employee injuries, and bus and rail fleet reliability aim for continuous improvement over prior years' performance. Given the uncertainty surrounding the operating budget and service levels in FY2021, targets for on-time performance, elevator and escalator availability were kept at FY2020 performance levels. Targets for crime and customer injuries were set to reach FY2020 rates by the end of the fiscal year. For bus on-time performance, which was a new measure in FY2020 and did not have a target, the FY2021 target was set at the average performance achieved from July – August 2020.

Targets were not set for ridership, customer satisfaction or crowding. Ridership is tracked relative to FY2021 budget projections. Total ridership is currently about 8% above initial budget forecasts, driven by strong ridership on Metrobus which carries

twice as many customers as Metrorail. Low ridership levels have changed the way staff collect customer satisfaction data and have made comparisons across time difficult. Crowding on bus and rail vehicles is closely monitored. However, staffing levels, fleet size, and the operating budget provide a hard cap on the amount of service that can be provided to meet demand and still enable CDC-guidelines for social distancing. As a result, a specific target for crowding metrics was not set. Metro's focus remains to stay ahead of demand and provide as much service as is feasible given budget constraints and employee availability. Rail and bus service levels are currently around 80% of pre-pandemic levels. Currently less than 1% of Metrorail passengers' trips are in crowded conditions, while just over 4% of Metrobus stops are full. In December 2020, Metro published real-time crowding predictions to enable customer to more safely plan their trips.

For the period July – December 2020, Metro met target for 18 of 20 measures, including: Ten out of 11 safety and security measures, and eight of nine quality service measures.

- Metro met its targets for safety and security measures related to crime, customer injuries (Bus, Rail and MetroAccess), bus and rail employee injuries, and safety events (serious bus collisions, rail collisions, derailments, and fires).
- Metro met its targets for Rail and MetroAccess on-time performance; Bus, Rail and MetroAccess fleet reliability; available track; and elevator and escalator availability. Bus and Rail fleet reliability both achieved record high levels due to a sustained focus by maintenance and engineering staff on addressing key failures and minimizing service interruptions.

Metro missed target for red signal overruns, experiencing ten incidents compared to a target of five or fewer. Six events were in the yard, while four were on the mainline. All mainline events occurred at slow speeds (<15 miles per hour) as trains were leaving or entering stations and involved operators that had less than one year of experience. No passengers were injured. Three did not result in any damage to Metro equipment while one resulted in a derailment – the first in 18 months. Human factors were the main causal factors, including failed compliance with published policy and procedures and unfamiliarity with the track environment. In response, training simulators will be used to combat complacency, additional engineering solutions are being researched, a system-wide survey of signals will be completed, and a campaign to call-out signals will be piloted.

Metro fell just shy of its target for bus on-time performance, remaining within the performance band. Reduced traffic as a result of the pandemic has significantly increased early departures. Metro will implement a new schedule in mid-March 2021 that is adjusted to reflect reduced traffic levels.

The pandemic continues to have a mixed impact on Metro's performance. For example, lower ridership has reduced injuries caused by crowding and those stemming from negative customer interactions such as employee assaults and stress claims. Less traffic has led to fewer collisions and collision-related injuries, but has significantly increased Metrobus early departures. Employee availability has not had an impact on Metro's ability to provide safe and reliable service. After swiftly implementing

precautions to protect employees and reduce the risk of exposure in the workplace, staff returned to schedules similar to those in FY2020, enabling maintenance and capital work to continue as planned and service to resume to near pre-pandemic levels.

FUNDING IMPACT:

There is no impact on funding for presentation of these metrics.	
Project Manager:	Joseph Leader
Project Department/Office:	Chief Operating Officer

TIMELINE:

N/A

Q2 Metro Performance Report

July – December 2020

Safety & Operations Committee
March 11, 2021



Purpose

- Provide information on Metro's performance on safety and service reliability KPIs from July – December 2020
- Communicate key initiatives to improve and/or sustain performance levels

FY2021 Targets

- Approach followed federal guidance to set realistic targets
- Uncertainty about ridership and service levels impacts many measures



Safety & Security

- Continuous improvement for safety events and employee injuries
- Reach FY20 performance levels by end of fiscal year for crime and customer injuries, convert from rate to count



Quality Service

- Continuous improvement for bus and rail fleet reliability
- Maintain FY20 performance for on-time performance, MetroAccess fleet reliability, elevator and escalator availability



Safety & Security

10 out of 11 measures met or performed better than target



Legend ● Met or above target | ● Near target | ● Target not met | ● No target | ↓ ↑ Desired direction



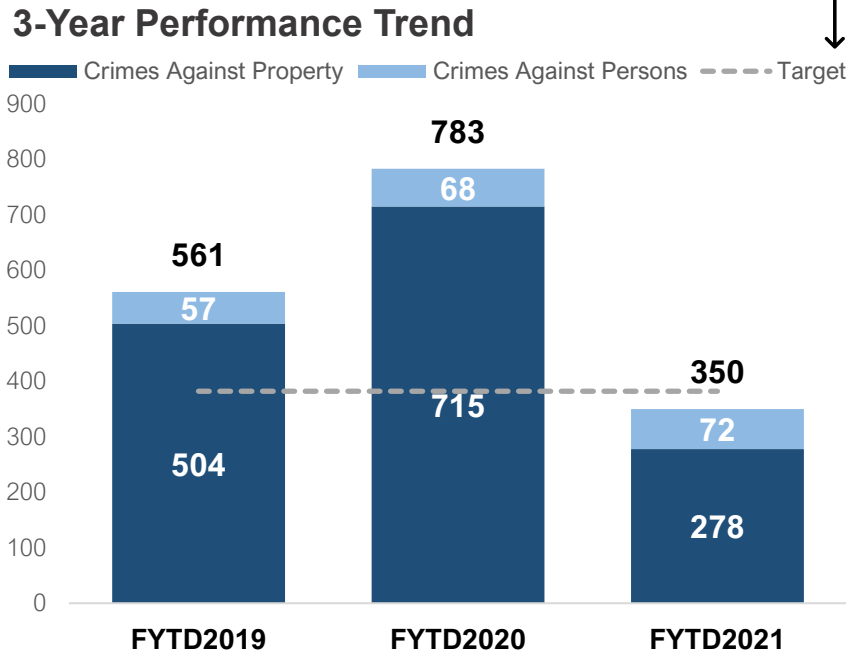
Part I Crime | 350 crimes vs. target of 382 through December 2020

Metro averaged 58 crimes per month during the first half of the fiscal year, 55% below the same time last year

Key actions to sustain performance

- Install public safety radio systems
- Improve station lighting
- Deploy Daily Security Observation Response Team (SORT) details

Crimes Against Property have fallen over 60% compared to FY20 while Crimes Against Persons have increased slightly



Customer Injuries | 95 injuries vs. target of 282 through December 2020

All modes met target during first half of fiscal year, benefitting from less crowding and fewer collisions

Rail Customer Injuries | 32 injuries vs. target of 69

- Station modernization improvements to address slip/trip/fall hazards

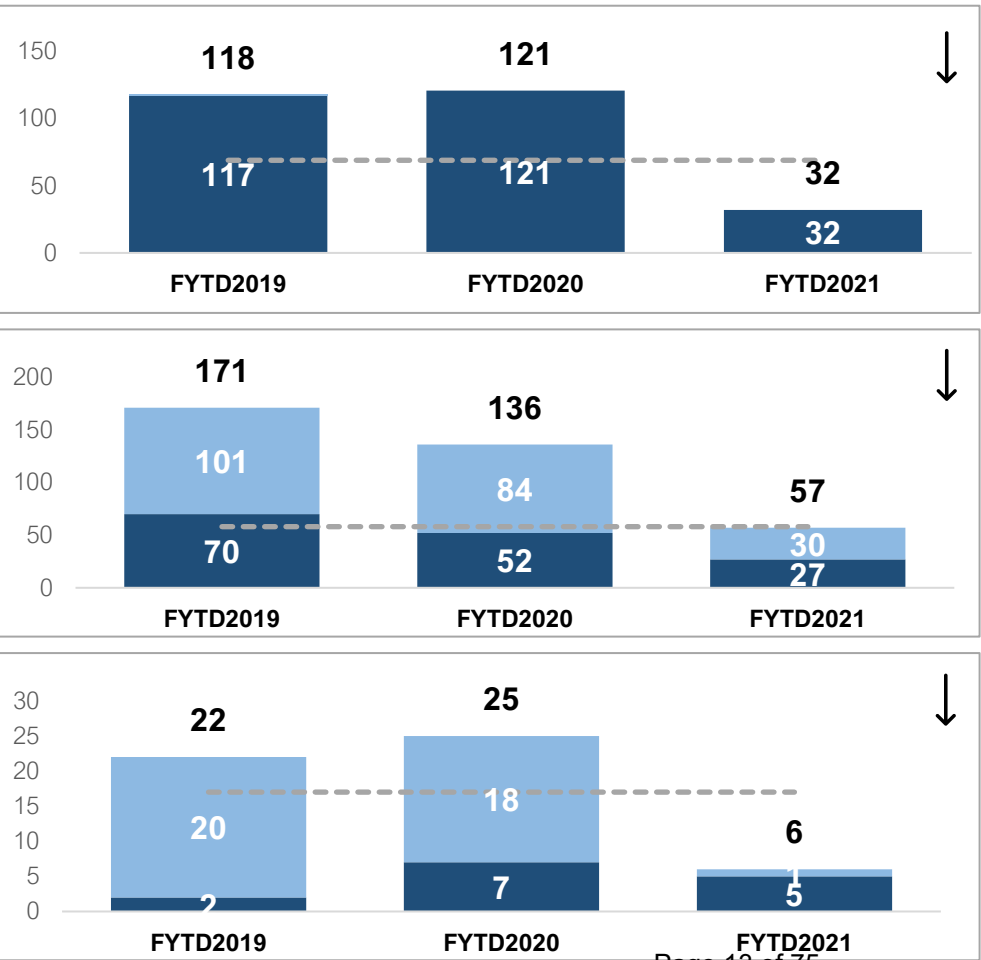
Bus Customer Injuries | 57 injuries vs. target of 58

- Investigate bus stop injuries and address causal factors
- Conduct safety observations at sites of frequent collisions

MetroAccess Customer Injuries | 6 injuries vs. target of 17

- Expand MetroAccess DriveCam to support coaching on safe behavior
- Conduct annual operator wheelchair recertifications

3-Year Performance Trend



Employee Injuries | 4.5 injuries per 200,000 work hours

Injuries fell due to less traffic / fewer collisions and fewer negative customer interactions thanks to lower ridership

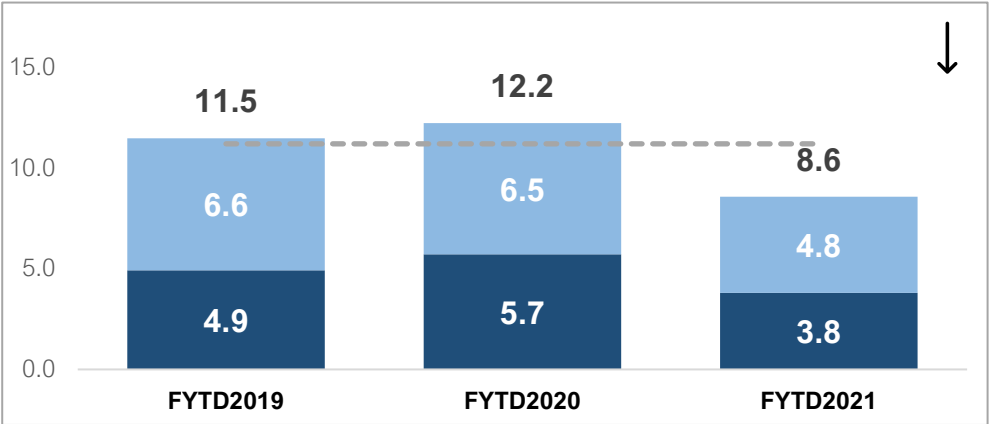
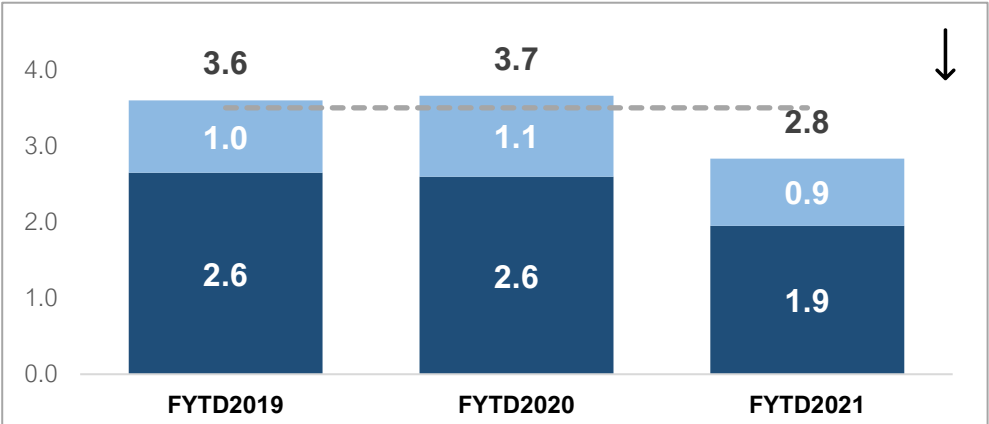
Rail System | 2.8 injuries per 200,000 work hours vs. target of 3.5

— Conduct safety observations and address unsafe behaviors

Bus | 8.6 injuries per 200,000 work hours vs. target of 11.2

— Conduct safety observations and address unsafe behaviors

3-Year Performance Trend

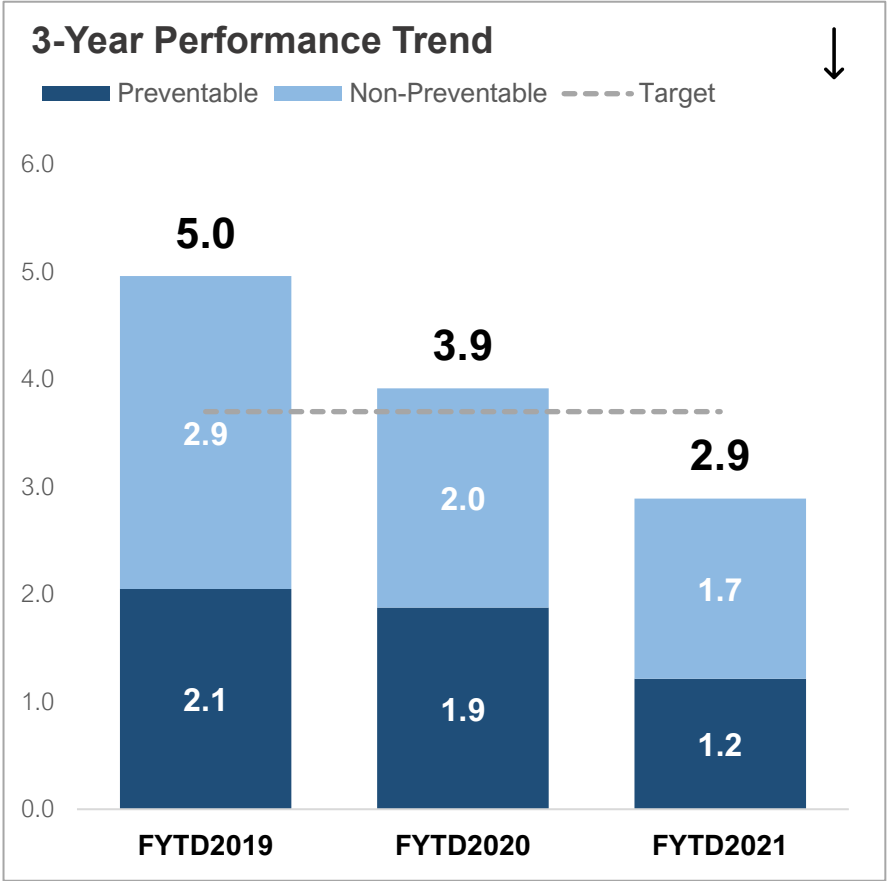


NTD Bus Collisions | 2.9 per million miles vs. target of 3.7

Less traffic has led to fewer serious collisions

Key actions to sustain performance

- Procure and install collision avoidance technologies
- Training program to address key factors, improve driving techniques



Rail Incidents | 21 incidents vs. target of 44 through December 2020

Over 50% fewer rail safety events than target, driven by large decreases in both electrical and debris fires

Rail Collisions | 2 collisions vs. target of 4

- Both in yards
- Updated SOP on moving rail vehicles within yards
- Monthly compliance checks on safety stops in rail yards

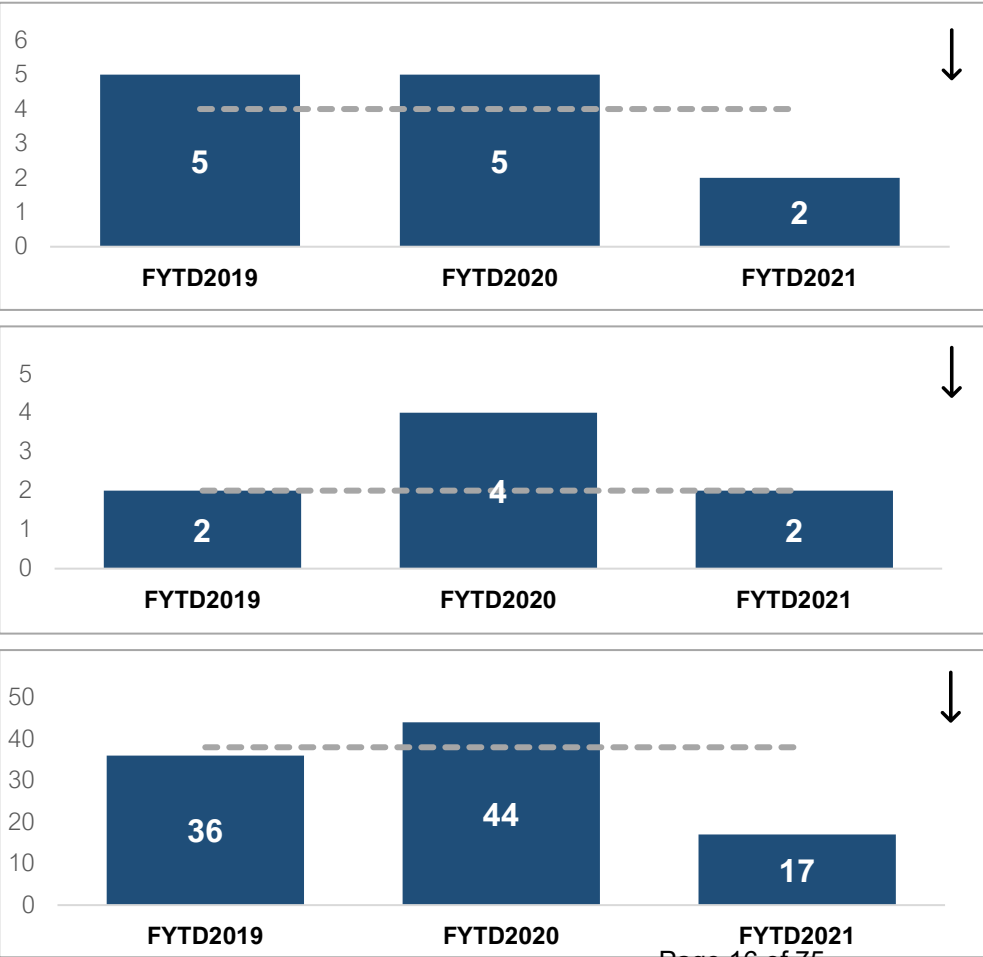
Derailments | 2 incidents vs. target of 2;

- One on mainline, one in yard
- Updated SOPs to include stop and proceed rule, protocol for contacting ROCC after losing speed commands, protocol for incident command
- Virtual refresher training on preventing zero speed command violations

Fire Incidents | 17 incidents vs. target of 38

- 9 non-electrical, 5 electrical (arcing or grounded track components), 3 station/facility equipment
- Debris and drain cleaning aimed at reducing fires, with increased focus on Red Line
- Installation of thermoplastic insulators to reduce arcing events

3-Year Performance Trend



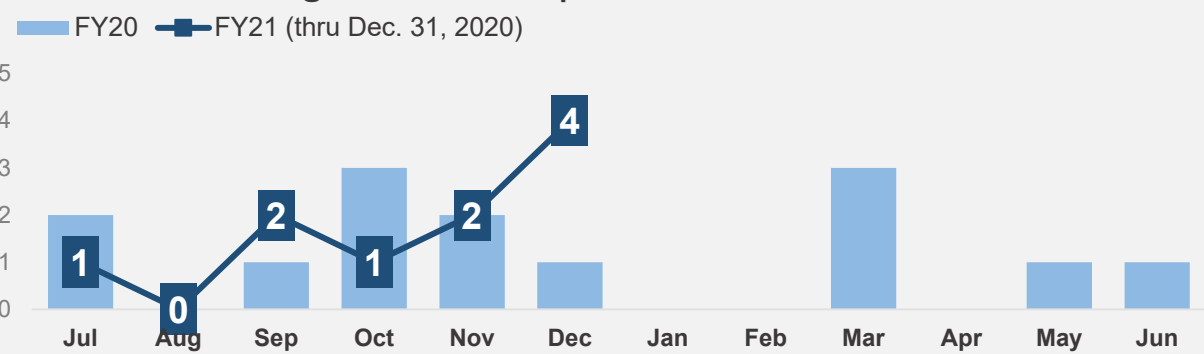
Red Signal Overruns | 10 incidents vs. target of 5 through December 2020

Operator error, failure to follow procedure and miscommunication

Key Factors

- Six in yards: no speed commands
- Four on mainline: low speeds, lower-tenured employees

Number of red signal overruns | FY21 vs FY20



Key actions to improve performance

- Stop and Proceed
 - Software upgrades to 7K complete
 - Completing 6K upgrades; expediting upgrades to 2K/3K
- Safety stand-down conducted
- Computer-based refresher training instituted
- Lessons learned bulletin issued
- Improved Permanent Order issued for moving trains without speed commands
- Red Signal Overrun Safety Advisory – SAFE-developed document on avoiding distractions

Red Signal Overruns | Slow Speed Mainline Events

Key Factors

- Slow speeds (<15 mph) as trains entering/leaving the station
- All operators < 1 year of experience
- No passengers injured
- Three resulted in no damage; one in derailment

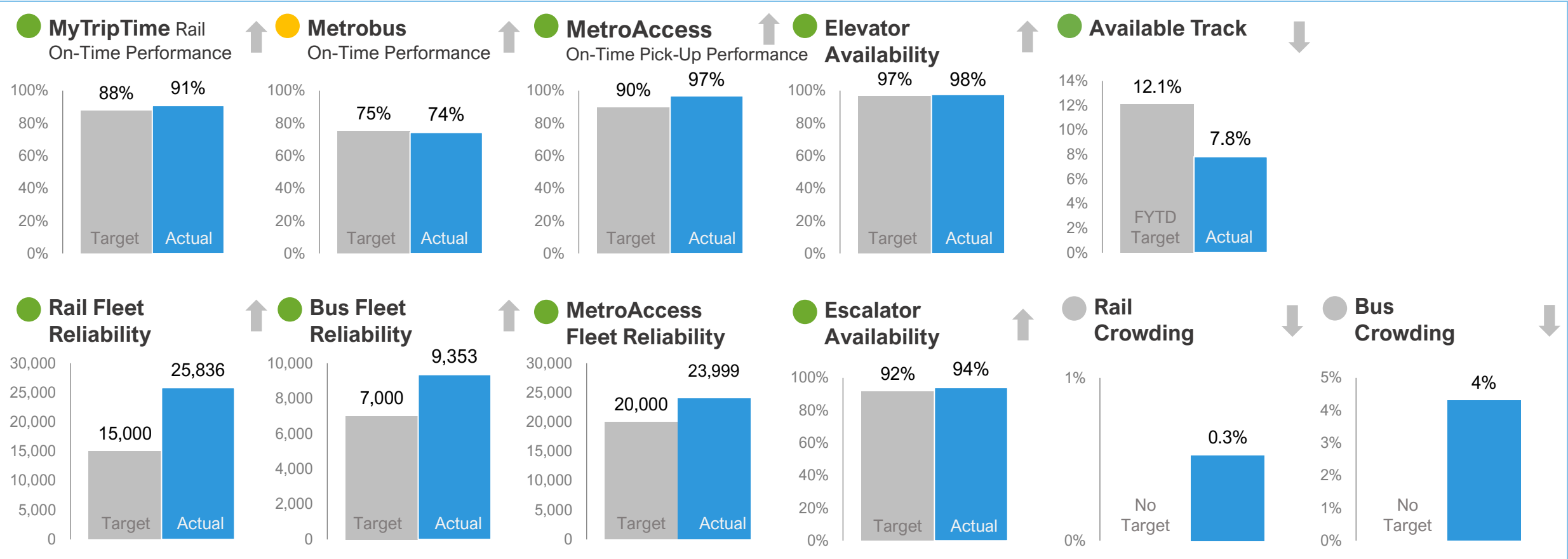
Additional actions to improve performance

- Use training simulators to combat complacency
 - Four simulators arrive in March 2021
- Research engineering solutions
- Continue system-wide survey of signals (20% complete)
- Pilot campaign to call-out signals



Quality Service

8 out of 9 measures met or exceeded target



Legend ● Met or above target | ● Near target | ● Target not met | ● No target | ↑↓ Desired direction

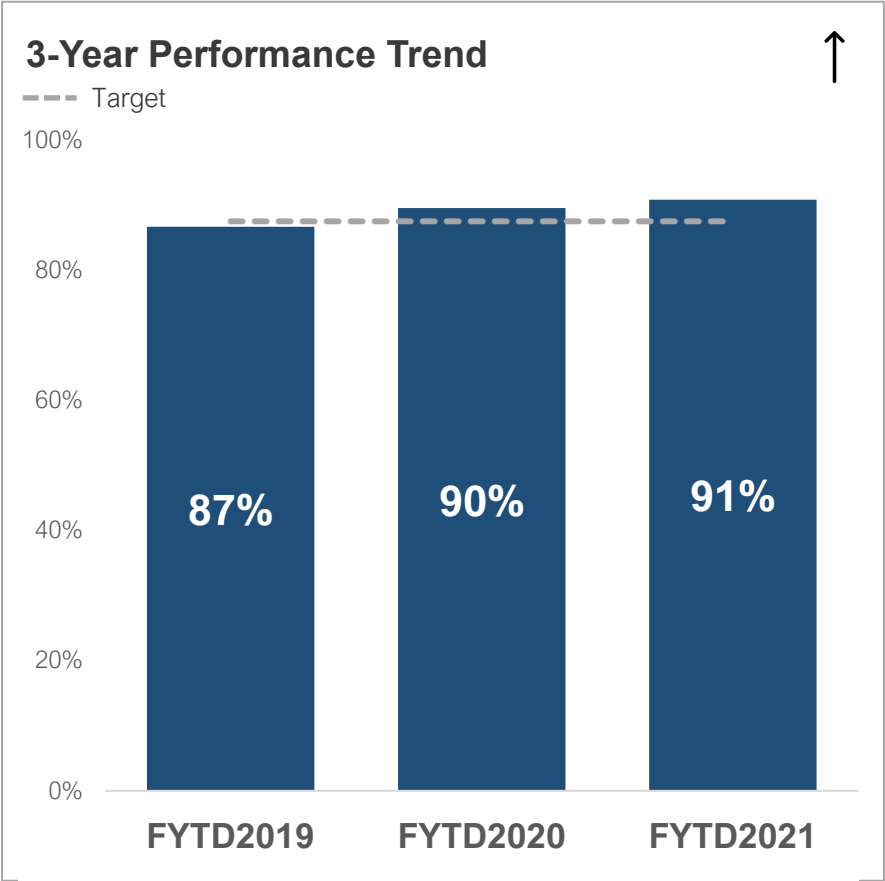


MyTripTime | 91% on-time vs. target of 88%

Consistently surpassed target every month, bolstered by fewer railcar failures

Key actions to sustain performance

- Monitor schedule adherence
- Ensure rail infrastructure remains in a state of good repair
- Railcar maintenance, rehab and replacement program

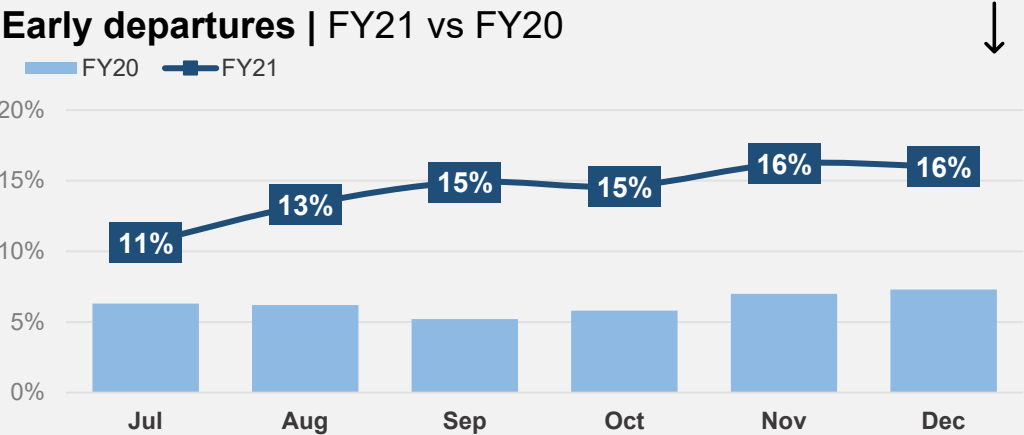


Bus On-Time Performance | 74% on-time vs. target of 75%

Reduced traffic levels, lower ridership resulted in more early departures

Key Factors

- 15% of buses departed timepoints early
- Nearly all early departures occurred mid-route
- Schedule reflects pre-pandemic traffic levels and end-to-end travel times



Key actions to improve performance

- Implement a new schedule in mid-March 2021 that is adjusted to reflect current run times

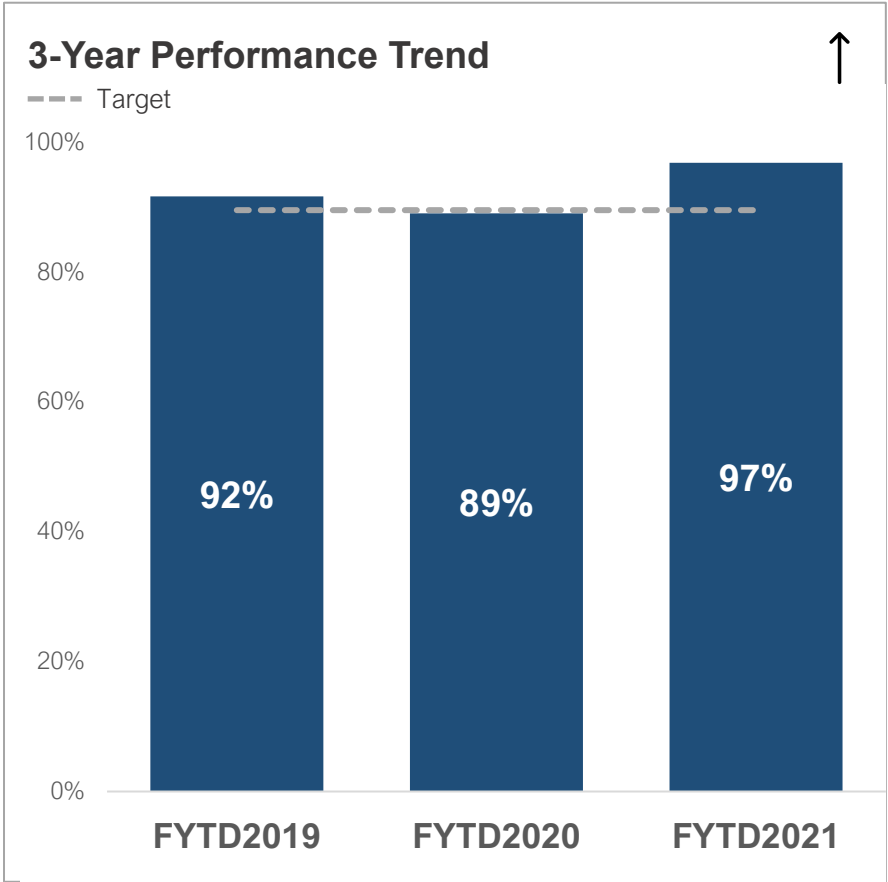


MetroAccess On-Time Pick-Up Performance | 97% on-time vs. target of 90%

Exceeded target every month due to less traffic, reduced ridership, and elimination of shared rides

Key actions to sustain performance

- Improve accuracy of length-of-trip estimates
- Dynamically adjust the system’s scheduling parameters
- Leverage available taxi and alternative resources
- Pursue a new cutting-edge scheduling and dispatch system



Fleet Reliability

Record performance for rail and bus fleets due to sustained focus on addressing key failures, replacing aging vehicles

Rail | 25,800 miles between failure vs. target of 15,000

- Reliability analysis and frequent inspections
- Scheduled Maintenance Program

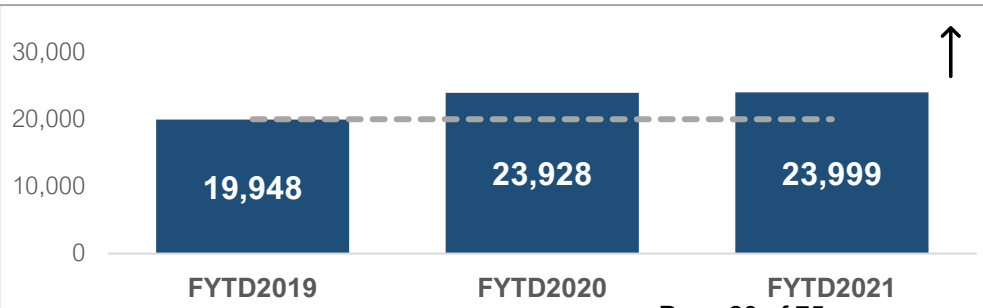
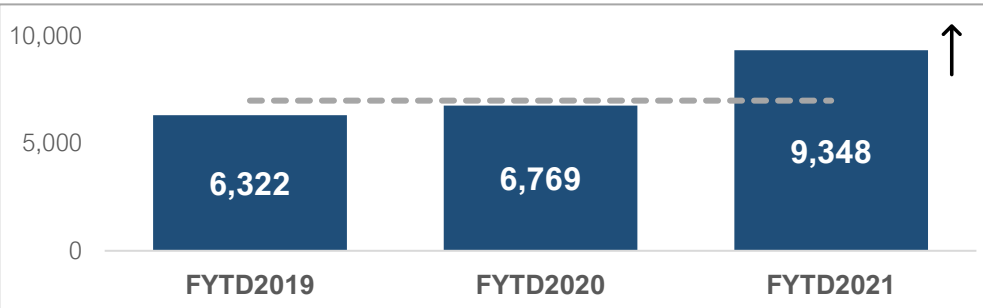
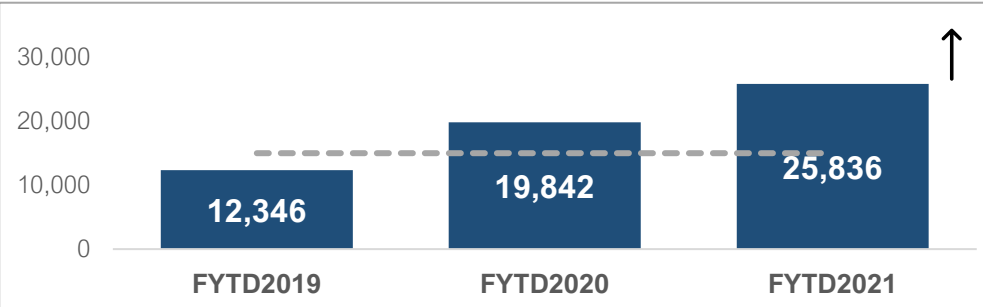
Bus | 9,300 miles between failure vs. target of 7,000

- Improve failure reporting
- Internal quality audits of preventive maintenance programs and service lane activities

MetroAccess | 24,000 miles between failure vs. target of 20,000

- Replacement of Ford Transit vans
- Preventive maintenance inspections and quarterly fleet audit

3-Year Performance Trend --- Target

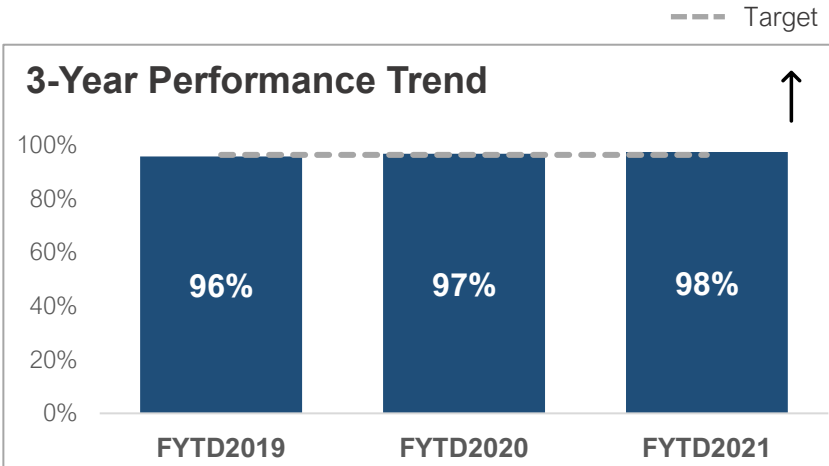


Escalator & Elevator Availability

Met target due to fewer unplanned outages resulting from reliability improvements, as well as lower usage

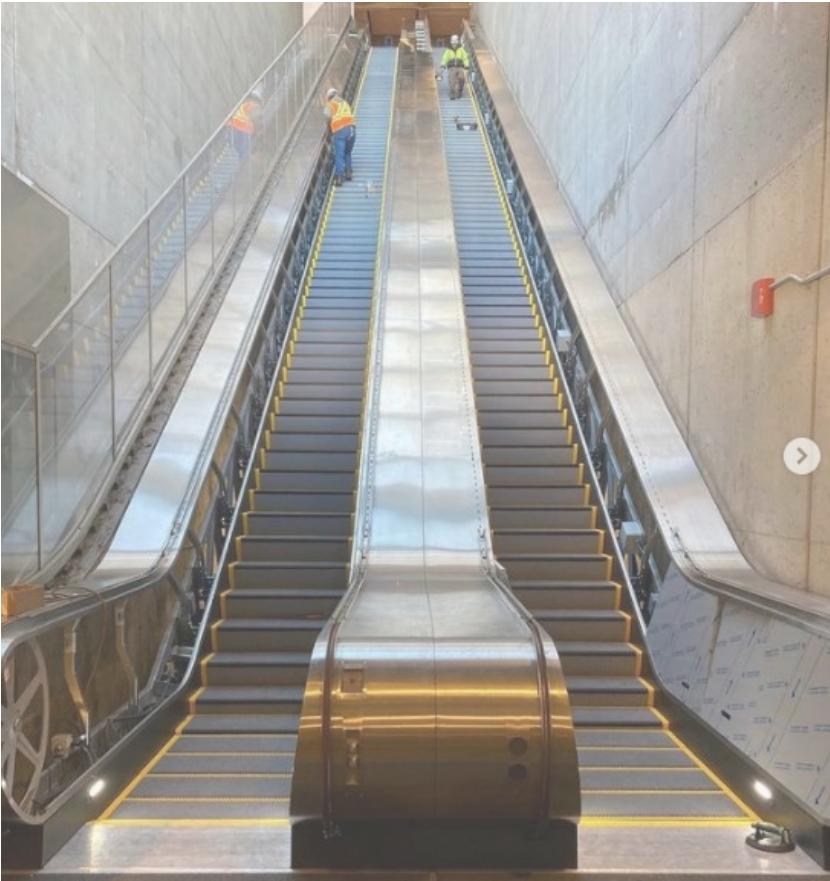
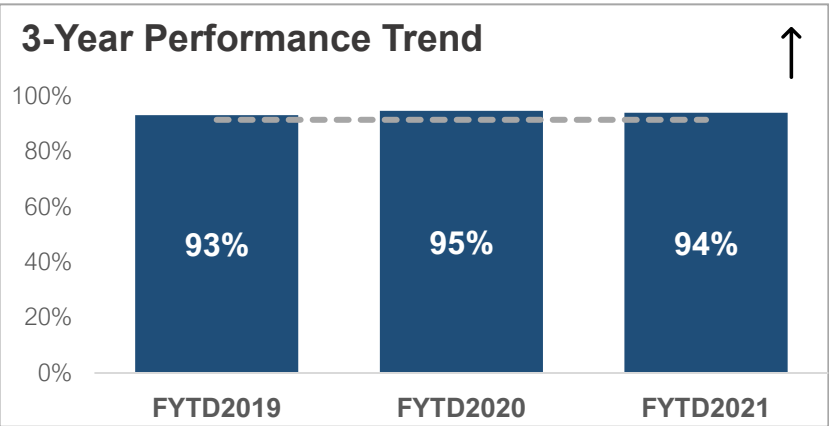
Elevator | 98% vs. target of 97%

- Continue current elevator renewal contract; identify units in need of replacement for the next contract
- Establish water remediation program to address related failures in elevator shafts



Escalator | 94% vs. target of 92%

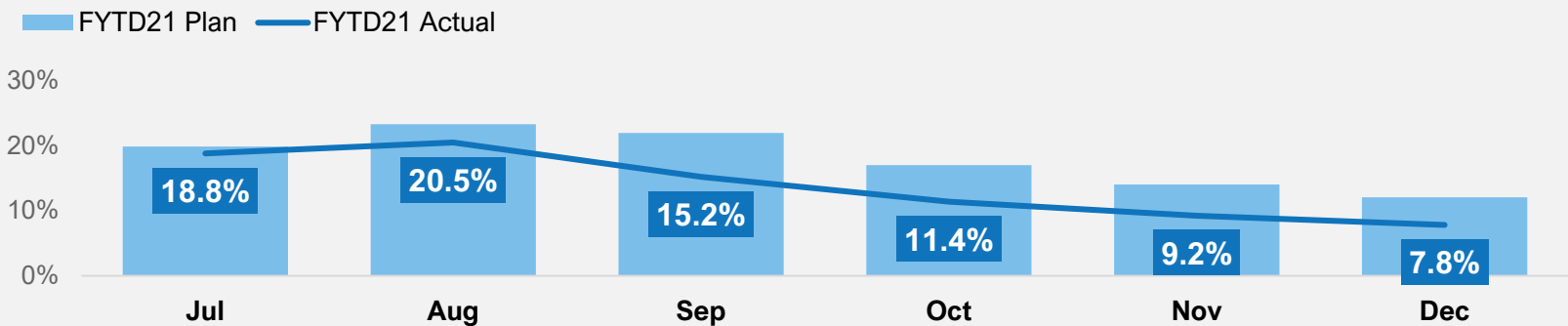
- Enhance mechanic training with new KONE Transit escalator at training lab
- Continue to train new apprentice class
- Begin rehabilitation of 89 escalators (first four complete by end of FY21)



Available Track | 7.8% unavailable vs. target of 12.1%

Fewer condition-related restrictions, early completion of capital projects led to better performance

Cumulative guideway restrictions % | FY21 vs Target



Key actions to sustain performance

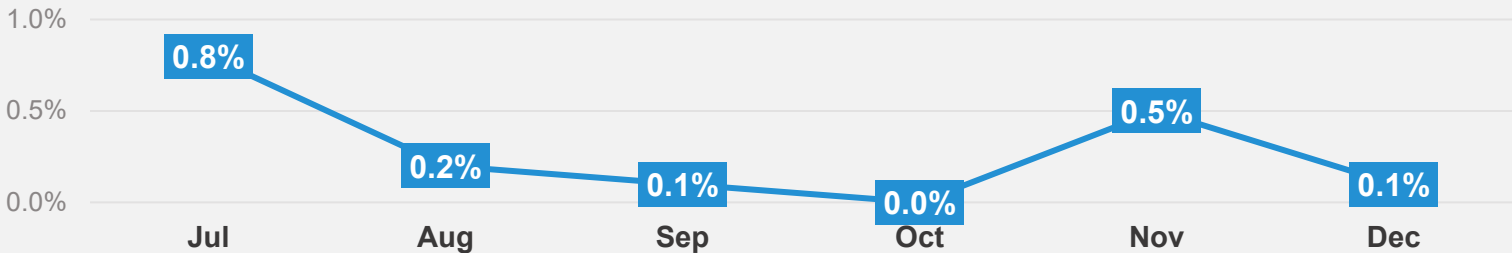
- Continue preventive maintenance and capital programs
- Install heat tape at up to four more stations before fall, eliminating the need for speed restrictions in these areas



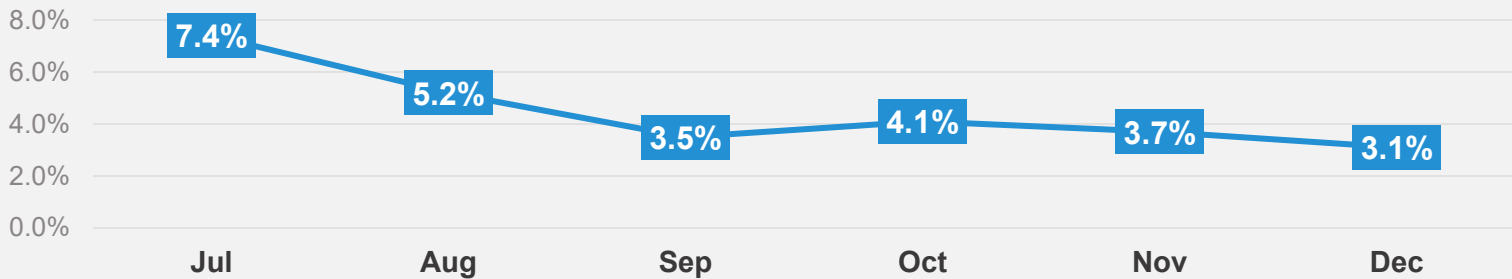
Crowding no target

Real-time crowding information for both modes now available on transit apps

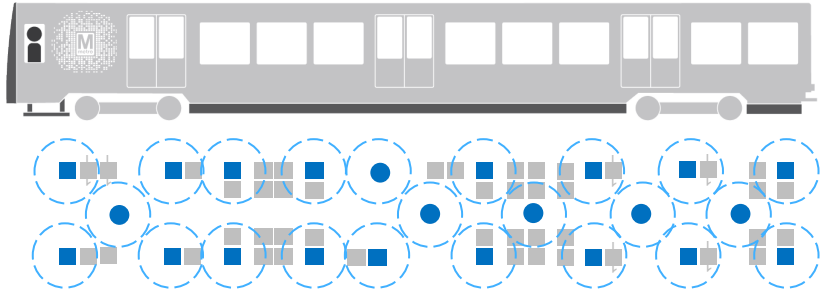
Metrorail | 0.3% passenger travel time with >23 passengers per car



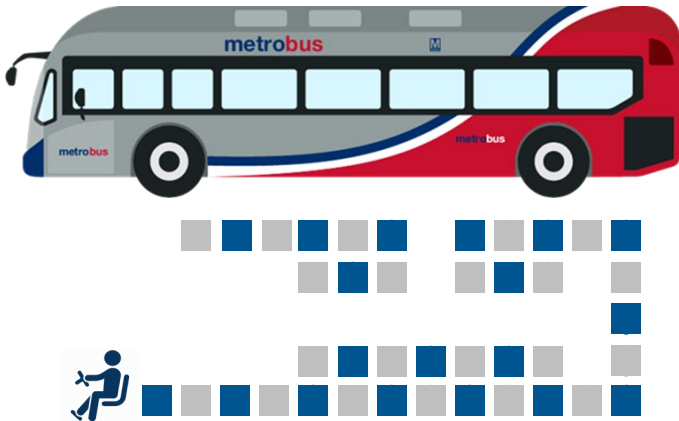
Metrobus | 4.3% stops encountered with >20 passengers on the bus



23 passengers per railcar



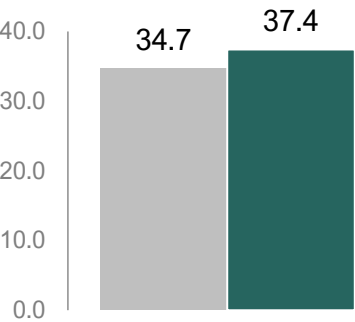
20 passengers per bus



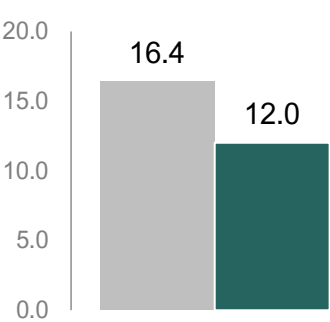


Ridership

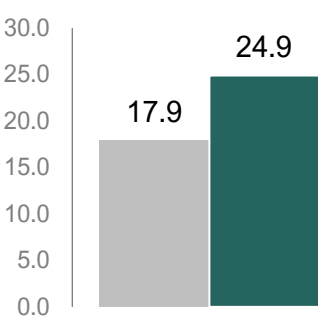
Total in millions



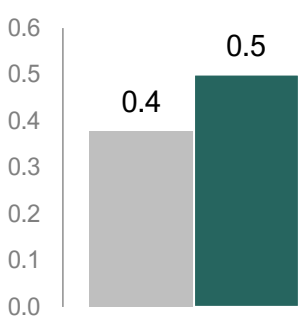
Metrorail in millions



Metrobus in millions



MetroAccess in millions



Highlights

- Total ridership almost 8% above initial budget forecasts; driven by ridership on Metrobus
 - Returned to front-door boarding and fare collection 1/3/21
- Metrobus carries twice as many customers as Metrorail
- Additional Metrobus service planned for Spring to support higher ridership, improve reliability



WASHINGTON METROPOLITAN AREA TRANSIT AUTHORITY

PERFORMANCE REPORT

Q2/FY2021

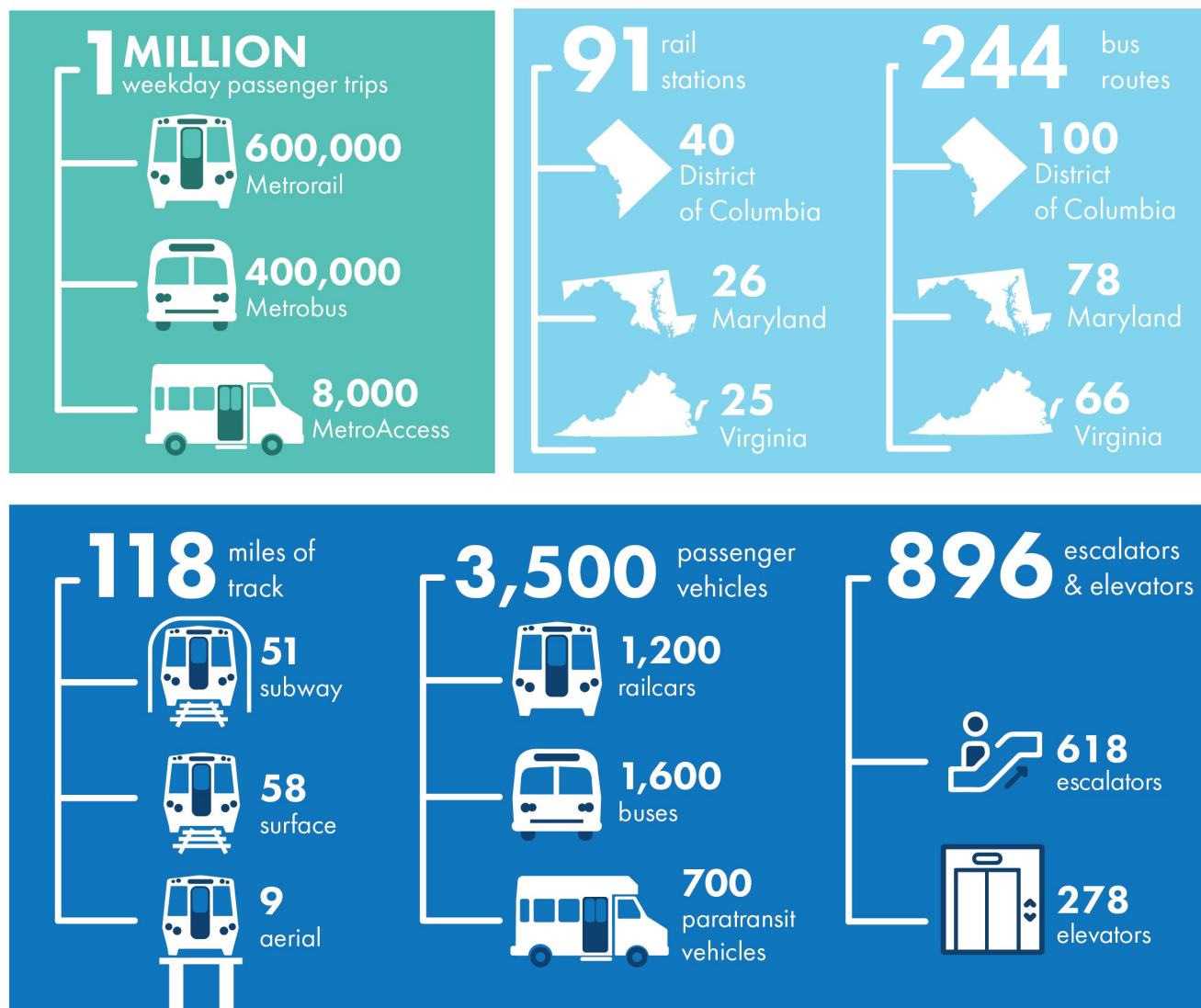
July – December 2020



Published
February 5, 2021

ABOUT METRO¹

The Washington Metropolitan Area Transit Authority (Metro) is one of the largest transit organizations in the United States. Formed in 1967 under an interstate compact among the District of Columbia, the State of Maryland, and the Commonwealth of Virginia, the Metro service area is approximately 1,500 square miles, with a population of approximately four million people. Metro provides three core transit functions: Metrorail, Metrobus, and MetroAccess paratransit. Prior to the pandemic, average weekday passenger trips combined on all three modes totaled approximately one million.



¹As of March 1, 2020. The Covid-19 pandemic has impacted these statistics.

HOW TO READ THIS REPORT

The Q2 FY2021 Metro Performance Report highlights Metro's performance on a suite of key performance indicators (KPIs) that evaluate how well the agency is delivering its mission to provide safe, equitable, reliable and cost-effective public transit and meeting the standards the Board has set for safety and service. These KPIs follow industry standard and align to the safety performance measures established in the Federal Transit Administration's National Public Transportation Safety Plan. The report compares performance for the period of July 2020 – December 2020 to the targets that Metro set for the fiscal year. Colored indicators throughout the report show the status against target. Targets that are counts (e.g., number of Part I crimes, number of customer injuries) have been pro-rated to reflect expected values for six months of the fiscal year. During the first half of FY2021, Metro met or exceeded target for 18 out of 20 measures, including: 10 out of 11 safety and security measures, and eight out of nine quality service measures. Metro did not meet target for red signal overruns, a rail safety measure, and fell just below its target for Metrobus on-time performance.



Safety & Security

10 out of 11 measures met or target in the first half of the fiscal year

- Part I Crime
- Metrorail Customer Injury Rate
- Metrobus Customer Injury Rate
- MetroAccess Customer Injury Rate
- Rail System Employee Injury Rate
- Bus Employee Injury Rate
- NTD Bus Collision Rate
- Rail Collisions
- Derailments
- Fire Incidents








Quality Service

8 out of 9 measures met target in the first half of the fiscal year

- MyTripTime
- MetroAccess On-Time Pick-up Performance
- Rail Fleet Reliability
- Bus Fleet Reliability
- MetroAccess Fleet Reliability
- Elevator Availability
- Escalator Availability
- Available Track

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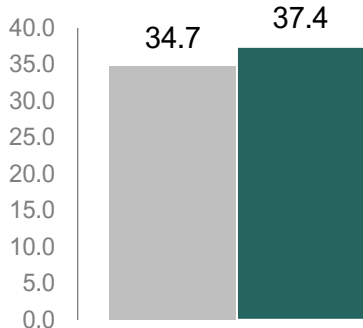
	RIDERSHIP	<ul style="list-style-type: none">▪ Ridership	PAGE 5
	SAFETY & SECURITY	<ul style="list-style-type: none">▪ Crime▪ Injuries▪ Safety incidents	PAGE 6
	QUALITY SERVICE	<ul style="list-style-type: none">▪ On-time performance▪ Fleet reliability▪ Asset availability▪ Crowding	PAGE 15
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RIDERSHIP

The total ridership of 37.4 million through the second quarter of FY21 is 7.8% above the forecast of 34.7 million but 76% below the same time in FY20.

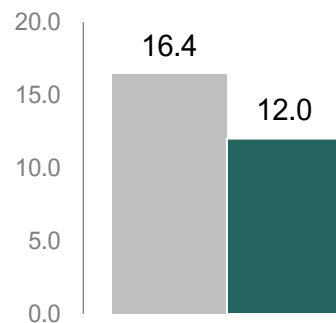
In a departure from historic trends, Metrobus ridership continues to exceed Metrorail ridership, with about twice as many Metrobus customers compared to Metrorail customers.

Ridership in millions ↑



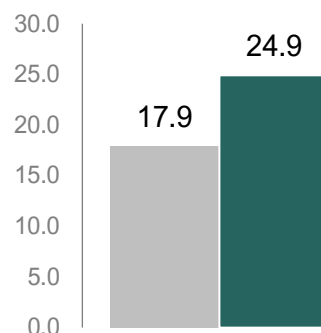
Metrorail Budget Actual ↑

- Through quarter two, ridership was 12 million, down 27% compared to budget and down 87% compared to prior year
- Average weekday ridership was 76,000, down 88% from prior year
- Average weekend ridership was 42,000, down 81% from prior year



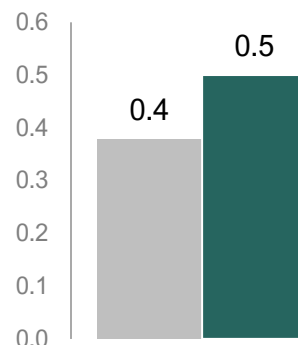
Metrobus Budget Actual ↑

- Through quarter two, ridership was 24.9 million, 39% above budget but down 61% compared to the prior year
- Average weekday ridership was 146,000, down 58% from the prior year
- Average weekend ridership was 85,000, down 46% from prior year



MetroAccess Budget Actual

- Through quarter two, MetroAccess carried about 500,000 passengers, 32% higher than budget but down 57% compared to the prior year
- Average weekday ridership is 3,300 passengers



Metro's **Ridership Data Portal** provides ridership data since 2010, including during the pandemic. Engage with the data through interactive dashboards using the Data Viewers ([Rail](#), [Bus](#), [Parking](#)).

Legend

● Met or above target | ● Near target | ● Target not met | ● No target | ↑↓ Desired direction

SAFETY + SECURITY TARGETS



Each fiscal year, Metro establishes performance targets for KPIs. These measures and targets are an important way for Metro to track progress through the year, and ultimately reflect how effectively Metro is delivering its mission to provide safe, equitable, reliable and cost-effective public transit.

For FY21, Metro established the following mode-level safety performance targets as part of Metro's Agency Safety Plan (ASP):

Mode	Fatality Rate*	Fatality Count	Injury Rate*	Injury Count	Safety Event Rate*	Safety Event Count
Rail	0	0	38.06	324	11.05	95
Bus	0	0	95.73	359	69.32	260
MetroAccess	0	0	24.22	54	7.78	18

*per 10 million Vehicle Revenue Miles (VRM)

For internal management and public reporting, Metro developed a suite of measures and targets that feed into the mode-level, summary KPIs above. For safety performance measures related to employee injuries and reportable safety events, the approach is to continuously improve relative to prior years' performance levels. This follows FTA guidance to set realistic targets, emphasizes the importance of building a safety culture, motivates staff to improve, and moves the agency along a glidepath to zero safety events. In this report, the annual targets listed below for customer injuries, rail collisions, derailments, fire incidents, and red signal overruns have been pro-rated to reflect the first six months of the fiscal year and are labeled "FYTD target."

Measure	FY21 target	Methodology
Rail Customer Injuries # of injuries	177 or ↓	Hold steady at FY2020 rate
Bus Customer Injuries # of injuries	154 or ↓	Hold steady at FY2020 rate
MetroAccess Customer Injuries # of injuries	35 or ↓	Hold steady at FY2020 rate
Rail System Employee Injuries # per 100 employees	3.5 or ↓	5% improvement from 3-year average
Bus Employee Injuries # per 100 employees	11.2 or ↓	5% improvement from 3-year average
NTD Bus Collision Rate # per million miles	3.7 or ↓	7.5% improvement from 3-year average
Rail Collisions # of collisions	7 or ↓	Improve relative to FY2020
Derailments # of incidents	4 or ↓	Improve relative to FY2020
Fire Incidents # of incidents	66 or ↓	Improve relative to FY2020
Red Signal Overruns # of incidents	11 or ↓	Improve relative to FY2020

SAFETY & SECURITY

The following highlights Metro's system-wide safety performance through the first half of FY21.

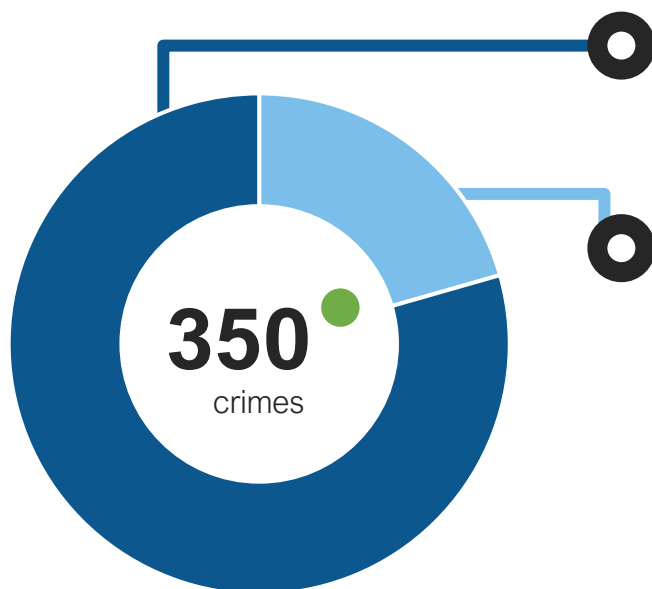




During the first half of FY21, Metro had 350 Part I crimes, about 58 crimes per month, meeting target of no more than 382 crimes.

Metro had 55 percent fewer crimes in the first half of FY21 compared to the same period in FY20. However, when scaled to ridership, the Part I crime rate increased 88 percent compared to the same period last fiscal year, with 9.4 crimes per million trips in FY21 compared to 5.0 in FY20. While the number of crimes is down, ridership is down even more (76 percent drop). Two-thirds of crimes occurred on Metrorail.

What crimes occurred?



FYTD Target ≤ 382

Crimes Against Property – 79%

Metro averaged 46 crimes against property per month across the system, which include Theft, Motor Vehicle Theft, Arson, Robbery, and Burglary. This is a 61 percent decrease from the same period last fiscal year.

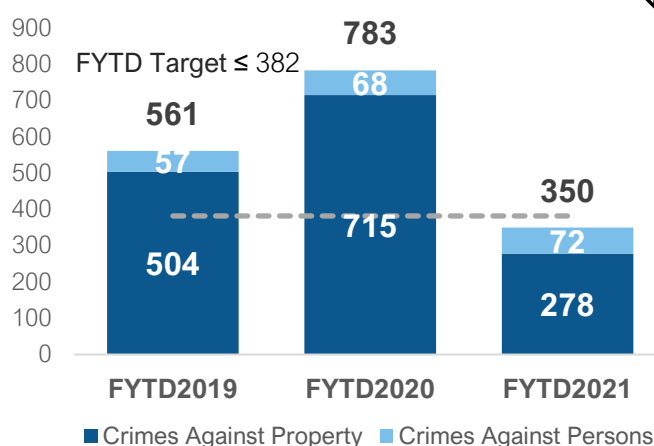
Crimes Against Persons – 21%

Metro averaged 12 crimes against persons per month across the system, which include Aggravated Assault, Homicide, and Rape. This is about the same as last fiscal year.

Key actions to improve performance

- ▶ Enhance safety features to reduce all types of crimes across the system.
 - Install public safety radio systems
 - Improve station lighting
- ▶ Daily Security Observation Response Team (SORT) details deployed for increased visibility to deter crimes against persons and properties in rail stations.

3-Year Performance Trend



CUSTOMER INJURIES



Metrorail Customer Injuries | 32 injuries

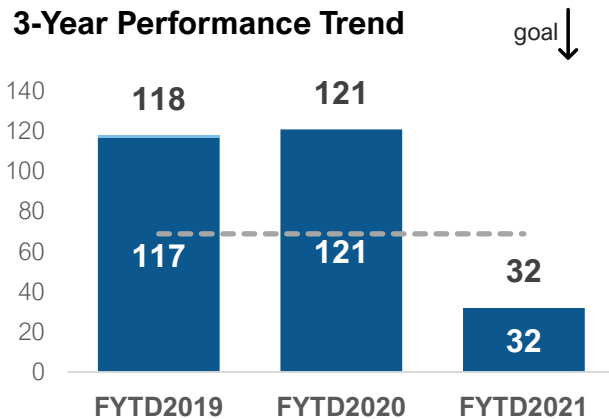
--- FYTD Target ≤ 69

Non-Preventable
Preventable

Metrorail experienced 32 customer injuries during the first half of FY21, meeting target. These 32 injuries result in a rate of 2.5 injuries per million passengers.

Slips, trips and falls account for 84 percent of all injuries this fiscal year. Most injuries occurred on station platforms or when customers fell onto the roadway. Twelve customers were injured on escalators and five customers were injured onboard trains. The most common factors for injuries are customer inattention/distraction, boarding/alighting, train motion (e.g. quick stops), and wet surfaces.

3-Year Performance Trend



Key actions to sustain performance

- ▶ Continue station modernization improvements to reduce hazards that result in slip/trip/fall and train door injuries.
- ▶ Install escalator floor warnings to increase customer attentiveness as they are approaching the end of the escalator.

Metrobus Customer Injuries | 57 injuries

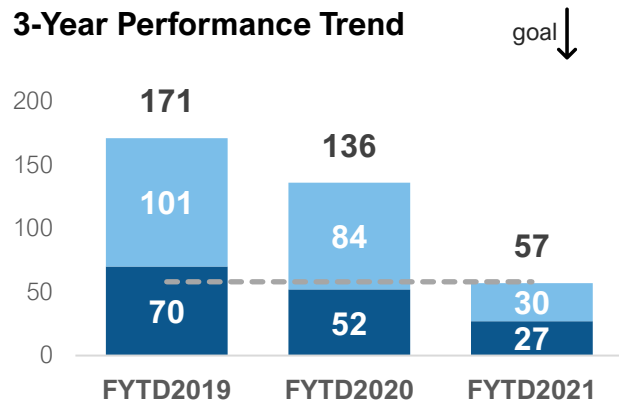
--- FYTD Target ≤ 58

Non-Preventable
Preventable

Metrobus experienced 57 customer injuries during the first half of FY21, meeting target. These 57 injuries result in a rate of 2.3 per million passengers.

The top two types of injuries this fiscal year are slips, trips and falls (32 injuries) and collisions (15 injuries). There were about half as many of these injury types this fiscal year compared to FY20. Injuries most frequently occur when the bus is in motion (e.g., during hard braking events) and when customers are boarding or alighting vehicles.

3-Year Performance Trend



Key actions to sustain performance

- ▶ Continue investigation of bus stop incidents to identify causal factors that result in customer injury.
- ▶ To reduce boarding and alighting injuries, Field Supervisor personnel are focusing safety observations at bus stops to monitor the bus approach angle and alignment of the rear door with the curb – a change from the pre-pandemic bus berthing procedure.
- ▶ Identification of intersections that are hot spots for collisions for heightened observation by Field Supervisors.

CUSTOMER INJURIES



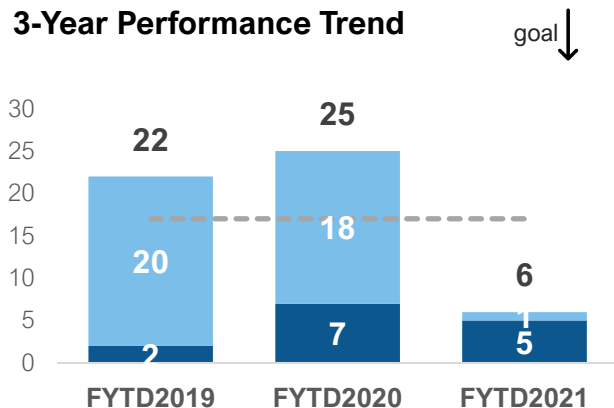
MetroAccess Customer Injuries | 6 injuries
-- FYTD Target ≤ 17

Non-Preventable
Preventable

MetroAccess experienced six customer injuries resulting in a rate of 1.2 per 100,000 passenger trips during the first half of FY21, meeting target.

There were five preventable injuries and one non-preventable injury. The injuries were due to collisions (2) and slips, trips and falls (4).

3-Year Performance Trend



Key actions to sustain performance

- ▶ Updated DriveCam units, adding live and continuous audio and video recording capability. This enhances root cause analysis and enables timely behavioral coaching for vehicle operators.
- ▶ Conduct annual Operator Wheelchair Recertification to reinforce current securement best practices.

EMPLOYEE INJURY RATE



Rail System Employee Injury Rate | 2.8 per 100 employees

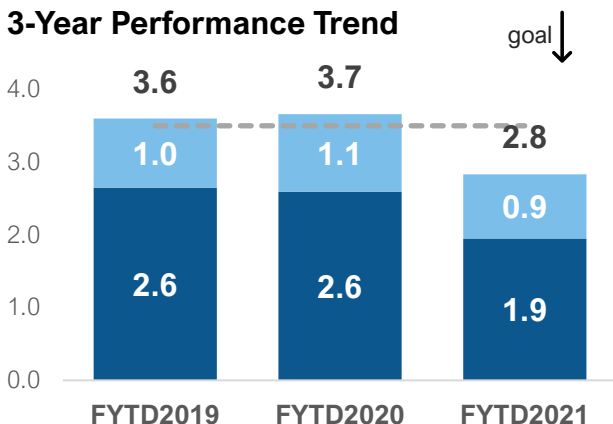
-- Target ≤ 3.5

Non-Preventable
Preventable

During the first half of FY21, rail system personnel experienced an injury rate of 2.8 injuries per 100 employees, which outperformed the target rate of 3.5 injuries per 100 employees.

Seventy-six rail system personnel were injured during the first quarter. The most common injury types were slips, trips, and falls, struck by or against an object, and assaults/stress. Rail Transportation staff, including operators and station managers, account for the majority of injuries. Injuries among maintenance staff are mostly ergonomic-related (e.g., when lifting or lowering materials).

3-Year Performance Trend



Key actions to sustain performance

- ▶ Conduct station manager training to de-escalate tense public interactions, similar to a previous initiative to reduce bus operator assaults.
- ▶ Encourage Safety Observations and use data to identify and proactively address unsafe behaviors.

Bus Employee Injury Rate | 8.6 per 100 employees

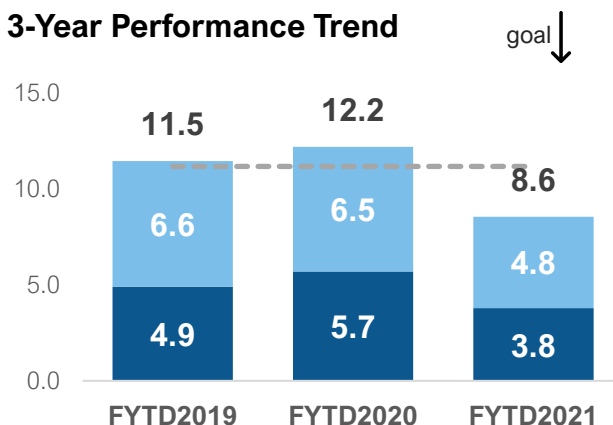
-- Target ≤ 11.2

Non-Preventable
Preventable

Metrobus had an employee injury rate of 8.6 injuries per 100 employees during the first half of FY21, meeting target of 11.2 injuries per 100 employees.

Through Q2 124 bus personnel were injured. The top injury types were collision-related (44), slips, trips, and falls (21), and assault/stress (17). Compared to FY20, collision-related injuries decreased by six percent and slips, trips and falls fell by 19 percent.

3-Year Performance Trend



Key actions to improve performance

- ▶ Continue de-escalation and conflict resolution training.
- ▶ Conduct safety observations and develop safety campaigns targeting specific injury types and known risky behaviors.

BUS COLLISION RATE



Non-Preventable
Preventable

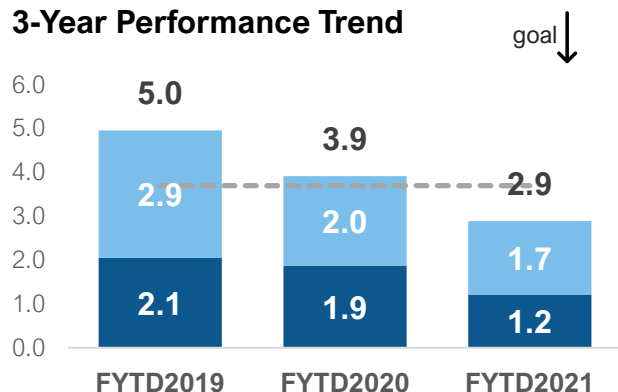
NTD Bus Collision Rate | 2.9 per million miles

-- Target ≤ 3.7

Metrobus experienced a serious collision rate of 2.9 per million miles during the first half of FY21, meeting target and a 26% improvement from the same time last fiscal year.

There were 47 serious collisions that resulted in over 40 customers being transported away from the scene during the first half of the fiscal year. Overall serious collisions are about six percent of all bus collisions. Less traffic resulting from the pandemic has contributed to improvements in the collision rate.

3-Year Performance Trend



Key actions to improve performance

- ▶ With the initial pilot now concluded, Bus Services is working now to advance procurement of collision avoidance technologies, such as Blind Spot Warnings and object detection, to decrease the number of bus collisions.
- ▶ Evaluate the bus operator training program to improve driving techniques for new and existing operators and use of existing forward-facing cameras to coach operators who have been involved in collisions.

Note: Metrobus tracks and reports serious collisions to the National Transit Database (NTD). A serious collision is one resulting in customer or employee injuries requiring immediate medical attention away from the scene, towaway of any vehicles involved, or combined property damage greater than \$25,000. This is a subset of all collisions, representing about six percent.

RAIL COLLISIONS & DERAILMENTS



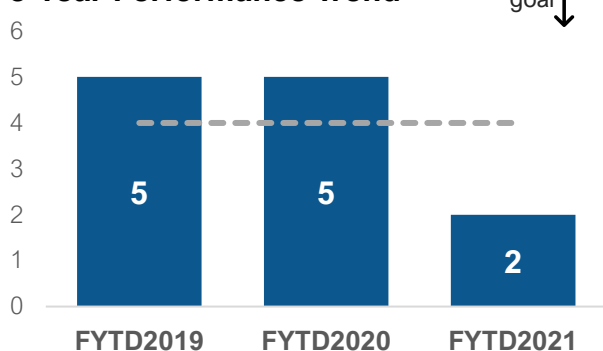
Rail Collisions | 2 collisions

--- FYTD Target ≤ 4

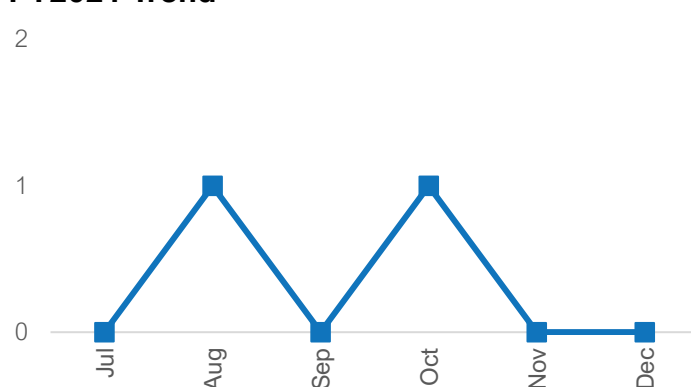
Metrorail had two National Transit Database (NTD) reportable rail collisions during the first half of FY21, better than target and a decrease of three collisions from FY20.

Both collisions involved the unintentional coupling of trains in a yard. Neither resulted in any injuries or major damages to the vehicles involved. Investigations have identified the following causal factors, which staff are working to address: failure to follow procedures, improper railcar storage (e.g., stored too close), and attempting to uncouple while on a downgrade portion of the track.

3-Year Performance Trend



FY2021 Trend



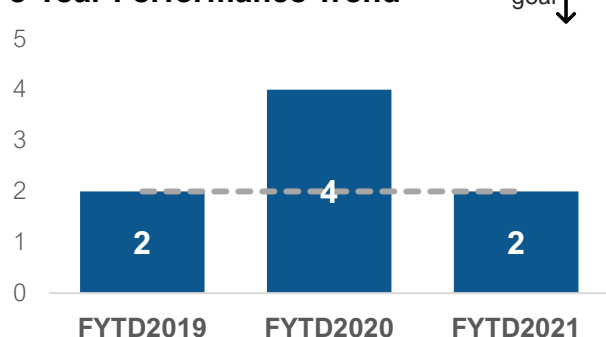
Derailments | 2 incidents

--- FYTD Target ≤ 2

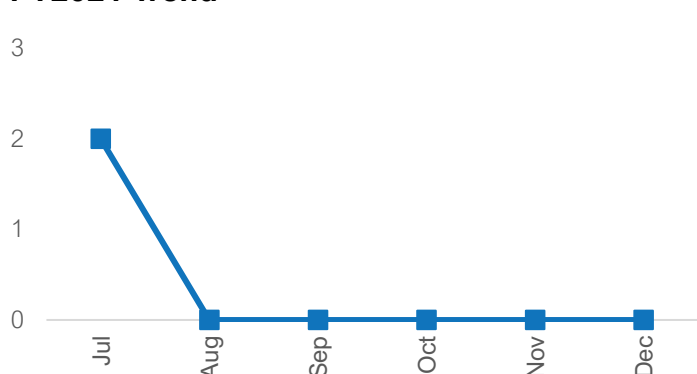
There were two derailments in the first half of FY21, a decrease of two incidents from the same period last fiscal year.

Both incidents occurred in July with one involving a train on the mainline – the first mainline train derailment with customers aboard since January 2018 – and the other involving a roadway maintenance machine in a yard. The mainline train derailment event occurred following a red signal overrun and resulted in no injuries and minor damages. The other derailment that occurred involved a flat car being pushed by a prime mover in the yard, when the front trucks of the flat car left the rail. This event resulted in no injuries or damages.

3-Year Performance Trend



FY2021 Trend



RAIL INCIDENTS



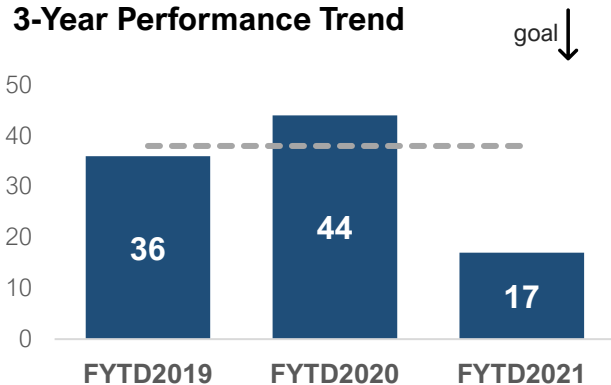
Fire Incidents | 17 incidents

--- FYTD Target ≤ 38

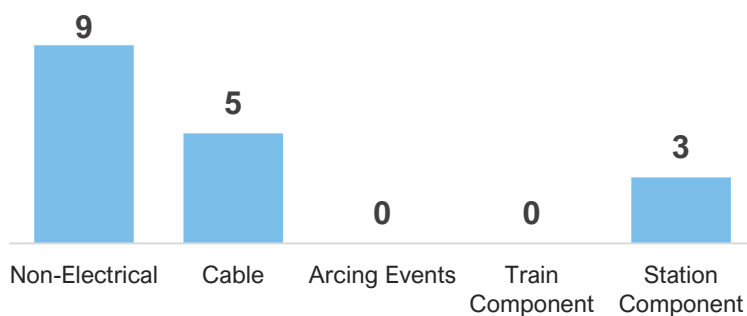
There were 17 NTD-reportable fires during the first half of FY21, better than target and a decrease of 27 compared to the same period last fiscal year.

Of the 17 fires, five involved arcing insulators or grounded track components, nine were non-electrical (e.g., debris-related), and three were related to station/facility equipment. When compared to the first half of FY20, non-electrical fires decreased 61 percent and insulator fires decreased 67 percent, including no insulator fires since September 2020. The stark decrease in non-electrical fires is likely related to decreased ridership associated with the pandemic, with fewer debris fires in stations and parking lots caused by normal combustible material (e.g., trash cans). Metro continues to conduct trackbed and drain cleaning and install new, thermoplastic insulators to reduce arcing events.

3-Year Performance Trend



FYTD21 by Type



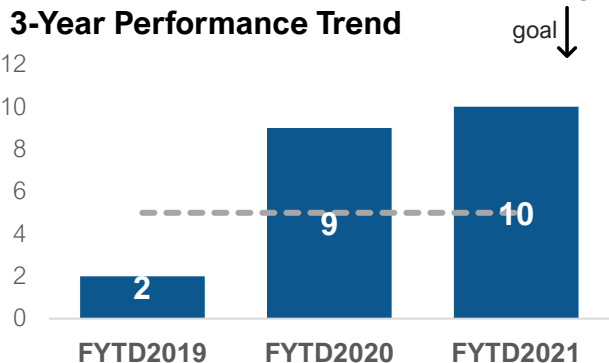
Red Signal Overruns | 10 incidents

--- FYTD Target ≤ 5

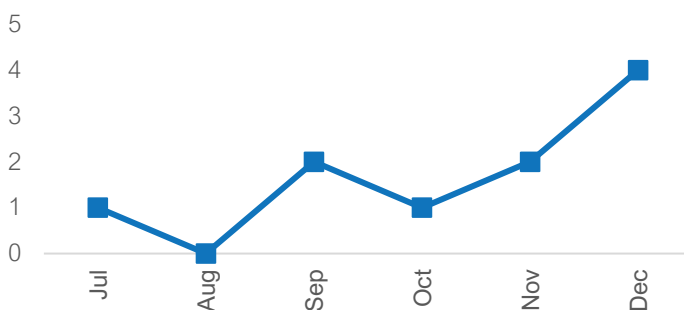
Metrorail vehicles overran a red signal 10 times during the first half of FY21, missing target and an increase of one compared to the same period last fiscal year.

Four events were on the mainline, while the remaining six were in yards. Of the events on the mainline, all occurred as trains were entering or leaving the station. Three of the four trains stopped immediately after running the red signals, while the fourth resulted in a derailment. All train operators had less than one year of experience. Human factors were the main causal factors, including failed compliance with published policy and procedures and unfamiliarity with the track environment. In response, Rail staff have conducted safety standdowns, instituted computer-based refresher trainings, published lessons learned bulletins, improved policies and procedures related to moving trains without speed commands, and installed Stop and Proceed software upgrades on railcars.

3-Year Performance Trend



FY2021 Trend
















QUALITY SERVICE TARGETS



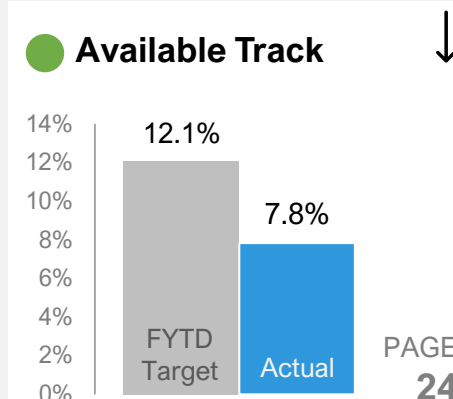
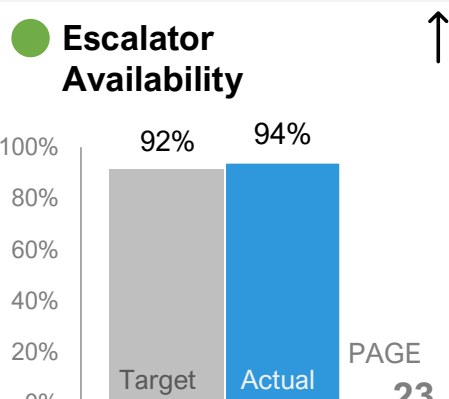
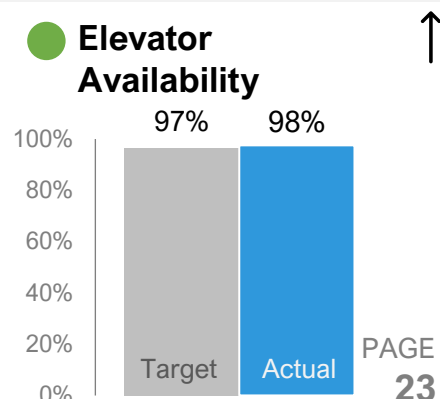
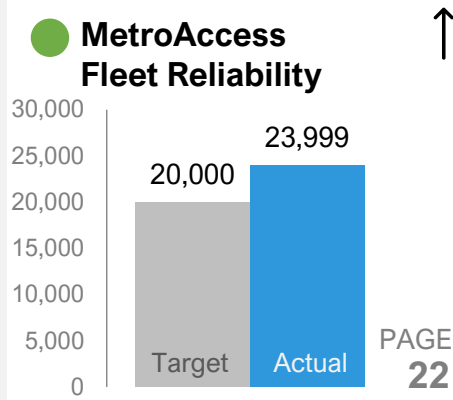
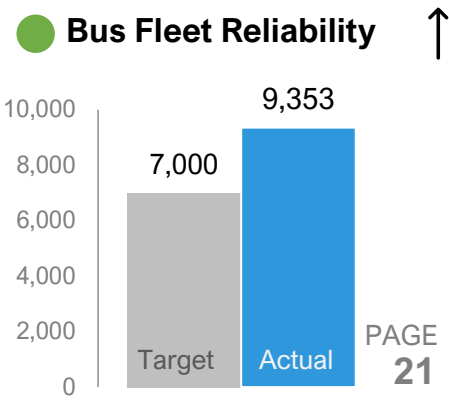
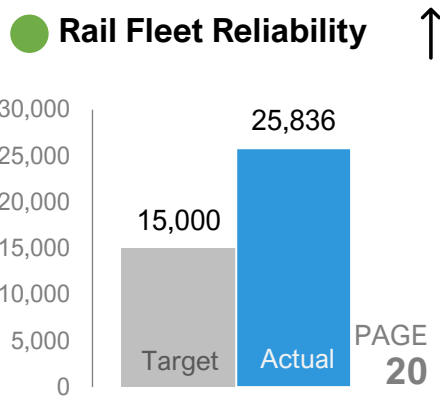
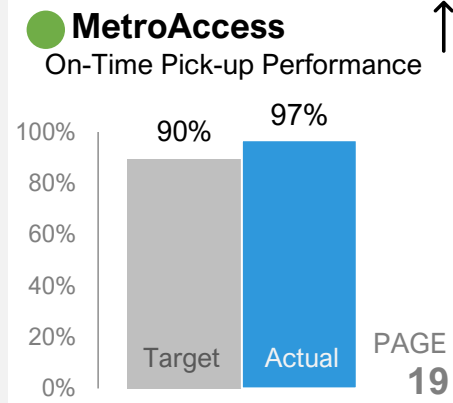
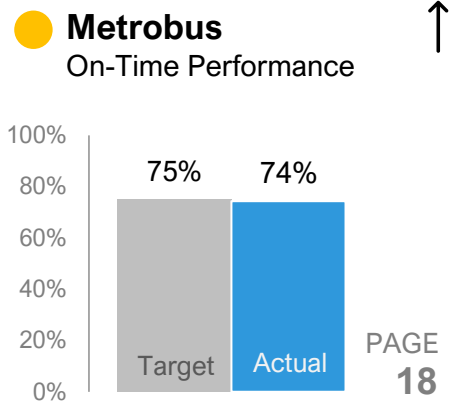
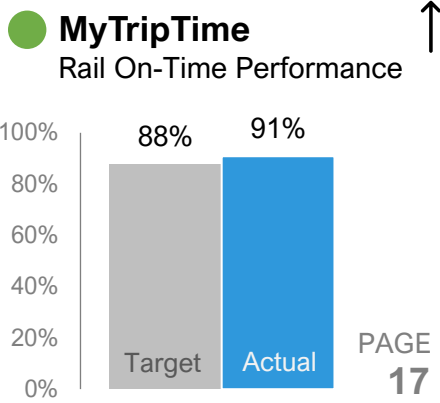
Each fiscal year, Metro establishes performance targets for KPIs. These measures and targets are an important way for Metro to track progress through the year, and ultimately reflect how effectively Metro is delivering its mission to provide safe, equitable, reliable and cost-effective public transit.

The table below lists the performance targets established by Metro for FY21. Given the uncertainty surrounding the operating budget and service levels this fiscal year, targets for measures of service quality were generally kept at FY20 levels. For bus on-time performance, which was a new measure in FY20 and did not have a target, the FY21 target was set at the average performance achieved from July–August 2020. Fleet reliability measures are a nexus between service quality, asset condition, and safety. For rail and bus fleet reliability, Metro aims to continuously improve performance.

Measure	FY21 target	Methodology
MyTripTime % of customers on-time	 88%	or ↑ Hold steady at FY2020 rate
Bus On-Time Performance % of buses on-time	 75%	or ↑ Hold steady at Q1 FY2021 rate
MetroAccess On-Time Performance % of vans on-time	 90%	or ↑ Hold steady at FY2020 rate
Rail Fleet Reliability mean distance between failure	 15,000	or ↑ 7% improvement from 3-year average
Bus Fleet Reliability mean distance between failure	 7,000	or ↑ 1% improvement from 3-year average
MetroAccess Fleet Reliability mean distance between failure	 20,000	or ↑ Hold steady at FY2020 rate
Elevator Availability % available	 97%	or ↑ Hold steady at FY2020 rate
Escalator Availability % available	 92%	or ↑ Hold steady at FY2020 rate
Available Track % unavailable	 7.9%	or ↓ Impact of Planned Track Work
Rail Crowding % passenger time in crowded conditions	 N/A	No target
Bus Crowding % stops encountered by full bus	 N/A	No target
Rail Customer Satisfaction	 N/A	No target
Bus Customer Satisfaction	 N/A	No target

QUALITY SERVICE

The following highlights Metro's system-wide service quality performance through the first half of FY21.



Legend

● Met or above target |
 ● Near target |
 ● Target not met |
 ● No target |
 ↑↓ Desired direction

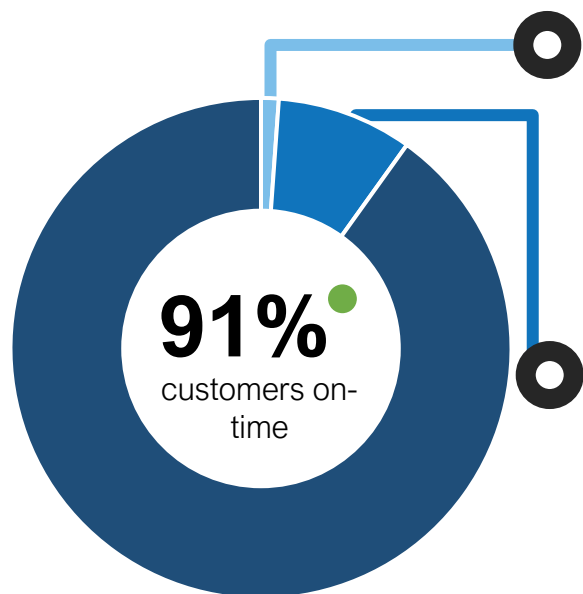
METRORAIL CUSTOMER ON-TIME PERFORMANCE MYTRIPTIME



In the first half of FY21, Metrorail customers completed 91% of their trips on-time, exceeding the target of 88%.

Rail on-time performance (OTP) has consistently surpassed the target through all six months this fiscal year.

What caused customers to not be on-time?



Target ≥ 88% on-time

Planned Delays

- ▶ **Planned track work** lowered OTP by approximately 1.2 percentage points.
- ▶ Planned track had the biggest impact during the first quarter, when summer track work projects closed all stations west of Ballston on Orange and Silver lines, and mini-surge works closed three to five stations at a time for maintenance and upgrades.

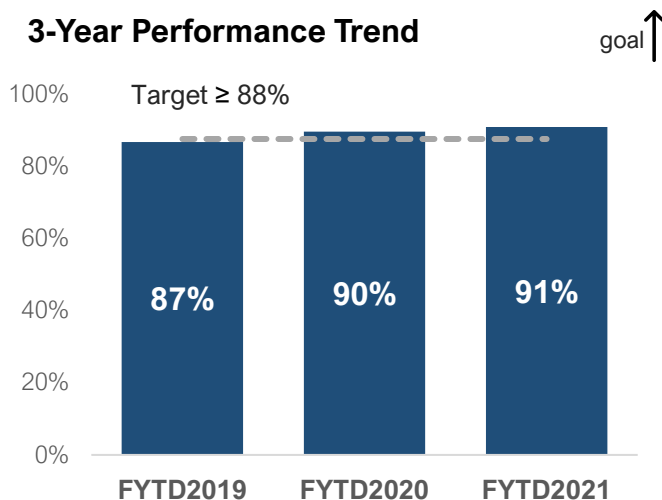
Unplanned Delays

- ▶ **Unplanned delays** lowered OTP by about 8.0 percentage points.
- ▶ **Railcars** accounted for 34 percent of unplanned delays, a four percent decrease relative to the same time period in FY20 thanks to continued improvements in railcar reliability.
- ▶ **Police activity and other customer-related incidents** accounted for 35 percent of delays with customer-related incidents (including sick passengers) increasing by six percent while police activity incidents remained unchanged.
- ▶ **Infrastructure failures, operations and others** accounted for 31 percent of delays.

Key actions to sustain performance

- ▶ Continue to monitor schedule adherence and share successful strategies and lessons learned to strengthen operational planning and scheduling.
- ▶ Continue to make critical repairs to rail infrastructure, ensuring it remains in a state of good repair.
- ▶ Continue railcar maintenance, rehab and replacement program, including plan to replace the oldest 2000- and 3000- series railcars when they reach the end of their useful life.

3-Year Performance Trend

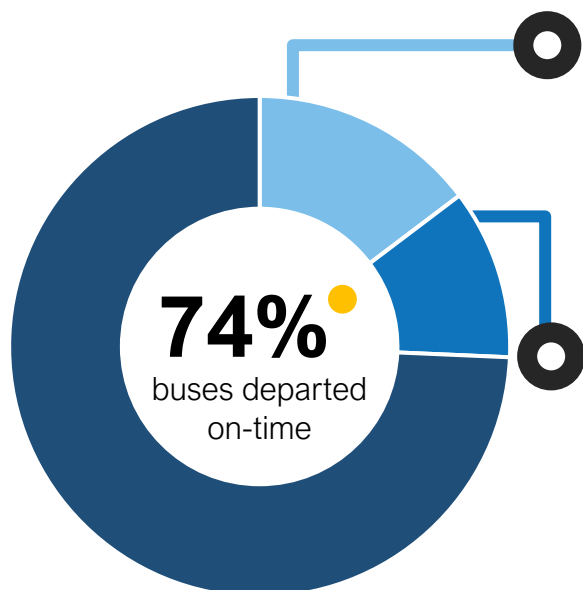




In the first half of FY21, 74% of buses were on-time, just shy of the target of 75%. Buses serving customers along Metro's six high-frequency routes were 60% on-time while 76% of buses serving other routes were on-time.

Overall reliability was impacted by buses running early as a result of less traffic. Early departures from key bus stops more than doubled compared to the same time last year while late departures decreased.

What caused buses to not be on-time?



Target ≥ 75% on-time

Early Departures were the main reason buses were not on-time, lowering OTP by 15 percentage points.

- ▶ Overall early departures increased eight percentage points compared to the same time last year.
- ▶ Buses depart terminals on-time (early terminal departures accounted for two percent of early departures), but start running early throughout the route due to less traffic.

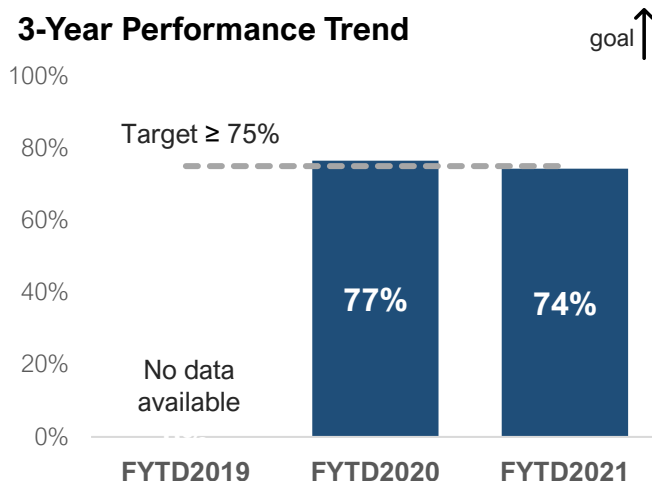
Late Departures lowered OTP by 11 percentage points.

- ▶ **Late terminal departures**, occurring primarily during the midday and PM peak service periods, accounted for 13 percent of lateness. These were often a result of the bus arriving late from the previous trip.
- ▶ **Late mid-route departures** were the main reason buses were not on-time, accounting for 73 percent of lateness, driven by service delivery challenges due to police and public activity, collisions and other issues.
- ▶ **Late terminal arrivals** accounted for the remaining 15 percent of lateness driven by late mid-route departures during the midday and PM peak service periods impacting on-time terminal arrivals.

Key actions to improve performance

- ▶ Implement a new schedule in mid-March 2021 that is adjusted to reflect reduced traffic levels.
- ▶ Continuing to advance the Bus Transformation Project, including partnering with DDOT to launch new car-free lanes, speeding up buses in the District of Columbia.

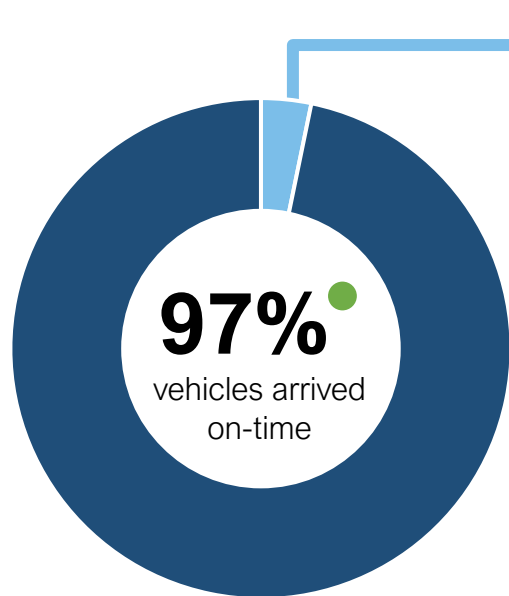
3-Year Performance Trend





Through the second quarter of FY21, 97% of MetroAccess trips were on-time, exceeding the target of 90%.

What caused vehicles to not be on-time?



Target ≥ 90% on-time

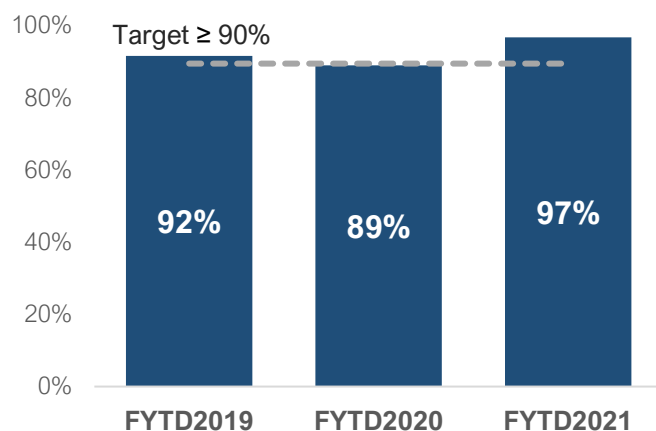
Operations Related Delays

- ▶ Less traffic, reduced ridership, and the elimination of shared rides (where delays can cascade across customer trips) have led to strong on-time performance.

Key actions to sustain performance

- ▶ Continue improving the accuracy of length-of-trip estimates by basing them on the fixed-route equivalent.
- ▶ Continue to dynamically adjust the system's scheduling parameters and leverage available taxi and alternative resources when trips are projected late throughout the day.
- ▶ Pursue a new, cutting-edge scheduling and dispatch system.

3-Year Performance Trend





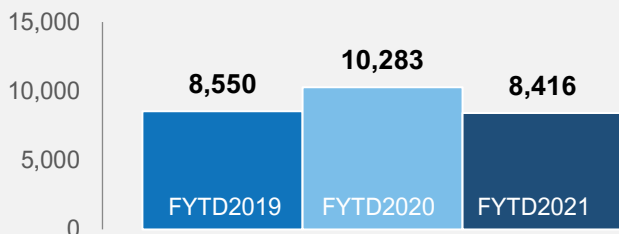
● Rail Fleet Reliability | 25,836 miles between failure

— Target ≥ 15,000

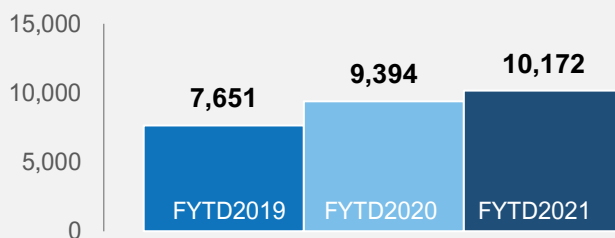
Throughout the first half of FY21, railcar performance continued to trend upward and hit record levels, driven by strong performance in the 7000-series fleet.

Railcar performance improved 44 percent compared to the same period in FY20. Metrorail averaged only eight failures per day in FY21, compared to 9.4 in FY20 and 16.9 in FY19. Strong railcar performance also contributed to strong customer on-time performance results—and smoother rides for customers. In late November following a train separation safety incident, Metro removed all 6000-series cars from service in order to fully investigate and understand the underlying factors and root causes. The removal of this fleet has not had an impact on fleet reliability or customer on-time performance.

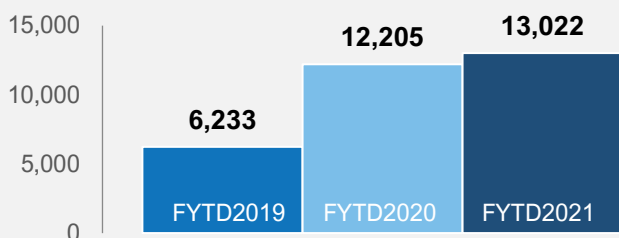
2000-series | 0.3% of miles traveled



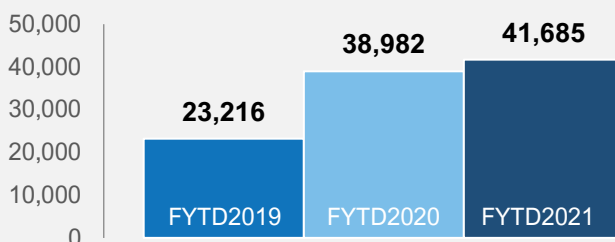
3000-series | 14% of miles traveled



6000-series | 7% of miles traveled



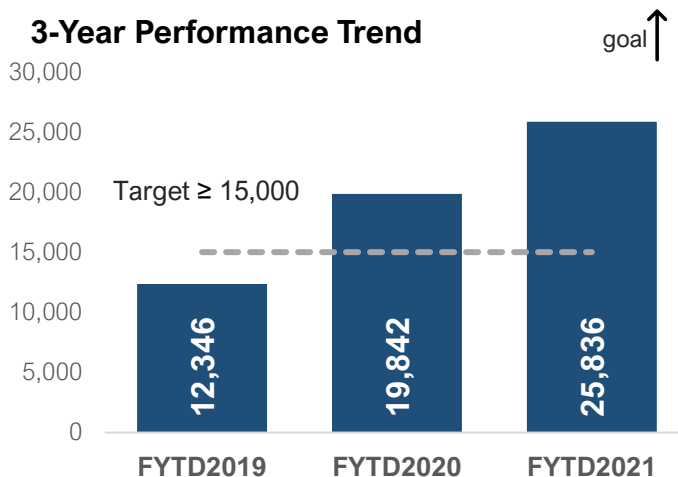
7000-series | 78% of miles traveled



Key actions to sustain performance

- ▶ Complete full investigation of 6000-series safety incidents and address root causes and underlying factors.
- ▶ Continue using reliability analysis and frequent inspections to ensure engineers prioritize problems causing the largest impacts.
- ▶ Continue the Scheduled Maintenance Program, which has helped improve performance of the 6000-series cars, and plan for the replacement of the 2000 and 3000 series as they turn 40 and near the end of their useful life.

3-Year Performance Trend



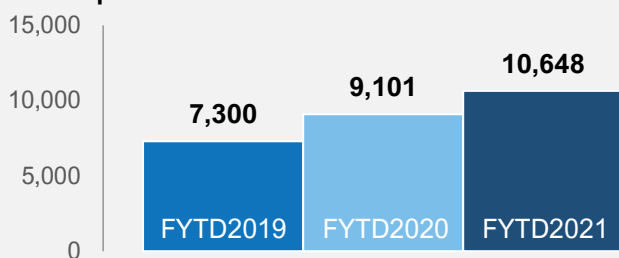


Bus Fleet Reliability | 9,348 miles between failure
 — Target ≥ 7,000

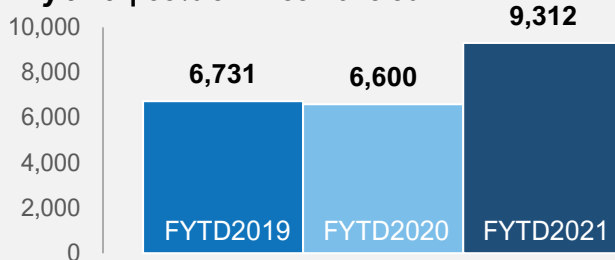
Bus fleet performance reached record levels since Metro began measuring it in 2003, exceeding 9,300 miles between failures in the first half of FY21—better than the target of 7,000 and a 38% improvement compared to the same period last fiscal year thanks to improvements across all sub-fleets.

The compressed natural gas (CNG) fleet improved 17 percent compared to the same period last year, traveling just under 10,700 miles between failure while the hybrid fleet improved 41 percent, traveling about 9,300 miles between failure.

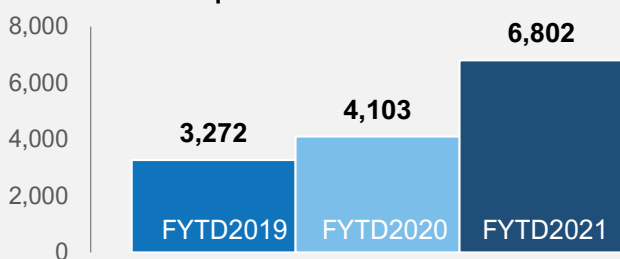
CNG | 27% of miles traveled



Hybrid | 65% of miles traveled



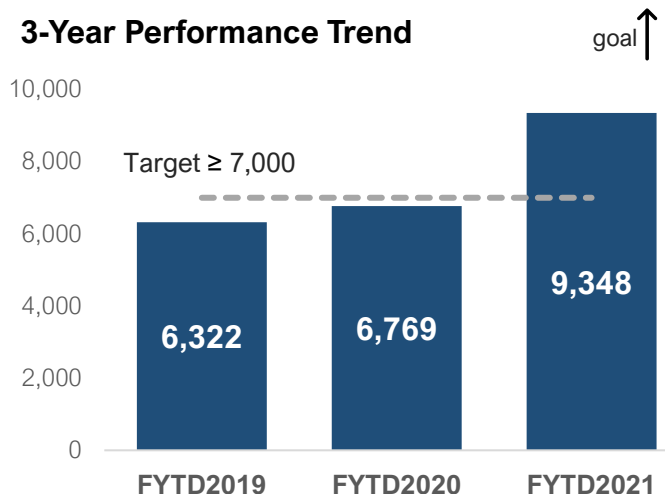
Clean Diesel | 8% of miles traveled



Key actions to sustain performance

- ▶ Increase collaboration between maintenance and transportation departments to reduce service interruptions through We Move the Region training program.
- ▶ Improve failure reporting in Metro's asset management system to allow for more in-depth trend analysis.
- ▶ Conduct internal quality audits of preventive maintenance programs and service lane activities to identify areas of improvement.
- ▶ In FY21, continue annual program to replace 100 of the oldest, least reliable buses.

3-Year Performance Trend





MetroAccess Fleet Reliability | 23,999 miles between failure
 —Target ≥ 20,000

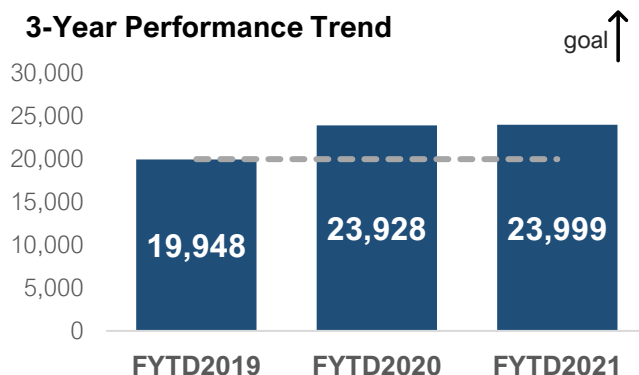
Through the second quarter of FY21, the mean distance between failure is 23,999 miles, exceeding the target of 20,000 miles.

The MetroAccess fleet traveled an average of 23,928 miles between failures through Q2 in FY20, sustaining above target performance year-over-year.

Key actions to sustain performance

- ▶ MetroAccess has procured 177 sedans to replace aging Ford Transit vans, and will roll them out into revenue service in Q3 and Q4 of FY21.
- ▶ Staff continues to focus on key initiatives to improve fleet reliability and good state of repair, to include preventive maintenance inspections and quarterly fleet audits.

3-Year Performance Trend





● Elevator Availability | 98% available

— Target ≥ 97%

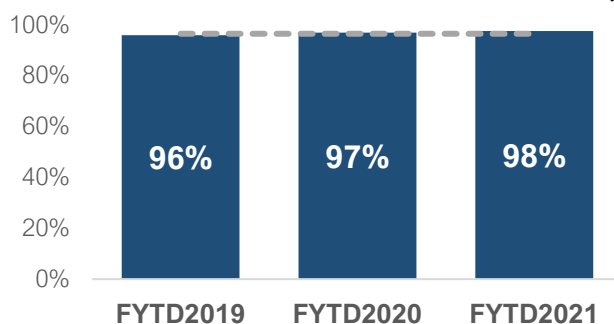
In the first half of FY21 elevators were available for use 98% of the time, meeting target and improving by one percentage point compared to the same period in FY20.

At any given time across Q1 and Q2, about 2 percent of elevators were out service, equivalent to about five or six elevators out of the total 275+ units across the system. About 60 percent of these outages were due to planned maintenance or capital work, with the rest due to system failures. Elevators went out of service less often during the first half of FY21 as compared to the same period in FY20, partially due to reliability improvements, but also resulting from significantly lower usage during the pandemic.

Key actions to sustain performance

- ▶ Continue current elevator renewal/replacement contract (89 out of 100 completed at the end of Q2).
- ▶ Collaborate with engineers to identify 100 more units in need of replacement for the next contract.
- ▶ Establish water remediation program to address failures related to water infiltration in elevator shafts.

3-Year Performance Trend



● Escalator Availability | 94% available

— Target ≥ 92%

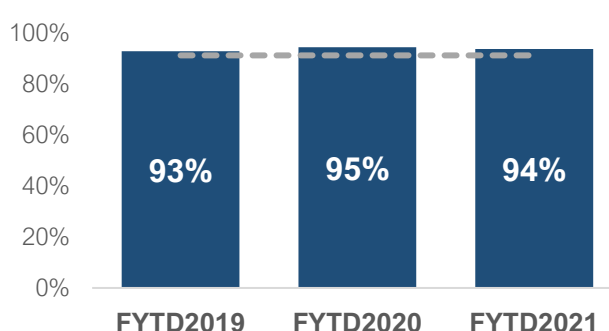
In the first half of FY21 escalators were available for use 94% of the time, exceeding target but ending one percentage point less than the same period in FY20.

At any given time, about six percent of escalators were out of service, equivalent to roughly 37 of the 600+ units across the system. Similar to elevator, about 60 percent of escalator outages were planned (including maintenance or capital work), with the rest resulting from unplanned unit outages. These outages occurred less frequently in Q1/Q2 than the same period in FY20; however, average repair times were higher due to the strain on workforce availability resulting from the pandemic.

Key actions to sustain performance

- ▶ Installed new KONE Transit escalator at training lab, enhancing training for mechanics.
- ▶ Tested for and hired new apprentice class, which began in January 2021.
- ▶ Ramping up contract to rehabilitate 89 Westinghouse escalators, with the first four scheduled for completion by the end of the fiscal year.

3-Year Performance Trend



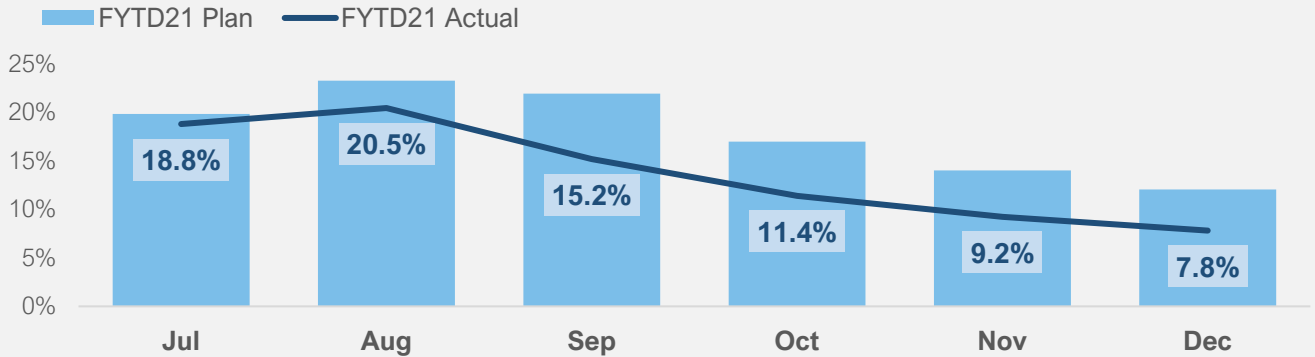
GUIDEWAY RESTRICTIONS AVAILABLE TRACK



7.8% under performance restriction
-- FYTD Target \leq 12.1%

In the first half of FY2021, 7.8% of track was under performance restriction, 4.3% below the FY21 year-to-date projection.

Cumulative guideway restrictions % | FY21 vs Target



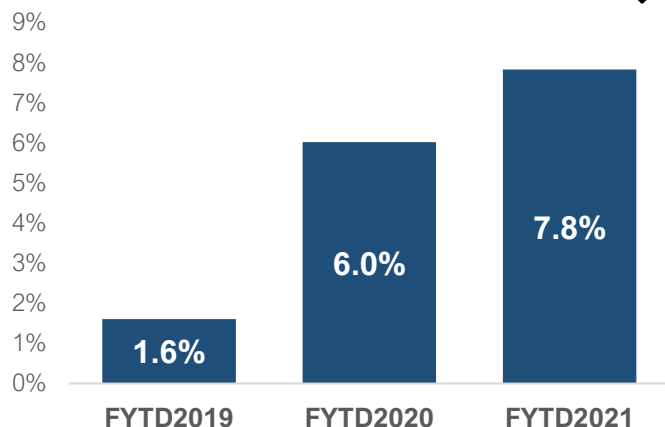
By December, Metro was performing better than projected, with an average of 7.8 percent of track “restricted” through the first six months of the year. Based on plans set at the end of last fiscal year, Metro expected significantly more guideway – 12.1 percent on average – to be restricted during this period. Performance was better than anticipated due to fewer condition-related restrictions, early completion of capital projects, and adjustment of plans – particularly related to the stalled Purple Line construction. Metro is on track to meet its annual target of no more than 7.9 percent of track under performance restriction on average.

Guideway restrictions include planned track work and unplanned condition-related speed restrictions. Planned work is the main reason guideway was unavailable. For the first six months in FY21, only 0.2 percent percent of track was restricted due to condition, well below the average of 0.6 percent in FY20. The remaining 7.6 percent was due to planned summer capital programs, including the shutdown of all Orange and Silver line stations west of Ballston, and short, localized shutdowns on a rolling basis.

Key actions to sustain performance

- ▶ Continue preventive maintenance and capital programs to keep unplanned restrictions low.
- ▶ Install heat tape at up to four more stations before fall, eliminating the need for speed restrictions in these areas.

3-Year Performance Trend



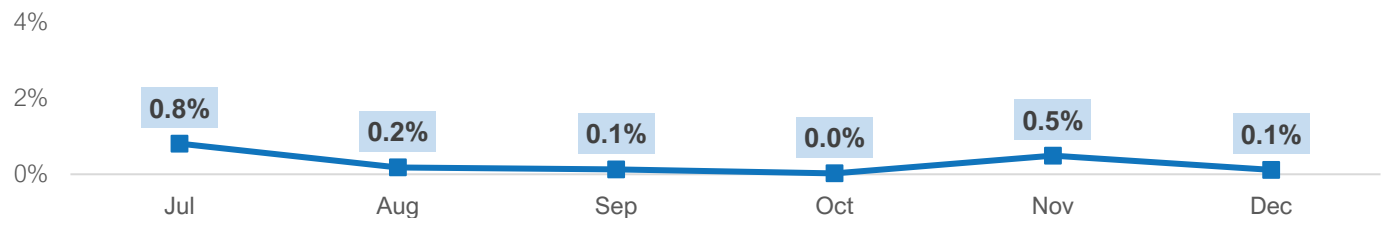


Metrorail Crowding | 0.3% of passenger travel time with >23 passengers per car

Metrorail service levels during the first half of FY2021 have successfully supported social distancing during the pandemic; only 0.3% of passenger travel time was in crowded conditions (> 23 passenger per car).

Metrorail crowding peaked in July at 0.8 percent and declined to 0.2 percent in August as Metro added more trains and extended hours as part of the Covid-19 Recovery Plan beginning August 16th. Rail crowding levels have remained near 0.1 percent or below since. The jump in crowding in November is related to a first amendment protest on November 14th, when ridership briefly exceeded Metro's capacity guidelines.

FY2021 Trend

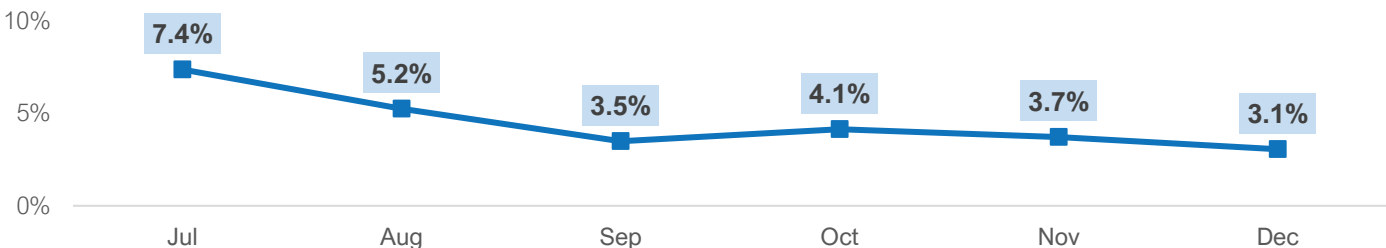


Metrobus Crowding | 4.3% of bus stops encountered with > 20 passengers on the bus

During the first half of FY2021, 4% of bus stops were encountered by a bus with more than 20 passengers onboard. While a standard size 40' bus has seats available for 40 passengers, to support social distancing, Metro deems any bus occupied at 50% or greater capacity as being full.

Crowding on buses has decreased from peak levels in July thanks to the mid-August schedule change that added bus service to the busiest lines. To continue to minimize crowding, Metrobus has empowered operators to skip stops or only stopping to allow alighting if the bus becomes too crowded. Additionally, in December Metro introduced real-time crowding information available on transit apps so that Metrobus customers can see how full a bus is before it arrives.

FY2021 Trend

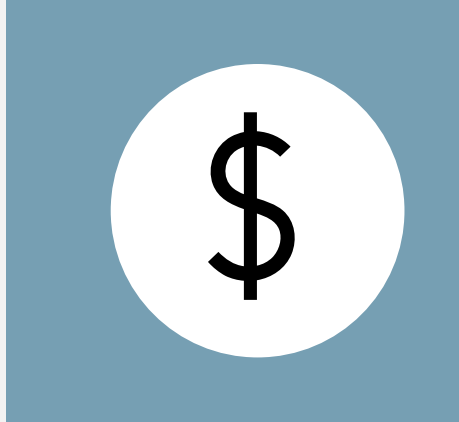


Crowding on bus and rail vehicles is closely monitored by Metro staff. However, staffing levels, fleet size, and the operating budget provide a hard cap on the amount of service that can be provided to meet demand and still enable CDC-guidelines for social distancing. As a result, a specific target for crowding metrics has not been set. Metro's focus remains to stay ahead of demand and provide as much service as is feasible given budget constraints and employee availability. Rail service levels are currently 80 percent of pre-pandemic levels, and staff are delivering 75-85 percent of pre-pandemic bus service.



The following highlights Metro's system-wide financial performance through the second quarter of FY21.

Operating Financial Performance



Legend

● Met or above target |
 ● Near target |
 ● Target not met |
 ● No target |
 ↑↓ Desired direction

OPERATING FINANCIAL PERFORMANCE



Metro's net subsidy through the second quarter of FY21 was on budget. Operating expenses were \$969.6 million or \$53.0 million less than budget. Operating revenues were \$59.7 million through Q2 (excluding CARES Act), funding six percent of operating expenses. Revenue losses from Covid-19, impacting ridership and non-passenger revenue, were offset by CARES Act funding as well as savings from overtime, paratransit and other services. Metro received CARES Act revenue totaling \$431.7 million, of which \$331.7 million was used to offset decreased revenue and \$100.0 million replaced jurisdictional contributions that were reduced as a result of the pandemic; including CARES revenue, total revenue through Q2 was \$491.4M.

How did expenses compare to revenues and funding?

