



U.S. Department
of Transportation

**Federal Transit
Administration**

COVID-19 Recovery Practices in Transit

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DISCLAIMER: To assist public transportation agencies, FTA has collected information on practices used by transit agencies worldwide. FTA has not assessed the efficacy of any of the practices listed. This list is provided for technical assistance only. Inclusion on this list does not imply endorsement by FTA of any of these practices, tools, or other information. Some transit agency websites may not be up to date. In addition, some transit agency websites may not reflect current CDC guidance or include specific information about their COVID-19 recovery efforts. News articles are used in this document only for informational purposes.

The contents of this document do not have the force and effect of law and are not meant to bind the public in any way. This document is intended only to provide clarity to the public regarding existing requirements under the law or agency policies. Grantees and subgrantees should refer to FTA's statutes and regulations for applicable requirements.



Overview

The Coronavirus Disease 2019 (COVID-19) public health emergency has had a significant impact on public transportation operations throughout the Nation. As communities recover from COVID-19, transit agencies are implementing new and enhanced measures to ensure the safety of their employees and passengers, and increase public confidence in transit, including enhanced cleaning and disinfection, personal protective equipment (PPE) and face coverings, and social distancing.

The Federal Transit Administration (FTA) is committed to helping the U.S. public transportation industry recover. This resource provides web links to practices implemented by transit systems worldwide to recover from the COVID-19 public health emergency. This list is non-exhaustive and is provided for technical assistance only. Practices are organized under the following categories:

- [Protecting Workers](#)
 - [Face Coverings and PPE](#)
 - [In-vehicle Protections](#)
 - [Infrastructure \(Non-vehicle Protections\)](#)
 - [Return to Work Policies and Health Screening](#)
 - [Sick Leave Policies](#)
- [Protecting Passengers](#)
 - [Face Coverings and PPE](#)
 - [In-vehicle Protections](#)
 - [Infrastructure \(Non-vehicle\) Protections](#)
- [Cleaning, Disinfecting, and Ventilating Vehicles and Infrastructure](#)
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 - [Service Changes to Support Opening, Restoration or Expansion of Transit Service](#)
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 - [Payment Options](#)
 - [Micromobility](#)

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Broken Links

The COVID-19 Recovery Practices in Transit tool will be updated monthly. In between updates, links identified in this tool may become inoperative as transit agencies or news organizations update their websites with new information. In the event you find a broken link, please send an email to FTASystemSafety@dot.gov.

To Recommend a Practice

If you are a transit agency or State with a recommended practice you would like added to this tool, please send an email to FTASystemSafety@dot.gov. Be sure to include a brief description of the practice and an active weblink to information on the practice. To the extent feasible, new practices will be included in the next monthly update.

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Acronyms and Abbreviations

| Abbreviation | Full Term |
|--------------|---|
| AC Transit | Alameda-Contra Costa Transit District |
| AI | Artificial Intelligence |
| BART | Bay Area Rapid Transit |
| BYD | Build Your Dreams, North America |
| CapMetro | Capital Metro Transportation Authority |
| CATA | Capital Area Transportation Authority |
| CARTA | Charleston Area Regional Transportation Authority |
| CHT | Chapel Hill Transit |
| COTA | Central Ohio Transit Authority |

| Abbreviation | Full Term |
|---------------|---|
| COVID-19 | Coronavirus Disease 2019 |
| CTA | Chicago Transit Authority |
| DART | Dallas Area Rapid Transit |
| FEMA | Federal Emergency Management Agency |
| FTA | Federal Transit Administration |
| GCRTA | Greater Cleveland Regional Transit Authority |
| GDRTA | Greater Dayton Regional Transit Authority |
| GETD | Golden Empire Transit District |
| Houston Metro | Metropolitan Transit Authority of Harris County |

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| Abbreviation | Full Term |
|---------------|--|
| King County | King County Metro Transit District |
| LACMTA | Los Angeles County Metropolitan Transportation Authority |
| LIRR | Long Island Rail Road |
| MARTA | Metropolitan Atlanta Rapid Transit Authority |
| MBTA | Massachusetts Bay Transit Authority |
| Metro Transit | Metropolitan Transit, Service of Metropolitan Council |
| Miami-Dade | Miami-Dade Transit, County of Miami-Dade |
| MTA | Metropolitan Transportation Authority |
| MTC | Metropolitan Transportation Commission |
| MTD | Champaign-Urbana Mass Transit District |

| Abbreviation | Full Term |
|--------------|---|
| MUNI | San Francisco Municipal Transportation Agency |
| NACTO | National Association of City Transportation Officials |
| NJT | New Jersey Transit |
| NYCT | New York City Transit |
| NYPTA | New York Public Transit Association |
| OCTA | Orange County Transportation Authority |
| PAAC | Port Authority of Allegheny County |
| PPE | Personal Protective Equipment |
| PSTA | Pinellas Suncoast Transit Authority |
| RTD | Regional Transportation District |

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COVID-19 Recovery Practices in Transit

| Abbreviation | Full Term |
|--------------|---|
| RideKC | Kansas City Regional Transit |
| SEPTA | Southeastern Pennsylvania Transportation Authority |
| TriMet | Tri-County Metropolitan Transportation District of Oregon |
| USDOT | United States Department of Transportation |
| UTA | Utah Transit Authority |


| Abbreviation | Full Term |
|--------------|--|
| Valley Metro | Valley Metro Regional Transportation Authority |
| VIA | Via Metropolitan Transit |
| VTA | Santa Clara Valley Transportation Authority |
| WMATA | Washington Metropolitan Area Transit Authority |
| WTA | Whatcom Transportation Authority |

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Protecting Workers

Face Coverings, PPE, and Vaccinations

| Topic | Description | Examples |
|-------------------|--|---|
| 1. Face coverings | Recommend or require face coverings for employees and passengers | DART: Face coverings required for employees and passengers MBTA: Face coverings required for employees and passengers NYCT: Face coverings required for employees and passengers WMATA: Face coverings required for employees and passengers Vermont Department of Health: COVID-19 Personal Protective Equipment (PPE) guidance for public transit operators |
| | Provide face coverings to employees |  Jacksonville Transportation Authority: 3D-printed face shields for front-line employees MARTA: Provides face masks to employees* NJT: Provides face masks to employees* |

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| Topic | Description | Examples |
|--|--|--|
| | Provide N95 and surgical masks for employees based on results of safety assessment | NYCT: Distributed N95 and surgical masks to employees and published video on how to use masks appropriately |
| 2. Hand sanitizer, gloves, or other hand-hygiene items | Provide hand hygiene items for employees | CTA: Gloves and hand sanitizer provided to employees Greater Attleboro Taunton Regional Transit Authority: Hand sanitizer units installed in all vehicles NJT: Gloves provided to employees* San Diego Trolley: Hand sanitizer and gloves available for employees |

In-Vehicle Protections

| Topic | Description | Examples |
|------------------------|---|--|
| 1. Compartment shields | Install shields around operator compartments, such as rigid plexiglass or polycarbonate | CTA: Bus operators only assigned to buses with driver shields DART: Operator shields installed on all buses |

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| Topic | Description | Examples |
|-------|---|--|
| | structures or flexible vinyl “curtains” | <p>NEW Delaware Transit Corporation: Recipient of a competitive grant from the Public Transportation COVID-19 Research Demonstration program to install barrier shields and evaluate the efficacy of the shields*</p> <p>GCRTA: Operator curtains installed on all buses and paratransit vehicles</p> <p>NEW Gold Coast Transit: Installed plexiglass shields around bus operator compartments</p> <p>NEW MARTA: Outfitted bus fleet with polycarbonate shields*</p> <p>NEW Metropolitan Transit System: Installed barriers for operators</p> <p>Palmetto Breeze Transit: Installed plexiglass operator shields</p> <p>NEW Pelivan Transit: Installed protective barriers in vehicles</p> <p>NEW Tri-Valley Transit: Installed plastic barriers between operators and passengers</p> |

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| Topic | Description | Examples |
|---|--|---|
| | | <p>NEW Valley Transit: Installed protective barriers in vehicles</p> <p>NYCT: Installing vinyl shields on buses</p> |
| 2. Safe area behind bus operator | Create a driver safe area by removing or taping off rows of passenger seating behind the driver's operating console or compartment | <p>Denver RTD: COVID-19 plan creates driver safe area</p> <p>London [Ontario] Transit: Front section of buses roped off to distance other passengers from the operator</p> <p>NJT: Removing rider seats near bus operators</p> <p>NEW Valley Metro: Seats near the operator are blocked off</p> <p>NEW VIA: Removed or restricted access to the seats nearest the operator</p> <p>NEW Yuba-Sutter Transit: Passengers not permitted in the first row of seats on commuter and Dia-A-Ride buses</p> |
| 3. Safe area behind rail transit operator | Create safe area for rail operators by closing railcar closest to operator compartment | <p>WMATA: Closes first and last rail cars on trains to protect workers</p> |

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| Topic | Description | Examples |
|--|--|---|
| 4. Visual cues for physical distancing | Install visual cues, such as stickers or tape, to remind passengers to distance themselves from the driver | <div><div>NEW</div><div>San Diego Metropolitan Transit System: Moved “stand behind” line back to provide additional space between operator and passengers</div></div> <div>The Bus of the City and County of Honolulu: Installed tape six feet behind the bus operator</div> |
| 5. Vehicle boarding | Change boarding procedure to reduce contact between operators and riders | <div>ART: Rear-door boarding for all passengers not requiring special assistance</div> <div>NJT: Rear-door boarding for all routes where rear-boarding is available</div> |

Infrastructure (Non-vehicle Protections)

| Topic | Description | Examples |
|---------------------------------------|--|--|
| 1. Shields or other physical barriers | Install shields or other physical barriers around work locations to minimize contact among workers and/or the public | <div><div>NEW</div><div>CTA: Rail station attendants working only out of enclosed kiosks</div></div> <div>Metropolitan Transit System: Installed barriers at all check-in locations</div> |

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| Topic | Description | Examples |
|--------------------|--|--|
| | | NYCT: Installing plexiglass barriers in subway work locations, bus depots, and central maintenance facilities |
| 2. Service changes | Change services provided to reduce or eliminate worker and public direct interaction |  San Diego Metropolitan Transit System: Fares checked at station platforms instead of on vehicles |
| 3. Visual cues | Install visual cues, such as stickers or tape, to remind workers and/or the public to maintain physical separation | CTA: Installing floor decals on platforms to encourage physical distancing Miami-Dade: Installed floor decals on platforms to encourage physical distancing Transport for London: Instituted one-way pedestrian flow measures in depots and control centers to support physical distancing* |
| 4. Scheduling | Set schedules that reduce the number of workers in a space at one time | MBTA: Divided operating teams in two and rotating staff between its main and backup Rail Operations Control Center to allow each facility to be cleaned and disinfected when not in use* NYCT: Construction crew work is staggered to reduce the number of workers in a specific location at one time* and Staggered work hours |

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| Topic | Description | Examples |
|----------------------------|--|---|
| | | to ensure that no more than 15-percent of office workers are in the offices at any one time |
| 5. Access to shared spaces | Reduce or eliminate access to non-critical shared spaces | NYCT: Reduced capacity in breakrooms and meeting rooms Regional Transportation Commission Washoe: Construction workers eat meals separately, avoid common-use water coolers, and have access to portable bathroom units with wash basins and soap |
| | Reduce or eliminate in-person meetings | NEW DART: No longer holding in-person meetings |
| 6. Teleworking | Permit or require workers to work from home as appropriate | NEW Heart of Iowa Regional Transit Agency: All office employees, including dispatch, work remotely Metro Bus: All administrative staff work remotely NYCT: Construction crews using an internal phone application to track progress and using a GoPro camera to monitor progress and inspect work remotely* and Non-essential personnel work from home |

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Worker Communications, Return to Work Policies, and Health Screening

| Topic | Description | Examples |
|-------------------------|---|--|
| 1. Worker guide | Provide guidance on staying safe for workers that are returning to work | Santa Clara VTA Return to Work Playbook to help employees stay healthy at work |
| 2. Worker communication | Communicate with workers about COVID-19 and its impact on the agency | NEW Spokane Transit: Providing text and email updates through safety notices and situation updates and operating a COVID-19 Employee Message Line |
| 3. Health screening | Check temperatures of workers as they report to work | COTA: Mandatory temperature checks for all workers entering agency facilities Lane Transit: Worker temperatures checked before every shift MBTA: Worker temperatures checked before every shift* NEW Metropolitan Transit System: Participating in Scripps Health Detect Study NYCT: Temperature Brigade testing workers at strategic locations |

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| Topic | Description | Examples |
|---------------------|---|--|
| | | <p>Oahu Transit Services: Testing employee temperatures daily and occasional COVID-19 tests*</p> <p>NEW RTC of Southern Nevada: Thermal analysis units installed in employee facilities*</p> <p>NEW San Diego Metropolitan Transit System: Bus operators temperature tested prior to shift</p> <p>NEW VIA: Daily employee temperature testing</p> |
| 4. COVID-19 testing | Provide free COVID-19 testing for workers | <p>NJT: Testing program for employees</p> <p>NYCT: COVID-19 antibody testing for employees</p> <p>Oahu Transit Services: Testing employee temperatures daily and occasional COVID-19 tests*</p> <p>SEPTA: Testing program for employees</p> <p>NEW Santa Clara Valley Transportation Authority: Offering COVID-19 testing for employees*</p> |

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| Topic | Description | Examples |
|--------------------------------|--|--|
| 5. COVID-19-related healthcare | Provide access to healthcare | CTA: Expanded access to health care services for employees without CTA healthcare coverage for COVID-19-related illnesses and expanded access to telehealth services |
| 6. Vulnerable workers | Provide protections for vulnerable workers | SunLine Transit: Vulnerable workers may use sick or other available time off and unpaid time off will be approved |

Sick Leave Policies

| Topic | Description | Examples |
|-------------------------|--|---|
| 1. Sick leave | Establish policies that promote employee sick leave | SunLine Transit: Workers do not need to provide a doctor's note before or during an illness |
| 2. Quarantine protocols | Establish protocols for responding to COVID-19 cases among employees | CTA: Workers testing positive and any other workers who came into close contact with the patient directed to remain at home with pay for 14 days since their last contact |

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Recruiting and Training

| Topic | Description | Examples |
|-------------------------------|---|--|
| 1. Interviews and Recruitment | Establish process for conducting virtual employment interviews | MARTA: Conducting employment interviews using video conferencing |
| | Work with community colleges, non-profit agencies, and technical education to develop and recruit employees | LACMTA: Partnering with community colleges to establish a transit workforce development program Denver RTD: Partnering with local community colleges and non-profits to recruit and train transit employees |
| 2. Testing and training | Establish a process for conducting pre-employment testing virtually | WMATA: Register and conduct testing for job applicants virtually |
| | Provide online resources to support employees preparing for transit careers | UTA: Place pre-test study guides and resources online to support employees in preparing for tests |
| | Provide online training | NEW DART: Creating virtual training opportunities NEW RideKC: Employee training provided using an e-learning platform |

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| Topic | Description | Examples |
|-----------------------------|---|--|
| 3. COVID-19 safety training | Develop online training to support employee awareness | New Mexico DOT: Developing and streaming COVID-19 safety training |
| | Provide training to employees as they return to work | Transit Authority of River City: Operators will undergo training on safety protocols, CDC guidelines, and measures to protect themselves and their passengers* |

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Protecting Passengers

Face Coverings and PPE

| Topic | Description | Examples |
|-------------------|--|--|
| 1. Face coverings | Recommend or require face coverings for passengers | Green Mountain Transit: All passengers above the age of two must wear a face covering NYCT: Face coverings required Shoshone-Bannock Tribes Public Transit: Face coverings required |
| | Distribute face coverings to passengers | <div>NEW AC Transit: Installed face mask dispensers on vehicle fleet</div> <div>CARTA: Distributing masks to passengers without them</div> <div>NEW CTA: Piloting mask dispensers on buses*</div> <div>NEW King County: Installing mask dispensers*</div> <div>NEW MARTA: Installed onboard mask dispensers*</div> <div>NYCT: Installation of mask dispensers on buses</div> |

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| Topic | Description | Examples |
|---|-----------------------------------|---|
| | | TriMet: Mask dispensers on vehicles UTA: Providing free face masks to returning college students* |
| | Sell face coverings to passengers | <p>NEW CTA: PPE vending machines installed in select stations*</p> <p>NEW NJT: PPE vending machines installed in select stations and terminals*</p> <p>NYCT: Deploying vending machines with face masks, gloves, hand sanitizer, and sanitizing wipes at 10 subway stations</p> |
| 2. Hand sanitizer, gloves, or other hand protection | Provide hand hygiene items | <p>NEW AC Transit: Installed hand sanitizer dispensers on fleet</p> <p>NEW Athens Transit: Installed hand sanitizer dispensers on fleet</p> <p>BART: Giving out and selling personal hand straps to riders</p> <p>Kigali Bus: Passengers required to wash hands before boarding*</p> <p>NEW Monterey-Salinas Transit: Installed hand sanitizer dispensers on fleet</p> |

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| Topic | Description | Examples |
|---|--|---|
| | | <p>Metro Transit: Handwashing stations installed at rail transit stops</p> <p>Nashua Public Transit: Hand sanitizer available on all vehicles for passenger use</p> <p>NEW San Diego Metropolitan Transit System: Handwashing stations available at all trolley stops</p> <p>Société de Transport de Montréal: Installing touch-free hand sanitizers at station entrances*</p> <p>The Comet: Hand sanitizer available on all vehicles for passenger use</p> <p>NEW Tri-Valley Transit: Hand sanitizer available on vehicles</p> |
| 3. Passenger coaches for new COVID-19 rules | Use coaches to help passengers navigate social distancing and face mask requirements | <p>SEPTA: Coaches used to help passengers with new COVID-19 rules*</p> |
| 4. COVID-19 testing for passengers | Offer COVID-19 testing to passengers | <p>NEW The COMET: Partnership with the Department of Health and Environmental Control to offer testing at the transit hub*</p> |

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| Topic | Description | Examples |
|-------|-------------|---|
| | | <div>NEW</div> <div>MARTA: Partnership with COVID Care Georgia, LabCorp, and the city of Brookhaven to make COVID-19 testing available via transit*</div> |

In-Vehicle Protections

| Topic | Description | Examples |
|----------------------|---|---|
| 1. Vehicle occupancy | Establish policies or procedures to limit the number of passengers on any one transit vehicle | <div>NEW</div> <div>AC Transit: No more than 6 passengers on 30-foot vehicles, 10 on 40-foot, 16 on 60-foot, and 24 on 44-foot decker coaches</div> |
| | | <div>NEW</div> <div>Anchorage People Mover: No more than 6 passengers on 22-foot buses and 14 on 40-foot buses</div> <div>CATA: No standing passengers permitted</div> <div>CTA: Bus operators authorized to bypass certain bus stops or only permit passengers to exit the vehicle depending on the number of passengers onboard and the size of the vehicle</div> |

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| Topic | Description | Examples |
|-------|-------------|---|
| | | Govia Thameslink Railway: Using train weight to determine whether a train has sufficient space to let on additional passengers* King County: Creates passenger limits to support social distancing OC Transpo: One passenger per paratransit vehicle, as available  Pelivan Transit: One passenger or party per paratransit vehicle The Comet: Bus seating limited to one passenger per row  The Rapid: Limit of 15 passengers on 40' buses and four passengers on paratransit vehicles Transit Windsor: Buses limited to a maximum of 10 passengers Valley Regional Transit: No standing passengers permitted VIA: Link vans limited to two passengers |




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| Topic | Description | Examples |
|-------|---|--|
| | | Vonlane: Aisle seats and certain conference table seats blocked to ensure physical distancing* NEW Yuba Sutter Transit: No more than 12 passengers per bus and no more than two unrelated passengers on Dial-A-Ride NEW City of Harrisonburg Public Transportation: No more than 18 passengers on each vehicle Redding Area Bus Authority: Standing prohibited on buses |
| | Increase vehicles in service to decrease the number of passengers per vehicle | BART: Running long trains throughout hours of service and adding additional trains during commute hours in 15-minute slots once trains consistently reach greater than 30 people on board King County: Adding additional buses to high-demand routes MBTA: Increasing frequency on bus routes with high ridership |
| | | MUNI: Adding more frequent service to lines that service neighborhoods that rely on transit service the most |

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| Topic | Description | Examples |
|-----------------------|------------------------------------|--|
| | | Metrolink: Tracking ridership and adding additional passenger cars or train service when ridership is consistently 30-percent or higher* |
| 2. Passenger boarding | Rear door boarding and exiting | Lawrence Transit: Rear door boarding for all passengers not needing mobility assistance  RideKC: Rear door boarding for all passengers not needing mobility assistance  SunLine Transit: Rear door boarding for all passengers not needing mobility assistance |
| | Wheelchair boarding and securement |  GoRaleigh: Installed fully automatic securement system that allows mobility passengers to secure themselves without direct physical assistance* TransLink: Some buses will not pick up passengers using mobility devices, but will call taxis to provide service* |
| | | Beijing: Rider temperatures screened prior to boarding* |
| | | |

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| Topic | Description | Examples |
|--------------------------|---|--|
| | Test passenger temperatures prior to boarding | Guam Regional Transit Authority: Passenger temperatures tested prior to boarding Rapid Kuala Lumpur: Rider temperatures screened prior to boarding* Singapore Land Transit Authority: Thermal cameras screen passengers in select stations* Vonlane: Passenger temperatures tested prior to boarding* |
| | Automatically opening doors to reduce touch points | NEW TriMet: Installed sensor-operated rear doors on vehicles |
| 3. Quiet transit service | Ask passengers to refrain from talking on vehicles | East Japan Railway: Asking passengers to refrain from talking while onboard |
| 4. Payment options | Encourage alternate methods of payment or suspend fares | CATA: Suspending fares CTA: Passengers must use farecard readers when boarding from the rear doors and buses not equipped with rear door farecard readers do not collect fares |

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| Topic | Description | Examples |
|-------|-------------|--|
| | | <p>NEW Gold Coast Transit: Suspending fares to facilitate rear door boarding</p> <p>Sound Transit: Suspending fares</p> <p>TriMet: Eliminating cash transactions to minimize contact with the driver</p> <p>Valley Regional Transit: Suspending fares for fixed route and demand response services</p> <p>Roaring Fork Transportation Authority will no longer accept cash payments from bus passengers</p> <p>NEW Sunline Transit: Bus and paratransit service provided free of charge</p> <p>NEW TriDelta Transit: Offering free Clipper cards to promote contactless fare payment</p> <p>NEW TriMet: Encouraging passengers to use contactless payment options and providing contactless cards via mail</p> |

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| Topic | Description | Examples |
|--|---|--|
| | | NEW VIA: Providing Workforce Assistance Passes to provide free rides for unemployed passengers |
| 5. Visual cues for physical distancing | Install visual cues, such as stickers or tape, to remind passengers to distance themselves from the driver and other passengers | CATA: Signage on buses to remind passengers to stay six feet apart NEW City of Harrisonburg Public Transportation: Passengers corded off from operator and seats marked to space passengers appropriately LYNX: Seats marked to space passengers appropriately NEW MARTA: Installed seat markers Nashua Transit System: Signage on seats to space passengers appropriately New Orleans Regional Transit Authority: Seats blocked off to space passengers appropriately NEW Sacramento Regional Transit: Seats blocked off to space passengers appropriately |

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| Topic | Description | Examples |
|--------------------------|--|---|
| | | NEW Tri-Valley Transit: Posted signs blocking off aisle seats |
| 6. Vehicle configuration | Change the physical layout of the vehicle to promote physical distancing | BART: Piloting new configurations for some trains to create additional space between riders NEW Tri-Valley Transit: Installed plastic barriers between rows of seats |
| 7. Vehicle materials | Change materials within the vehicle to improve cleaning | Maryland Transit Authority: Retrofitting buses with plastic seats* NEW Metro Transit Authority of Harris County: Installing fiberglass seat inserts on light rail vehicles* |
| | Install antimicrobial materials | NEW Edmonton Transit Service: Installing anti-microbial push-plates on swing doors in transit centers and stations* NEW TransLink BC: Piloting copper-plated surfaces on buses and trains* |

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Infrastructure (Non-vehicle) Protections

| Topic | Description | Examples |
|--|--|---|
| 1. Visual cues for physical distancing | Install visual cues, such as stickers or tape, to remind riders to distance themselves from each other | TransLink BC: Installed stickers at stations to show passengers where to stand to remain six feet apart  Sacramento Regional Transit: Spray painted sidewalks to remind passengers to remain six feet apart |
| 2. Reduce exposure | Implement policies to reduce exposure in transit infrastructure |  Denver Regional Transportation District: Bus concourse prohibits eating and limits the number of people in restroom facilities at one time*  Everett Transit: Limit of one customer permitted in Customer Service Center lobby at a time Regional Transportation Commission of Southern Nevada: Maximum of 10 passengers permitted in transit centers for a maximum of 10 minutes each Regional Transportation Commission Washoe: Customer Service center permits no more than six visitors at a time |

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Cleaning, Disinfecting, and Ventilating Vehicles and Infrastructure

Vehicles

| Topic | Description | Examples |
|------------------------|---------------------------|---|
| 1. In-service cleaning | Clean vehicles in service | CATS: Buses and light rail vehicles cleaned during layovers CTA: Workers disinfect rail car high-touch surfaces at all terminals and workers disinfect bus high-touch surfaces at four bus terminals serving 30 routes C-TRAN: Additional workers on transit center platforms to clean and disinfect buses in between trips DART: Light rail vehicles cleaned at least every 90 minutes at terminal stations Metropolitan Transit System: Trolley doors and buttons cleaned at four stations* Milwaukee County Transit Systems: Bus operators given disinfectants to use throughout service* |

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| Topic | Description | Examples |
|--------------------------|--|--|
| | | <p>Sacramento Regional Transit Authority: Light rail fare inspectors sanitize tap payment device after each use</p> <p>NYCT: Testing new air filters on several car classes to determine whether they effectively kill microbes</p> <p>NEW The Rapid: Periodic disinfection of fixed-route and bus rapid transit buses throughout the day</p> |
| 2. Cleaning technologies | Use coatings or other mechanisms to decrease the likelihood of fomite transmission | <p>CTA: Testing products on vehicle interiors to prevent pathogens from “sticking” to treated surfaces</p> <p>NJT: Contracted with Rutgers to study the effectiveness of UVC wavelength in killing viruses and mapping the interior of different bus models to identify the best placement for the UVC source*</p> <p>NYCT: Piloting antimicrobial biostats, materials that create a protective layer on surfaces and prevent microbes from growing, on surfaces in train cars and buses, stations, and crew quarters</p> <p>Valley Metro: Trains fogged with a “barrier” solution</p> |
| | Use UV lights to disinfect vehicles | <p>DART: UV system sanitizes air as it recirculates through buses</p> |

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| Topic | Description | Examples |
|-------|---|---|
| | | <p>NJT: Partnering with Rutgers to test UV disinfection*</p> <p>NYCT: Using UV lights in break rooms and operations centers, and working with university and startup to develop portable lights</p> <p>NEW Vermont Agency of Transportation: Received funding from the Public Transportation COVID-19 Research Grant program to test the efficacy of two UV-C light products*</p> <p>Yanggao: Using UV light chambers to disinfect buses in five to seven minutes*</p> |
| | Use foggers, misters, or sprayers to disinfect vehicles | <p>NEW ABQ RIDE: Using electrostatic foggers on fleet*</p> <p>DART: Light rail vehicles sanitized with foggers</p> <p>Hong Kong Mass Transit Railway: Deployed vaporized hydrogen peroxide robot to clean and decontaminate trains and stations*</p> <p>MARTA: Delta Airlines provided MARTA with 50 electrostatic sprayers to help clean MARTA buses, trains, and rail stations*</p> |

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| Topic | Description | Examples |
|-------------------|--|--|
| | | NYCT: Testing electrostatic sprayers that positively charge a disinfecting solution, atomizes it, and disperses it, in subways and buses Valley Metro: Fogging buses three times per week and trains once per month |
| 3. Daily cleaning | Clean vehicles prior to or after service | Long Beach Transit: Each bus is cleaned with freshly laundered towels and towels are not used on multiple buses before laundering MBTA: All vehicles disinfected daily NYCT: Subway closed from 1am to 5am every day for vehicle cleaning RideKC: Buses sanitized nightly Sunline Transit Agency: Buses fogged with disinfectant with the HVAC running Valley Regional Transit: Every in-service bus cleaned and disinfected each night |

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| Topic | Description | Examples |
|----------------|--|--|
| 4. Ventilation | Use special air filters | <p>NEW BART: Installing MERV14 filters in vehicle HVAC systems and continuing testing ultraviolet bulbs in HVAC system*</p> <p>DART: Ultraviolet germicidal irradiation in bus air-conditioning ducts that clean the air automatically as it recirculates</p> <p>NEW King County: MERV8 HVAC filters used on Metro's buses</p> <p>MARTA: Installed antimicrobial air filters*</p> <p>MTA: Understanding subway ventilation and testing ultraviolet technology in railcar ventilation systems*</p> <p>NEW NJT: Partnering with Knorr Merak to test three-stage air filtration and purification*</p> <p>NEW Plymouth Metrolink: Installed air cleaning devices that filter more than 95-percent of airborne viruses*</p> |
| | Open windows or use other means to draw outside air through vehicles | <p>East Japan Railway: Automatic ventilation systems exchange air in six to eight minutes per vehicle and all windows open six to eight inches</p> |

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| Topic | Description | Examples |
|-------|------------------------|---|
| | | NEW Monterey-Salinas Transit: Leaving bus windows open to draw air through the vehicle NYCT: Bus windows and roof hatches opened to draw outside air into the vehicle * |
| | Sanitize HVAC elements | Rossiyskie Zheleznye Dorogi: Installed UV lamps in the duct works of trains * Shanghai Keolis: Adjusted streetcar HVAC to use all fresh air and equipped air conditioning units with UV lights * |

Infrastructure

| Topic | Description | Examples |
|--|--|---|
| 1. Stations, terminals, and other revenue facilities | Clean, disinfect, and ventilate revenue facilities | NEW Athens Transit: Pressure washing bus stops daily The Comet: Cleaning bus stop shelters, benches, and wall panels * Transit Windsor: All hard surfaces in transit terminals sanitized daily |

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| Topic | Description | Examples |
|---------------------------|--|--|
| 2. Cleaning technologies | Install air purifiers at transit facilities | MARTA: Implements project to install 209 air purifiers in air conditioning units found at 18 MARTA facilities* |
| | Use coatings or other mechanisms to decrease the likelihood of fomite transmission | SMART: Terminals, transit center, and downtown offices sprayed with electrostatic microbial spray treatments |
| | Use UV lights to disinfect infrastructure | NYCT: Using UV lights on vehicles and working with university and startup to develop portable lights |
| | Use robots to clean | Hong Kong Mass Transit Railway: Deployed vaporized hydrogen peroxide robot to clean and decontaminate trains and stations* |
| 3. Non-revenue facilities | Clean spaces as they are used | Long Beach Transit: Custodians service administrative buildings three times daily NYCT: Added daytime cleaning shifts to disinfect work areas SMART: Employees who use conference rooms are required to wipe down all shared equipment, furniture, and high-touch surfaces after use |

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| Topic | Description | Examples |
|------------------|---|--|
| | Clean and disinfect tools or shared use items | NYCT: Construction tools disinfected daily * |
| 4. Post-exposure | Clean or disinfect spaces after exposure | Transdev (transit contractor): Deep cleaning vehicles, offices, maintenance shops, and facilities after exposure |

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Operational Considerations

Planning for Recovery

| Topic | Description | Examples |
|------------------------|--|--|
| 1. Recovery task force | Establish a work group or task force to guide public transit recovery from the COVID-19 pandemic | LACMTA: Recovery Task Force releases recommendations to improve mobility UTA: COVID-19 Work Group WMATA: Pandemic Task Force issues recommendations |
| | Include labor and members of the business community in recovery planning | MTC: Created Transit Recovery Task Force for Bay Area* |
| 2. Recovery plan | Establish a decision support system and playbook of recommended operations options for various service scenarios | <div>NEW</div> East Texas Council of Governments: GoBus Pandemic Response Plan <div>NEW</div> Laredo Transit: Pandemic Response Plan <div>NEW</div> Monterey-Salinas Transit: COVID-19 Recovery Plan |

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| | | |
|--|--|--|
| | | NACTO: Playbook guidance for managing street design and movement, including transit lanes* NYPTA: COVID-19 Recovery & Restoration Plan SMART: COVID-19 Safety Playbook  South Plans Community Action Association: SPARTAN Public Transportation Pandemic Response Plan WMATA: COVID-19 Recovery Plan |
|--|--|--|

Service Changes to Support Opening, Restoration or Expansion of Transit Service

| Topic | Description | Examples |
|---|--|--|
| 1. Transit services for essential workers | When opening, restoring, or expanding transit service, focus service on key routes for essential workers | Houston Metro: Adding a Texas Medical Center shuttle to move essential employees to the medical center Maryland Transit Administration: Enhanced service on routes that service healthcare facilities, food distribution sites, and designated supply chain employers |

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| Topic | Description | Examples |
|---|--|---|
| | Provide essential employees with rides to or from work curb-to-curb on paratransit service | Maryland Transit Administration: Cooperative agreement with Transdev, First Transit, and MV to provide “park-and-ride” service for essential hospital workers* MTA NYCT: Essential Services Plan* |
| 2. Adjusting transit service to support schedules of essential services | Adjust schedules and add trips to address essential workers’ schedules | NYCT: Adjusts service to meet needs of essential workers |
| 3. Supporting transit-reliant communities | When opening, restoring, or expanding transit service, focus on those in the community that need it the most | CATA: Announces Diversity, Equity, and Inclusion Task Force Greensboro Transit Agency: Providing service to city’s free shelter-in-place option for residents experiencing homelessness* Jacksonville Transit: Launching new line to improve connectivity to critical resources for areas with known mobility challenges* LACMTA: Recovery Task Force uses an equity framework to prioritize better mobility for those who rely on transit |

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| Topic | Description | Examples |
|-------|--|---|
| | | <p>Montgomery County Transit: Service focuses on Equity Emphasis Areas</p> <p>MUNI: Core Plan focuses on most used routes and equity to ensure service for customers most reliant on transit</p> <p>NEW New Orleans Regional Transit Authority: Prioritizes life-sustaining reservations for paratransit service</p> <p>TriMet: Focus on minority and low-income riders</p> |
| | Provide alternate service in areas where regular service is not yet restored | <p>COTA: Launching COTA//Plus pilot, an on-demand service that hails vehicles to the user's nearest transit stop, in service areas where fixed-route service has been suspended*</p> <p>Denton County Transportation Authority: Replacing fixed-route bus service with on-demand transit*</p> <p>NEW Monterey-Salinas Transit: Developed routes to replace temporarily suspended volunteer driver routes to veteran medical facilities</p> |

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| Topic | Description | Examples |
|--|--|---|
| | | The Comet: Provides on-demand service for riders on routes that are not currently running* |
| 4. Expanding support for passengers with disabilities impacted by service cuts | Expand paratransit service to customers with disabilities who can no longer reach their essential destinations through traditional service | King County: Expands eligibility for paratransit services to those impacted by COVID-19 service cuts LACMTA: Expands service area and offers a safer travel option for essential workers and those with essential needs* |
| 5. Off-peak transit service | Incentivize passengers to travel during off-peak times | Sydney Public Transit Systems: Fares halved for off-peak travel* |
| | Expand off-peak service | MBTA: Increases service for off-peak hours* |
| 6. Expanding coordinated services | Bring on-demand services back to support enhanced transit service in a coordinated approach | King County: Resumes Via to Transit |

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Service Adjustments to Manage Crowding

| Topic | Description | Examples |
|---|---|--|
| 1. Staying ahead of demand | Restore more frequent transit service to stay ahead of demand | Miami-Dade: Increases frequency of service on key routes to reduce crowding Pasadena Transit: Increasing buses on its busiest route * Vista Transit: Added additional service to popular route to reduce the number of passengers on each vehicle WMATA: Outlines phased approach for restoring service |
| 2. Changing vehicle type to address service needs | Place larger transit vehicles on agency's most crowded routes | NJT: Use articulated buses to support social distancing * Port Authority: Move largest buses to new routes * |
| | Preferentially use vehicles that allow for social distancing | Regional Transportation Commission of Southern Nevada: Using double-decker buses or other high-capacity buses as available to increase space available for social distancing |
| 3. Ridesharing | | Miami-Dade and other transit agencies: Ridesharing to supplement service * |

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| Topic | Description | Examples |
|---|---|---|
| | Use ridesharing to supplement fixed route transit service and reduce crowding | Cities across US: Supplementing service with rideshare* |
| 4. Monitoring and changing service requirements with expanded service | Reevaluate COVID-19 service levels and safety precautions as demand increases | WMATA: Surveying employers on their plans to bring their employees back into offices |
| 5. All-door boarding | Use all-door boarding as a strategy to reduce crowding at bus stops | WMATA: Evaluating accelerated installation of SmarTrip targets on rear doors to enable smooth transition to all-door boarding |
| 6. Expanding existing service zones | Use additional service capacity to support essential workers and those with special needs | LACMTA: Expands service area and offers a safer travel option for essential workers and those with essential needs* Pasadena Dial-a-Ride: Delivering food from the food bank to its members* |
| 7. On-demand services | Expand access to on-demand service |  MetroWest Regional Transit Authority: Providing essential trips to eligible individuals through taxi/livery services |

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Building for the Future

| Topic | Description | Examples |
|---|--|---|
| 1. New bus lanes, traffic signal priority and other measures | Partner with local jurisdictions to accelerate implementation of bus-only lanes and other speed and reliability measures | LACMTA: Announces new bus lanes * MBTA partners with four cities to rapidly construct 14 miles of bus lanes * |
| 2. Accelerating maintenance, rehabilitation or expansion programs | Take advantage of lower ridership and less service to accelerate or expand maintenance and construction projects | LACMTA: Using reduced traffic to close Wilshire Boulevard to fast track Purple Line construction * WMATA: Using upcoming low-ridership summer to maximum effect, expands Orange and Silver line shutdown |
| 3. Prioritizing projects based on post-COVID-19 criteria | Prioritize and re-examine major capital projects during recovery | LACMTA: Considering re-prioritizing capital projects Paris: Creating 650 kilometers of post-lockdown cycleways * |
| 4. Working groups | Form working groups to explore ways the transit agency can expand mobility within their service area | LACMTA: Created the Office of Extraordinary Innovation to discover and develop ways to provide high quality mobility options |

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Passenger Communications

| Topic | Description | Examples |
|--------------------------|--|--|
| 1. Welcome back campaign | To welcome riders back and restore confidence in the safety of transit service, post plans on agency websites that outline steps the agency will take to ensure the safe restoration of service, often focusing on cleaning and disinfecting, the use of face coverings, how social distance will be maintained, service changes, and the exploration of new measures and technologies | BART: 15-step plan to welcome back riders DATTCO: Clean Care Certified initiative NJT: Your Ride to Recovery NYCT: Action Plan for a Safe Return  Ohio Public Transit Association: Ride Easy Ohio campaign  AC Transit: ReNEW plan SEPTA: Reopening Guide  SunLine: SunLine Refueled five-level alert system VTA: VTA's 10-Point Plan to Strengthen Trust in Transit TriMet: Here's what you need to know when you return |




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| Topic | Description | Examples |
|--|---|--|
| | | UTA: COVID-19 Recovery plan and Recovery Plan Summary |
| 2. Welcome back kits | Provide riders with what they need to safely use the system, including reusable face mask, hand sanitizer and safety guide | CTA: Giving away "Travel Healthy" kits |
| 3. Keeping riders informed in real-time | Use website banner, push notifications on transit app, text and email alerts and updates, social media, and other means to keep riders informed | DART: Coronavirus communication NEW Valley Regional Transit: Weekly newsletter |
| | Provide real-time cleaning information | Ontario Northland: Web application allows passengers to enter a vehicle identifier into the website and see the cleaning history for the vehicle * |
| 4. Collecting information from riders on new travel patterns and needs | Survey customers on their current transportation patterns and modes, future transportation plans, COVID-19 concerns, and customer experience | NEW Anchorage People Mover: People Mover and AnchorRIDES passenger survey |
| | | NEW Denton County Transportation Authority: Survey of passenger experience during COVID-19 public health emergency * |



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| Topic | Description | Examples |
|---|---|---|
| | | LACMTA: Agency research efforts Miami-Dade: Issues survey as part of 10-year planning goal  RideKC: Customer survey on ridership during COVID-19 public health emergency TriMet: Agency research efforts UTA: COVID-19 General Rider Survey Report  Valley Metro: Customer survey on ridership during COVID-19 public health emergency |
| 5. Collecting information from riders most reliant on transit | Survey different groups of riders on their transportation during the pandemic and how they plan to travel in the future | LACMTA: Promotes a rider-led recovery |
| 6. Shifting from print resources | Encourage customers to shift from print media to online sources | NYPTA: Recommends shifting to online media sources  RideKC: Printed materials available by request only |

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| Topic | Description | Examples |
|---|--|--|
| 7. Behavioral science tools | Approaches to communicating with passengers based in behavioral science | MTA: Enlisting the help of behavioral psychologists and crowding experts to plan for New York's reopening* Transit agencies: Use behavioral science techniques to attract riders and design passenger communication* and How behavioral science can help with 'normal' after coronavirus* |
| 8. Notifying passengers of potential exposure | Implement a process to notify passengers of potential exposure to workers or other passengers who test positive for COVID-19 | Houston Metro: Publishing routes, days, and times operators who test positive worked* Jacksonville Transportation Authority: Publishing routes, days and times operators who test positive worked and posting information on those routes* |
| 9. In- or on-vehicle safety messaging | Display safety tips in or on vehicles | RoadRUNNER Transit: Installing banners with COVID-19 health tips on fixed route buses in English and Spanish  Tri-Valley Transit: COVID-19 information posted in three languages on buses and at shelters |
| 10. Video campaigns and promotions | Encouraging mask wearing |  Multiple agencies: Video encouraging riders to #MaskUpForTransit* |


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| Topic | Description | Examples |
|---------------------------------|---|--|
| | Public demonstration of cleanliness of system | NYCT: A spot-check of the New York subway system by the television program Inside Edition revealed no trace of COVID-19 on any of the 32 surfaces swabbed and tested* |
| 11. Access to vaccination sites | Provide access to vaccination sites via transit | <div><div>NEW</div>Chapel Hill Transit: Providing rides to vaccination sites</div> <div><div>NEW</div>Charlottesville Area Transit System and JAUNT: Providing free rides to vaccination center</div> <div><div>NEW</div>Jacksonville Transportation Authority: Providing vaccination transportation</div> <div><div>NEW</div>North Carolina: Departments of Health and Human Services and Transportation funding rides to vaccination sites*</div> <div><div>NEW</div>NYCT: Helping passengers access vaccination sites</div> <div><div>NEW</div>Operating Above the Standard Transit: Providing free transportation to vaccination sites</div> <div><div>NEW</div>San Diego Metropolitan Transit System: Providing free transit rides to COVID-19 vaccination appointments</div> |

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| Topic | Description | Examples |
|------------------------------|--|---|
| 12. Federal mask requirement | Publicize information about the Federal mask requirement and your agency's process for adherence |  RTC Washoe: Public-facing website describes agency's process to comply with the Federal mask requirement |

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Technology and Innovation

Detecting Crowding

| Topic | Description | Examples |
|--|---|---|
| 1. Real-time tools to track crowding on transit vehicles | Provide real-time vehicle occupancy information to help passengers make informed decisions about riding | <p>NEW Alameda-Contra Costa Transit District: Automated Passenger Counters update crowding information on transit website*</p> <p>Auckland Transit: Requiring passengers “tap” fare media when boarding and alighting allows their phone application to convey real-time passenger loads*</p> <p>CTA: Bus crowding report for passengers</p> <p>Danske Statsbaner (Danish State Railways): Advanced booking capabilities for light rail trips, including information on which services and vehicles are the least crowded*</p> <p>East Japan Railway: Rail-time information on vehicle occupancy and the availability of space for “reduced mobility passengers”</p> <p>LIRR: Real-time crowding information available to the public via a phone application</p> |

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| Topic | Description | Examples |
|--|--|---|
| | | MBTA: Real-time crowding information on nine bus routes displayed on bus stop digital signs and in the MTBA transit phone application  RTC Southern Nevada: Transit app provides real-time crowding information* |
| 2. Monitoring crowding in transit service | Use artificial intelligence (AI) and CCTV to monitor crowding on transit platforms and vehicles | India: AI helps cities monitor and manage crowding* |
| 3. Apps to help riders make appointments for transit service | Provide apps that lets riders make appointments to enter subway stations during rush hours. Riders are given a QR code on their phones that will be valid for a half-hour window to better stagger ridership | Beijing Transit: Uses “subway by appointment” to reduce crowding* |

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Passenger Monitoring

| Topic | Description | Examples |
|---|---|---|
| 1. Monitoring passenger temperatures in transit stations | Use thermal cameras to take riders' temperatures | Beijing Transit: Uses temperature monitoring in subway* MTA: Recommends the use of thermal cameras to monitor riders' temperatures in subway stations* |
| 2. Monitoring passenger temperatures prior to boarding vehicles | Test passenger temperatures prior to boarding | Rapid Kuala Lumpur: Rider temperatures screened prior to boarding* |
| 3. Monitoring transit stations and vehicles for face mask use | Use AI technology and CCTV cameras to monitor face mask use | France: Uses AI technology to monitor whether passengers are wearing face masks*  NJT: Testing cameras for face mask detection, heat mapping* NYCT: Recommends use of AI to assess mask wearing* |

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Passenger Engagement

| Topic | Description | Examples |
|--|--|---|
| 1. Passenger reporting of unclean surfaces | Use transit app to allow passengers to report concerns on the system, including cleanliness issues | DART: Say Something App for reporting surfaces that need to be cleaned  Mountain Line: See Say Now app for reporting safety and security concerns* |

Cleaning, Sanitizing, and PPE

| Topic | Description | Examples |
|-------------------------------|---|---|
| 1. UV robots | UV-cleaning robots to disinfect trains and stations | Pittsburgh: Airport is the first in the US to use UV-cleaning robots* |
| 2. Chemical-dispensing robots | Robot technology to conduct deep cleaning and decontamination | Hong Kong Mass Transit Railways: Using an automated robot to clean hard to reach areas* |

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| Topic | Description | Examples |
|--|--|--|
| 3. Partnering with companies to design PPE | Work with vendors to re-tool or expand their capabilities to provide products and supplies | BYD for Toronto Transit Commission: Manufactures face masks for transit systems* |

Payment Options

| Topic | Description | Examples |
|---|---|--|
| 1. Phone and watch app to support contactless payment | Launch phone and watch app to support contactless fare payment | WMATA: Launches iPhone and Apple Watch app to allow riders to use their phone or watch to pay fare anywhere smart card readers are used |
| 2. Contactless fare payment and mobile ticketing | Accelerate or start the process of introducing contactless fare payment in response to COVID-19 | <div><div>NEW</div><div>DART: Soliciting riders to help test contactless payments by offering reduced fares</div></div> <div>GDRTA: Adopts "Transit" app</div> <div><div><div>NEW</div><div>Gwinnett County Transit: Launching Token Transit app for contactless payment*</div></div><div>LACMTA: Recommends rapid introduction of contactless, visual ticket purchase and payment option in Metro's new "Transit" app</div></div> |

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| Topic | Description | Examples |
|---|--|--|
| | | NEW MetroLink: Launched mobile fare option |
| 3. Providing unbanked or underbanked transit riders with access to TouchPass system | Supplement Title VI inclusivity programs with broad, local, and convenient access for passengers to add value using cash to TouchPass accounts | COTA: Working with state government to load fares onto magnetic-strip EBT cards used for food benefits* |
| 4. Virtual enrollment in fare programs | Allow passengers to sign up for reduced fare programs online | NEW Pasadena Transit: Dial-A-Ride applications accepted only online TriMet: Temporarily opening a virtual application site |

Micromobility

| Topic | Description | Examples |
|--|--|--|
| 1. Integrating micromobility providers into transit apps | Partner with micromobility providers to offer alternative transportation options | DART: On-demand microtransit service integrated into DART's GoPass mobile app* |

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| Topic | Description | Examples |
|---|---|--|
| 2. Expanding microtransit partnerships through technology and contracts | Pilot and expand alternative services following new models, such as MicroTransit and Mobility on Demand | Denton County Transportation Authority: Using the Spare Platform to replace fixed-route service with on-demand transit to manage the number of riders on a vehicle and trace riders* |
| | | LAMCTA: On-demand services adapted to accommodate essential trips to grocery stores, pharmacies, and medical centers*  SunLine Transit Agency: Offering a SunRide microtransit service* |

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