

**Board Report**

File #: 2017-0755, **File Type:** Informational Report**Agenda Number:** 42.

**AD HOC CUSTOMER EXPERIENCE COMMITTEE
NOVEMBER 16, 2017****SUBJECT: PROCEDURES TO MITIGATE SERVICE
DISRUPTIONS****ACTION: RECEIVE AND FILE****RECOMMENDATION**

RECEIVE AND FILE report on procedures for customer support and mitigating loss of service due to planned and unplanned service disruptions.

ISSUE

Service disruptions impact the quality of service delivered to our customers and their overall experience. When Metro encounters delays or disruptions to service, a series of mitigating actions are put into place employing failure management strategies and informing customers of the incident. This includes collaboration with a number of departments and leveraging multiple channels of communication ranging from onboard announcements to social media posts. Managing through major service disruptions requires coordination, timing, sound communication and effective advance planning.

DISCUSSION

Metro Bus Operations encounters service disruptions on a daily basis due to construction detours, special events, police activity and many other instances. For planned incidents, the Special Events Desk within Bus Operations Control (BOC) issues Detour Notices to Bus Divisions for operators working affected lines. These Detour Notices are also entered into the onboard Advanced Transportation Management System (ATMS), when a timely notification is provided. Customer Care, Media Relations and the Social Media team are also notified so that they can relay information to customers. Furthermore, Vehicle Operations (VO) is notified so field supervisors may post temporary signage at affected bus stops, informing customers where they can board buses on detour. The VO unit also monitors the area to ensure customers are waiting for buses in the correct location during a detour.

For unplanned events, such as accidents obstructing the road or police activity, bus operators must notify BOC. The operator is then instructed to safely detour around the incident area and reports to BOC on the route which they operated. While the bus is on detour, the operator will make passenger stops where it is safe to do so. The VO unit either confirms that the detour route is the best way to

proceed for other buses or they update BOC with a different detour route. VO units will also post temporary bus stop signage until normal operations has resumed. BOC informs Customer Care, Media Relations and the Social Media team of the incident and detour route being used.

While Bus Operations incidents can often be isolated to one location, Rail Operations incidents often impact the entire line, as trains are limited to operating within the tracks available and can only maneuver at track crossovers that may be several miles apart. Occasionally, an incident on the Blue Line may result in cascading delays on the Expo Line, and vice versa. Because of track infrastructure constraints, Metro prepares and executes a comprehensive strategy to keep Metro Rail customers moving, as a rail incident typically impact a greater amount of customers compared to a bus incident.

Metro prepares for disruptions by planning and conducting quarterly drills based on actual service disruption scenarios. These exercises prepare staff for assimilating into their established roles as situations occur. However, the dynamic nature of a service disruption means no two incidents are ever the same. Day of week, time of day, location, weather conditions and many other variables play a role in how Metro responds to an incident. Metro strives to continuously improve based on experience from each incident that arises.

As customer communication is important to safely and reliably transport customers, Metro has a comprehensive public address (PA) system to provide travel information. During rail service disruptions, the PA system is used to quickly and effectively inform customers of the situation and alternate services until the incident has cleared. PA announcements can be made remotely by Rail Operations Control Center (ROC), locally at selected rail stations, by a field supervisor; and by train operators onboard their vehicle. In parallel, Customer Care, Media Relations and the Social Media team are notified to inform customers through their channels. PA systems are inspected regularly at each station and onboard each railcar for volume and clarity to ensure customers can reliably listen to and understand critical announcements while riding the system. If field personnel or customers report faulty PA equipment, Metro dispatches maintenance personnel to troubleshoot and bring the PA system back to working order.

At the first sign of a rail incident, the Rail Operations Control Center (ROC) coordinates a response that begins with identifying a staff member to serve as the Incident Commander (IC) for coordinating support to immediately restore service and provide updates. The first 5-10 minutes are crucial to properly assessing the disruptions, effectively notifying stakeholders, the public and anticipating when service will be restored. Closed circuit television (CCTV) observers make frequent station announcements over the public address system and update the Transit Passenger Information System / Variable Message System (TPIS/VMS) at stations. Field supervisors are dispatched to provide passenger support and relay field conditions to ROC staff. Train operators are also directed to make frequent, scripted announcements to passengers onboard. These scripts are installed in each train operator cab to explain the majority of incidents to customers and ensure consistent messaging both onboard and from ROC. Furthermore, the Metro social media team is notified to update Metro.net, Metro's Twitter feed and local news media during commute traffic updates. The social media team is also able to monitor public discussion of the incident and relay social media reaction back to Metro Operations, which provides a real-time feedback loop on customer impacts. Finally, Metro's Transit Security is dispatched to the scene of the incident to ensure the safety and security of

passengers and employees.

Bus Bridges

When a bus bridge is needed as a result of trains unable to proceed through a segment, a number of actions must take place to fully implement. Planned bus bridges for maintenance are scheduled and coordinated in advance to provide ample time for support departments to assemble and for customers to be notified.

However, unplanned bus bridges as a result of emergencies require many departments to divert their attention away from normal duties. During rush hour periods, implementing a bus bridge can sometimes take over one hour to organize. This is due to limited resources available as nearly every bus and operator is already scheduled for their normal assignment, heavy traffic to reach the incident location, and street closures associated with a major incident preventing buses from quickly reaching customers. Other external challenges include serving Metro Rail stations located around narrow, one-way or dead end streets which restrict bus turning movements and necessitate additional travel time to safely serve customers.

Bus vehicle capacity is also significantly smaller than train capacity, so customers must often wait for several buses to clear customers until they are able to board. As an example, it can take six or more buses to serve affected customers from only one train. Furthermore, if an in-service bus is redirected to a bus bridge assignment, there is a likelihood that bus passengers waiting for the redirected bus are negatively impacted with a trip cancellation. Bus operations makes every effort to minimize those impacts by prioritizing their request to buses that are out of service or from lines with frequent service where the next bus is scheduled just a few minutes later.

Support Staff and Communication Efforts

As Metro does not employ dedicated station staff for customers, this places the responsibility on CCTV observers, train operators, bus operators, and field supervisors to convey these messages to inform and direct customers. However, the dynamic nature of incidents result in shifting strategies as tracks or streets are reopened, police investigations are completed, or when medical emergencies are cleared. This would be a significant financial commitment within all other agency priorities. Effective communication between Metro and first responders are critical to determining the duration of the service outage and allows customers to plan in advance for alternate travel patterns. For now, Metro employs a small team of Blue Shirt staff, originally responsible for supporting the transition to faregates, for the support of special events and major incidents. Their ambassadorship has been well received by customers, especially during major incidents.

Example: Incident at 7th Street/Metro Center

One example of a major disruption which resulted in a positive outcome occurred on July 26, 2017. A track fire occurred in the Blue and Expo Line tail track at 7th Street/Metro Center, resulting in the loss of a critical track segment used to quickly reverse trains at the Downtown LA terminus.

A bus bridge was quickly established between 7th Street/Metro Center and Pico Station to ferry passengers to departing trains. Staff was deployed throughout 7th Street/Metro Center and along the path to the bus bridge to direct customers between bus and train. Field supervisors were on scene to manage both Bus and Rail Operators and dispatch buses as soon as they were safely boarded.

Once train service was restored to 7th Street/Metro Center, train movement was reconfigured to allow work crews to continue making repairs while restoring train service into 7th Street/Metro Center. Historically, all Blue and Expo trains would discharge all customers on Platform 1, proceed into the tail track area to reverse directions, then board passengers on Platform 2. With the damaged tail track out of service, Metro devised a plan to modify terminal operations to board and alight all Expo Line trains from Platform 1 and all Blue Line trains from Platform 2. This change in service required a substantial amount of customer outreach to inform passenger crowds of which platform to board either the Blue or Expo Line. Therefore, Metro deployed staff from various departments, including the Blue Shirts and field supervisors to direct customers to new platform assignments, answer customer questions and reduce confusion. Station signage within 7th Street/Metro Center was also updated within days to reflect the new service plan. Shortly thereafter, automated announcements onboard each Red Line railcar were updated to notify transferring customers of the platform change.

The results of this modified service plan were well received by the public with the clear delineation of platforms dedicate to each of the Blue and Expo Lines. As such, Metro intends to continue this service plan for the foreseeable future. Crowds are now evenly distributed between Platform 1 and 2 vs previously when both Blue and Expo Line boardings occurred on Platform 2. Also confusion is minimized as to which line a customer is boarding. Finally this plan requires one less train to maintain existing service levels on each line, reducing cost of operations.

DETERMINATION OF SAFETY IMPACT

The ability of Operations to effectively support customers through service disruptions reduces customer confusion and frustration, improving the safety and quality of their experience.

FINANCIAL IMPACT

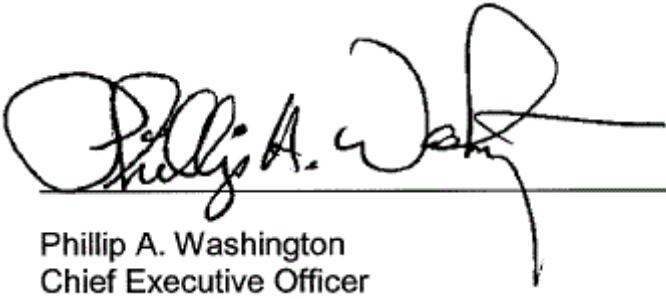
Receive and filing this report would have no financial impact to the agency.

NEXT STEPS

Metro intends to continuously improve responsiveness to both planned and unplanned service disruptions. In the short term, Metro recognizes opportunities to improve customer care during unplanned emergencies. Customer feedback generally centers on two themes- lack of information/staff availability and excessive wait times for bus bridges to arrive. It is therefore imperative for Metro to continue placing customers first through preparation, training, communication, and follow through.

Prepared by: Stephen Tu, Sr. Manager, Transportation Planning, (213) 418-3005
Conan Cheung, Sr. Executive Officer, Service Planning, Scheduling and Analysis (213)
418-3034

Reviewed by: James T. Gallagher, Chief Operations Officer, (213) 418-3108



Phillip A. Washington
Chief Executive Officer

Incidents Resulting in Rail Service Disruptions

Ad-Hoc Customer Experience Committee



Metro

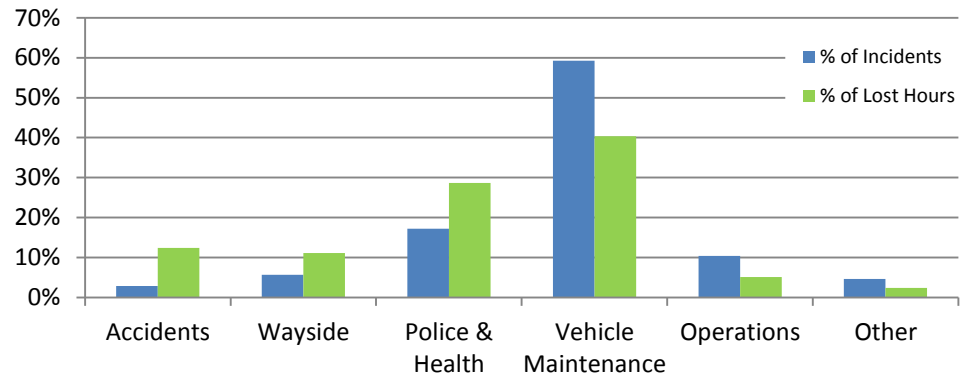
November 2017

CAUSES OF RAIL SERVICE DELAYS

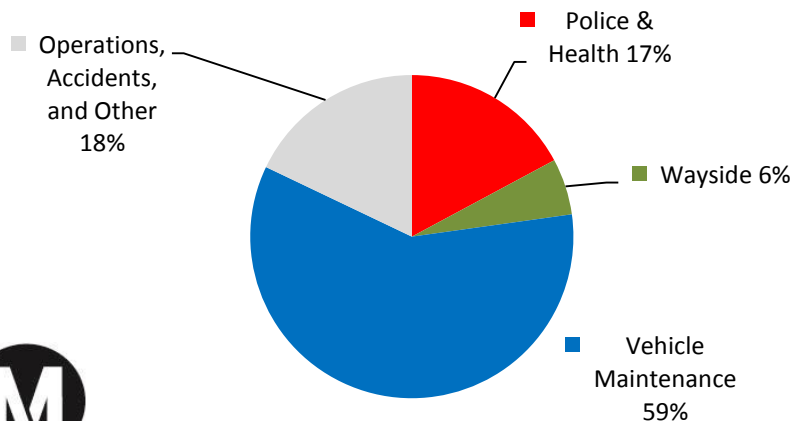
- **Rail Vehicles Failures**
(e.g. doors, brakes, propulsion)
- **Police & Health**
(e.g. customer altercations, sickness)
- **Accidents**
(e.g. traffic)
- **Operations**
(e.g. single tracking, terminal departures, customers)
- **Wayside Failures**
(e.g. track, power, signals, other infrastructure)

FY17 LRT INCIDENTS AND LOST HOURS

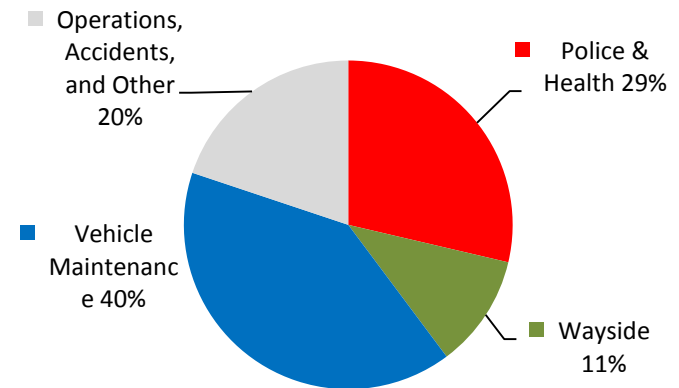
	% of Incidents	% of Lost Hours
Accidents	3%	12%
Wayside	6%	11%
Police & Health	17%	29%
Vehicle Maintenance	59%	40%
Operations	10%	5%
Other	5%	2%
Total	100%	100.0%



**Light Rail % of Total Incidents
FY2017**

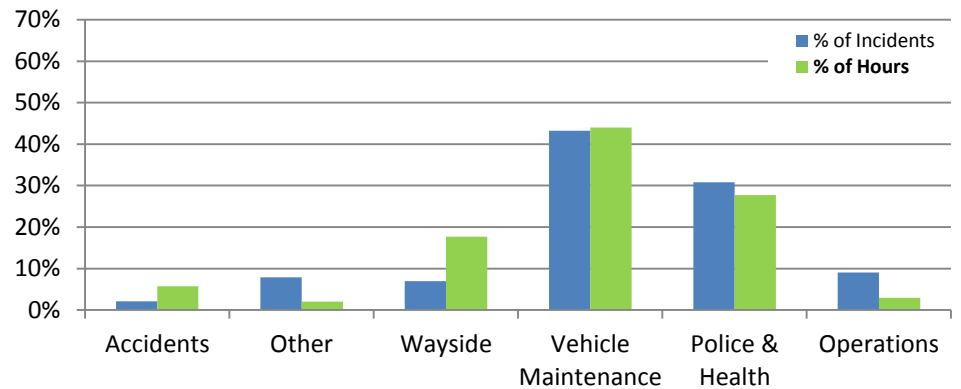


**Light Rail % of Total Lost Hours
FY2017**

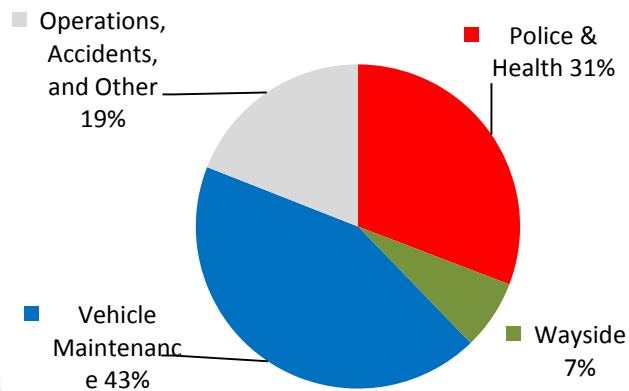


FY17 HRT INCIDENTS AND LOST HOURS

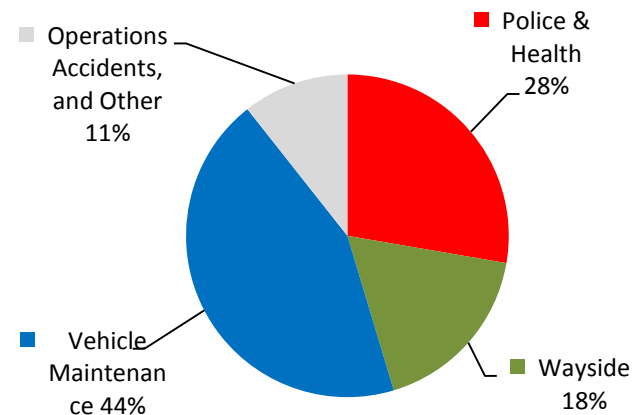
	% Incidents	% Lost Hours
Accidents	2%	6%
Other	8%	2%
Wayside	7%	18%
Vehicle Maintenance	43%	44%
Police & Health	31%	28%
Operations	9%	3%
Total	100%	100.0%



**Heavy Rail % of Total Incidents
FY2017**



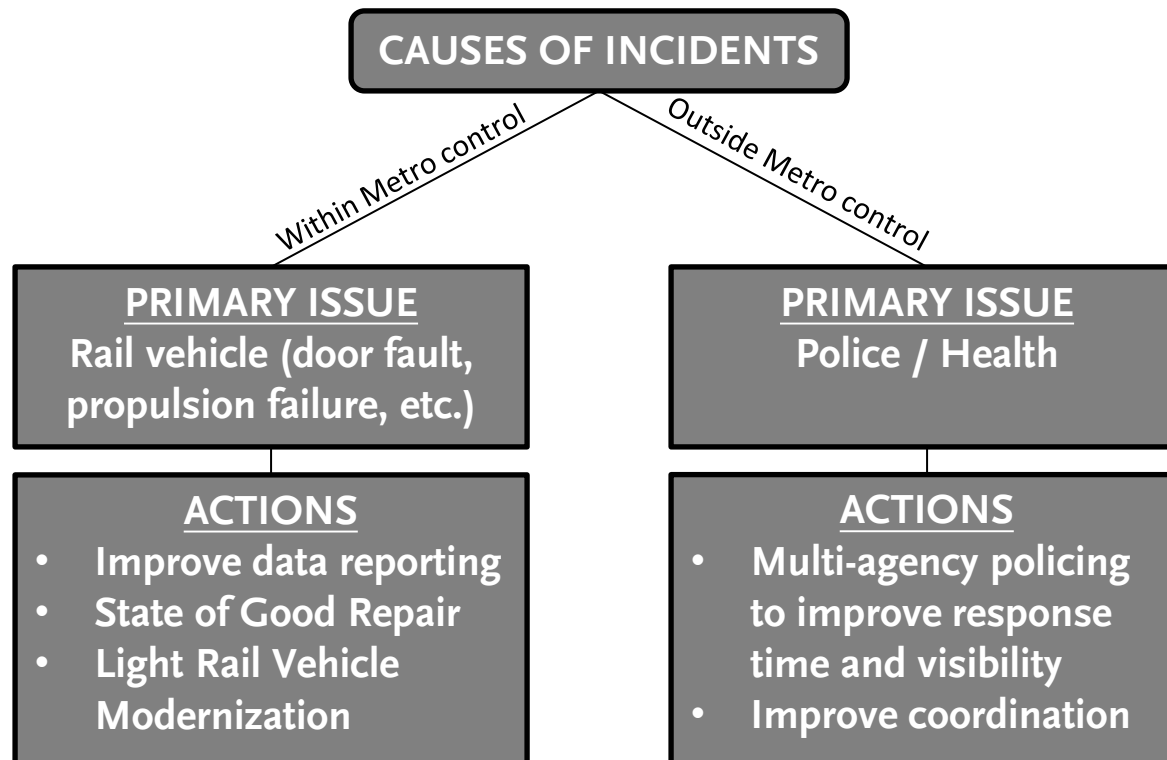
**Heavy Rail % of Total Lost Hours
FY2017**



Metro

PREVENTING INCIDENTS

Minimizing delays caused by incidents is essential to providing safe and reliable transit service for our customers



Metro

MITIGATING INCIDENTS

When incidents occur that delay service, Metro must place customers first by making every effort to get them to their destinations safely with minimal impact.

INCIDENT OCCURS

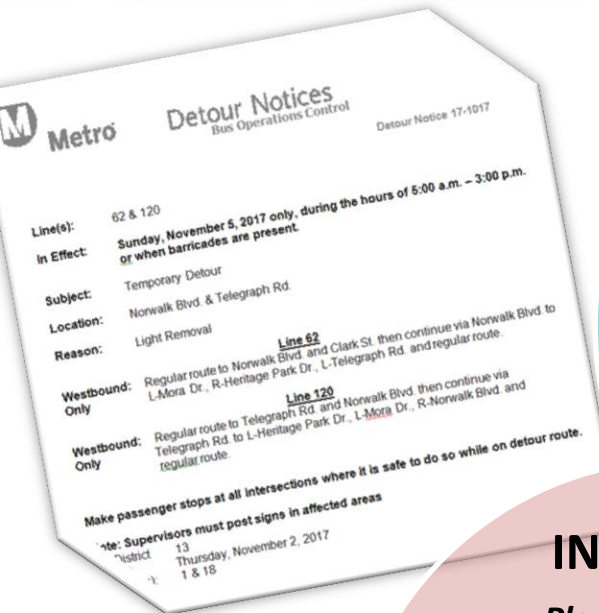
- MINIMIZE DURATION
- Scenario based planning exercises to prepare staff for incidents
 - Incident Commander to coordinate/deploy support
 - Post incident debrief/ review for major events

- COMMUNICATIONS
- Internal coordination between various departments to immediately address incident
 - External communications to keep customers updated, answer questions, and assist in customer support

- TRANSPORT CUSTOMERS
- Deploy bus bridge to transport customers to the next accessible station to complete their trip



HOW WE RESPOND TO BUS INCIDENTS



BUS OPERATIONS

Bus Operations Control (BOC)

- Coordinates field supervisor and operator actions
- Notifies Customer Care, Media Relations, Social Media teams

Field Supervisors (VO Units)

- Verify detour routes and stops
- Post temporary signage
- Monitor impacted customers



INCIDENTS

Planned Incidents

- Example: LA Marathon
- Originated by Special Events Desk at BOC who notify Bus Divisions

Unplanned Incidents

- Example: Traffic Accident
- Originated by Bus Operator who notifies BOC for further instruction

COMMUNICATIONS

- Onboard announcements made before detour begins
- Temporary signage posted at affected stops
- Customer Care agents inform and provide up-to-date info
- Metro.net and Social Media accounts updated with current conditions
- Media Relations involved for major incidents



Metro

HOW WE RESPOND TO RAIL INCIDENTS

INCIDENTS

Planned Incidents

- Example: Maintenance
- Temporary Letter Request
- Notify Rail Divisions
- Update NexTrip

Unplanned Incidents

- Example: Vehicle Issue
- Notify ROC for instruction
- Onboard announcements

RAIL OPERATIONS

Rail Operations Control (ROC)

- Coordinate with Train Operators and RTOS
- Monitor station cameras
- Respond to alarm indications

Field Supervisors (RTOS)

- Verify service conditions
- Direct customers to alt services and post temporary signage

COMMUNICATIONS

- Frequent announcements onboard and at stations
- Temporary signage at affected stations
- Customer Care agents inform and provide up-to-date info
- Metro.net and Social Media updated with current info.
- Media Relations involved for major incidents

BUS OPERATIONS

- ROC requests bus bridge
- BOC redirects in-service buses
- Field supervisors dispatched to direct customers and manage operation



SERVICE ALERT
BLUE/EXPO LINES

Sat, July 15th (Open) - Sun, July 16th (Close)

Due to Blue Line and Expo Line Upgrades, Shuttle Buses will replace rail service in Downtown LA.

- Blue Line between 7th/Metro Ctr & Grand Stations.
- Expo Line between 7th/Metro Ctr & LATTC/Ortho Stations.

Debido a los mejoramientos del Metro Blue Line y Metro Expo Line servicio de enlace reemplazara los trenes en el Centro de Los Angeles.

- Blue Line entre las estaciones 7th/Metro Ctr y Grand.
- Expo Line entre las estaciones 7th/Metro Ctr y LATTC/Ortho.

Bus Shuttle Replaces Rail Service
Servicio de Enlace Reemplaza Servicio de Tren

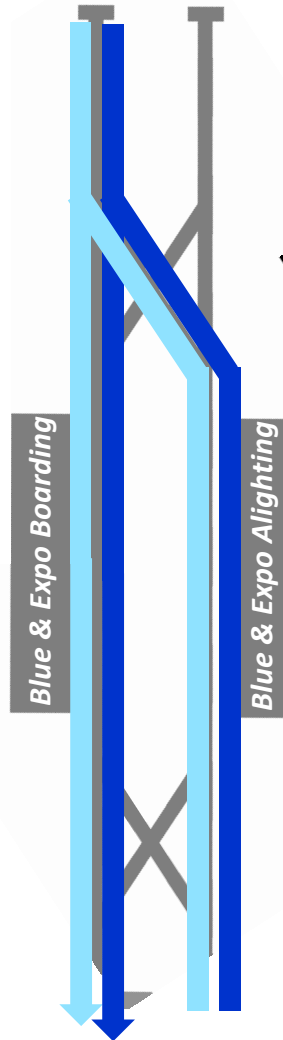


The graphic includes a map of downtown Los Angeles showing the Blue Line and Expo Line routes. A yellow bus icon is placed on the Blue Line between 7th/Metro Ctr and Grand Stations, and a blue bus icon is placed on the Expo Line between 7th/Metro Ctr and LATTC/Ortho Stations. A 'TRANSFER HERE' sign is also visible on the map.

EXAMPLE: 7TH STREET/METRO CENTER

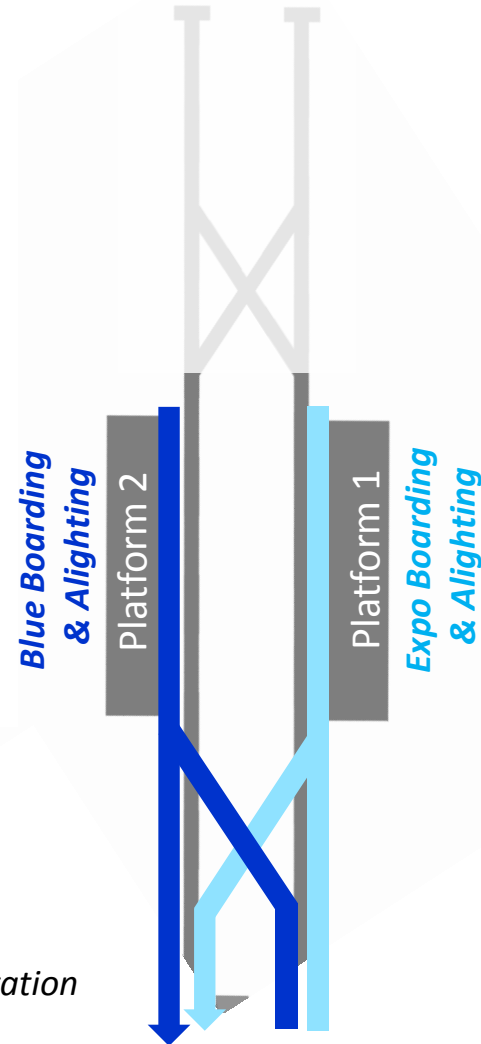
BEFORE

- Crowded boarding platform during rush hour and special events
- Uncertainty of boarding correct line on shared platform



AFTER

- Improved station flow
- Reduced confusion with line specific platform assignments
- Savings of 1 train per line from operational efficiencies





Thank you



Metro®